POST-TEMPORARY SOLUTION STATUS REPORT NO. 10 AND PERIODIC REVIEW OF THE TEMPORARY SOLUTION
FORMER GENERAL ELECTRIC FACILITY
50 FORDHAM ROAD, WILMINGTON, MA
RTN 3-0518

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Lockheed Martin Corporation

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 108

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COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT
Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

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ACRONYMS AND ABBREVIATIONS

AUL	Activity and Use Limitation
AECOM	AECOM Technical Services, Inc.
bgs	below ground surface
BWSC	Bureau of Waste Site Cleanup
BTEX	benzene, toluene, ethylbenzene, xylenes
CAM	Compendium of Analytical Methods
C/I	commercial/industrial
CMR	Code of Massachusetts Regulations
COC	chemical(s) of concern
CSIA	Compound Specific Isotope Analyses
CVOC	chlorinated volatile organic compound
1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
cis-1,2-DCE	cis-1,2-dichloroethene
1,4-D	1,4-dioxane
DHC	*Dehalococcoides*
DNAPL	dense non aqueous phase liquid
DO	dissolved oxygen
EPH	extractable petroleum hydrocarbons
EPL	Eastern Parking Lot
ERC	Environmental Risk Characterization
°F	degrees Fahrenheit
FID	flame ionization detector
ft	foot/feet
g/d	gallons per day
gal/ac/yr	gallons per acre per year
GE	General Electric Company

GC	gas chromatography
HRP	Hilco Redevelopment Partners
IDW	investigation derived waste
ITRC	Interstate Technology & Regulatory Council
kg	kilograms
LNAPL	light non aqueous phase liquid
LOE	line of evidence
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
µg/L	micrograms per liter
MNA	monitored natural attenuation
MS	mass spectrometry
MTBE	methyl tertiary butyl ether
NSZD	natural source zone depletion
OMM	operation, maintenance, and/or monitoring
PAH	polynuclear aromatic hydrocarbon
PIANO	n-paraffins (P), iso-paraffins (I), aromatics (A), naphthenes (N) and olefins (O)
PID	photoionization detector
PIP	Public Involvement Plan
PCE	tetrachloroethene
ppmv	parts per million by volume
PWS	public water supply
RAM	Release Abatement Measure
TCE	trichloroethene
trans-1,2-DCE	trans-1,2-dichloroethene
UCL	upper concentration limit
USEPA	United States Environmental Protection Agency
UPS	United Parcel Service

VC	vinyl chloride
VOC	volatile organic compound
VPH	volatile petroleum hydrocarbon
WRT	Wilmington Realty Trust
YRC	YRC Freight

SECTION 1
INTRODUCTION

AECOM Technical Services, Inc. has prepared this Post-temporary Solution Status Report Number 10 and the first Periodic Review of the Temporary Solution on behalf of Lockheed Martin Corporation in fulfillment of the requirements of Post-temporary Solution Operation, Maintenance, and/or Monitoring, and Periodic Review of the Temporary Solution, under the Massachusetts Contingency Plan, 310 Code of Massachusetts Regulations 40.0897 and 40.1050, respectively. This report also has been prepared in accordance with the Temporary Solution Statement submitted in May 2017 for Release Tracking Number 3-0518 (AECOM Technical Services, Inc., 2017a), which pertains to the former General Electric Company Facility at 50 Fordham Road, Wilmington, Massachusetts (site). The site location is depicted on Figure 1-1.

This report is being submitted electronically via eDEP, the electronic filing site for the Massachusetts Department of Environmental Protection, along with the Permanent and Temporary Solution Statement form (Bureau of Waste Site Cleanup form BWSC104), Comprehensive Response Action Transmittal/Phase 1 Completion Statement form (Bureau of Waste Site Cleanup form BWSC-108) and the Remedial Monitoring Report form, which provide additional responsible party and Licensed Site Professional certifications.

1.1 BACKGROUND

Contamination of the Stickney Well, a currently inactive public supply well for the Town of North Reading, was discovered in the late 1970s. Subsequent investigations of multiple surrounding properties, including the former General Electric property, began in the early 1980s. On October 9, 1987, prior to the adoption of the Massachusetts Contingency Plan in 1988, the Massachusetts Department of Environmental Quality Engineering (subsequently Massachusetts Department of Environmental Protection or MassDEP) classified the former General Electric facility as a Priority Disposal Site. Under the Massachusetts Contingency Plan (Massachusetts Department of Environmental Protection, 2014), the site is a Tier 1 Classified site, under Release

Tracking Number 3-0518, with four original operable units, as listed below and further defined in previous reports submitted to the Massachusetts Department of Environment.

- Operable Unit-1—Former Tank Farm source area (includes Pump House/Vault and Oil House) and adjacent Eastern Parking Lot
- Operable Unit-2—Former Tank Farm source area and downgradient groundwater plume both on- and off-property
- Operable Unit-3—Storm water/Wastewater Outfalls 001 and 002
- Operable Unit-4—Former Tank K Source Area and immediately downgradient groundwater plume

Areas relating to sediment at storm water/wastewater Outfalls 001 and 002 within Operable Unit-3 have been resolved and closed via a partial Response Action Outcome (Class A-2) submitted in December 2004 (TRC Companies, Inc., 2004). The former Tank K area that comprised Operable Unit-4 has been resolved and closed via a partial Response Action Outcome (Class A-2) dated November 9, 2010 (TRC Companies, Inc., 2010). The remaining two areas, Operable Unit-1 (petroleum contamination in former Tank Farm and Eastern Parking Lot areas) and Operable Unit-2 (chlorinated volatile organic compounds in former Tank Farm and downgradient groundwater plume), make up Release Tracking Number 3-0518. Figure 1-2 depicts an overview of the disposal site, including relevant site features, and Figure 1-3 depicts all monitoring wells located within the site boundary and in the general vicinity of the site.

A Tier 1A Permit was in place from 1999 until a Remedy Operation Status Opinion was filed on April 20, 2006 (TRC Companies, Inc., 2006). Lockheed Martin Corporation and AECOM Technical Services, Inc., determined on February 28, 2013, that the requirements to maintain Remedy Operation Status were no longer being met, and therefore submitted the required Remedy Operation Status Termination Notice and a Tier 1 Permit Extension Application on March 27, 2013, returning the site to Phase II/Phase III status under the Massachusetts Contingency Plan (AECOM Technical Services, Inc., 2013). On October 10, 2014, Lockheed Martin Corporation submitted a Tier Classification Extension (AECOM Technical Services, Inc., 2014) that was approved by the Massachusetts Department of Environmental Protection, extending the Tier Classification deadline to May 3, 2017. On May 2, 2017, Lockheed Martin Corporation electronically submitted to the Massachusetts Department of Environmental Protection the required reports including a Phase II Comprehensive Site Assessment with a Method 3 Risk Characterization (AECOM Technical

Services, Inc., 2017b), a Phase III Remedial Action Plan (AECOM Technical Services, Inc., 2017c), and a Temporary Solution Statement (AECOM Technical Services, Inc., 2017a). The Massachusetts Department of Environmental Protection acknowledged receipt of the reports on May 2, 2017, via electronic stamp on the transmittal form. Currently, the site is in Temporary Solution status and, therefore, Post-temporary Solution Status and Remedial Monitoring Reports are required to be submitted to the Massachusetts Department of Environmental Protection every six months, by May 2 and November 2 of each year, with evaluations of the Temporary Solution conducted every five years.

Additional details related to Release Tracking Number 3-0518 (comprehensive release history, site assessment, and remedial activities completed) can be found in reports previously submitted to the Massachusetts Department of Environmental Protection, specifically the Phase II Comprehensive Site Assessment (AECOM Technical Services, Inc., 2017b), Phase III Remedial Action Plan (AECOM Technical Services, Inc., 2017c), and Temporary Solution Statement (AECOM Technical Services, Inc., 2017a).

1.2 OBJECTIVE

The objective of this Post-temporary Solution Status Report Number 10 is to document the monitoring activities conducted at the site during the six-month reporting period of November 2, 2021, through May 1, 2022, in accordance with the Operations, Maintenance, and/or Monitoring Plan detailed in the Temporary Solution Statement submitted to the Massachusetts Department of Environmental Protection in May 2017. The objectives of the Periodic Review of the Temporary Solution are to document:

1. the feasibility of implementing a Permanent Solution,
2. the effectiveness of the Temporary Solution,
3. the definitive or enterprising steps taken to identify, develop, and implement a feasible permanent solution at the site,
4. any changes in activities, uses, and/or exposures that may cause actual or potential increase in exposure for human or environmental receptors,
5. an evaluation of the Activity and Use Limitations in place, and its effectiveness in maintaining a condition of No Substantial Hazard,

6. any necessary and required response actions to maintain the Temporary Solution.

1.3 LIST OF CONTACTS

This section identifies the potentially responsible party, the Licensed Site Professional-of-record, and the owner of the site.

Potentially Responsible Party:

Lockheed Martin Corporation
6801 Rockledge Drive
MP CCT246
Bethesda, MD 20817
Contact: Mr. Paul E. Calligan
Phone: (240) 687-1813

LSP-of-Record:

Daniel W. Folan, PhD, PG, LSP (License No. 1736)
AECOM Technical Services, Inc.
250 Apollo Drive
Chelmsford, MA 01824
Phone: (978) 905-2205

Current Property Owner:

Hilco Redevelopment Partners (HRP)
99 Summer Street, Suite 1110
Boston, MA 02110
www.hilcoredev.com
Contacts: Ms. Julianna Connolly (617) 240-8695 and Mr. Eric Darci (617) 308-3659

1.4 REPORT ORGANIZATION

This Post-temporary Solution Status Report and Periodic Review of the Temporary Solution is organized as follows:

- **Section 2**—provides a description of the type and frequency of monitoring/field activities conducted during this reporting period, plus a statement of compliance with the conditions of the activity and use limitation in place at the site.

- **Section 3**—presents a description of the comprehensive monitoring well gauging program as well as the resulting measurements and updated groundwater contours based on these measurements.

- **Section 4**—presents a description and the results of the light non-aqueous phase liquid monitoring and subsequent product recovery, a discussion of the performance of the monitored natural attenuation relating to the light non-aqueous phase liquid, and a discussion

of the remedial objectives related to the light non-aqueous phase liquid and the progress toward meeting these objectives.

- **Section 5**—presents the groundwater laboratory analytical results and data validation and includes an evaluation of the field and analytical data presented. An evaluation of the performance of the remedial monitoring program is also presented.

- **Section 6**—presents a description of the indoor air sampling activities as well as laboratory analytical results and data validation activities completed during the reporting period.

- **Section 7**—provides a description of conditions identified during the monitoring period, which may be affecting the performance of the remedial action.

- **Section 8**—provides a description of modifications made to the monitoring program.

- **Section 9**—provides the five-year Periodic Review of the Temporary Solution.

- **Section 10**—provides a description of the schedule for future monitoring activities.

- **Section 11**—provides the conclusions and Licensed Site Professional Opinion regarding this report.

- **Section 12**—provides a discussion of the public notification requirements for the site and copies of any required notifications.

- **Section 13**—provides a list of references.

SECTION 2
MONITORING AND FIELD ACTIVITIES

The Post-temporary Solution Operations, Maintenance, and/or Monitoring (OMM) Program continued during this reporting period in accordance with the monitoring plan presented in the Temporary Solution Statement submitted to the Massachusetts Department of Environmental Protection (MassDEP) on May 2, 2017, and the updated Post-temporary Solution OMM annual groundwater monitoring plans submitted to MassDEP on September 6, 2018, and as Table 10-2 of Post-Temporary Solution Status Report Number 8 submitted to the MassDEP on May 2, 2021. The activities completed as part of the OMM Program during this reporting period (November 2, 2021 through May 1, 2022) are discussed below.

2.1 GROUNDWATER SAMPLING

The annual groundwater-gauging and subsequent groundwater sampling event concluded in September 2021 are summarized below. These activities are reported in this status report as opposed to the November 2021 status report based on receipt of the laboratory analytical results in October 2021 with data validation completed in November 2021.

2.1.1 Site-Wide Water Level Measurements – August 31, 2021

On August 31, 2021, prior to commencing the groundwater sampling event, AECOM Technical Services, Inc. (AECOM) measured depth to water in all on-site and off-site monitoring wells. AECOM also obtained measurements of surface water at 12 well locations where standing water was present. In addition, AECOM obtained surface water elevations from the pond on Concord Street east of the site and northeast of the STM-3 wells, and from two stream gauges, SG-1 in the wetlands north of the Eastern Parking Lot (EPL) and SG-2 adjacent to the Ipswich River on the Wilmington Masonry property. During this gauging event, AECOM measured depth to water in 15 monitoring wells on the YRC Freight (YRC) property at 95 Concord Street including AE-106-S-M-D and AE-106-R1-R5, in the wetland, AE-111-R1-R7 adjacent to the wetland, and five YRC wells MW-1-S-R, MW-12S, and MW-13-S-R. Table 2-1 presents a summary of water levels measured along with the resulting groundwater and surface water elevations, including wells on the YRC

property. AECOM purged the standard Water FLUTes™ on August 30, 2021 to equilibrate the water levels prior to the site-wide measurements on August 31, 2021. AECOM measured the water levels within the Shallow Water FLUTes™ using the procedure provided by FLUTe™. The field records from the site-wide water level measurement event are included in Appendix A. An evaluation of the measurements collected is included in Section 3 of this report.

2.1.2 Groundwater-Sampling Event – September 2021

From September 1 to 23, 2021, AECOM collected groundwater samples from a comprehensive list of the site-wide monitoring wells in accordance with the Post-temporary Solution OMM Plan. Table 2-2 details the September 2021 updated annual groundwater monitoring plan. This scope was executed with one deviation, which is that the groundwater sample from AE-109R-5 was not analyzed for 1,4-dioxane via 8270 with selective ion monitoring due to a miscommunication with the laboratory. Figure 1-3 shows all monitoring well locations sampled in September 2021.

All conventional monitoring wells along with shallow Water FLUTes^{TM} (AE-26R, AE-28R, and AE-29R) and continuous multi-channel tubing (AE-101R and TRC-301R) intervals were purged and sampled with either a peristaltic pump or a bladder pump using low-flow techniques. All standard Water FLUTe^{TM} intervals were purged and sampled using compressed gas. Purging and sampling was conducted in accordance with United States Environmental Protection Agency (USEPA) Region 1 *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells* (USEPA, January 2010, revised September 2017).

Groundwater quality parameters (temperature, pH, specific conductance, dissolved oxygen, and oxidation-reduction potential) were measured during purging at all wells using a YSI water quality meter with flow through cell and a separate Geotech turbidity meter. These September 2021 groundwater quality parameter data are summarized in Table 2-3. Field records (water level forms, calibration logs, groundwater-sampling forms, and field logbook notes) from the sampling event are provided in Appendix A.

All samples were collected into laboratory-supplied glassware and either picked up by the lab courier or shipped to each laboratory in accordance with standard chain-of-custody procedures. Samples were analyzed for volatile organic compounds with select samples analyzed by area for additional site chemical(s) of concern (COC), including 1,4-dioxane, total and dissolved arsenic,

and extractable and volatile petroleum hydrocarbons. A focused group of samples was analyzed to evaluate monitored natural attenuation processes that may be affecting the COC at the site. These select samples were analyzed for some or all the following: chloride, the terminal electron acceptor processes (e.g., dissolved iron, manganese, nitrate, nitrite, sulfate, sulfide), total organic carbon, and dissolved gases including hydrogen, ethane, ethene, methane, propane, and acetylene, as well as compound-specific isotope analyses, and microbial analyses. Groundwater samples were submitted to Phoenix Environmental Laboratories, Pace Analytical Gulf Coast, and Microbial Insights. Groundwater samples from select wells were also analyzed via PIANO [acronym for n-paraffins (P), iso-paraffins (I), aromatics (A), naphthenes (N) and olefins (O)] analyses at Alpha Analytical. Groundwater analyses are detailed in Table 2-2. The analytical results are discussed in Section 5 of this report.

2.2 LIGHT NON-AQUEOUS PHASE LIQUID MONITORING AND PRODUCT RECOVERY

In accordance with the OMM Program, AECOM conducted quarterly light non-aqueous phase liquid (LNAPL) monitoring from select monitoring wells in December 2021 and February 2022. These gauging events are summarized below. An evaluation of the LNAPL monitoring results is presented in Section 4.

2.2.1 December 2021 Gauging Event

On December 2, 2021, AECOM gauged seven overburden monitoring wells for depth to water and the presence of LNAPL: AE-3, AE-4, CW-1, CW-2, GZA-102S, PZ-2S, and TRC-101. At the time of the gauging, none of the wells contained an absorbent sock. LNAPL was not detected in any of the monitoring wells gauged. Based on the lack of measurable LNAPL, AECOM did not install absorbent socks in any of the wells. Monitoring wells gauged during this event are depicted on Figure 1-3, and Table 2-4 includes a summary of LNAPL gauging and removal data. A copy of the field record completed during the LNAPL-gauging event is included in Appendix B.

2.2.2 February 2022 Gauging Event

On February 23, 2022, AECOM gauged seven overburden monitoring wells for depth to water and the presence of LNAPL: AE-3, AE-4, CW-1, CW-2, GZA-102S, PZ-2S, and TRC-101. At the time of the gauging, none of the wells contained an absorbent sock. LNAPL was not detected in any of

the monitoring wells gauged. Based on the lack of measurable LNAPL, AECOM did not install absorbent socks in any of the wells. Monitoring wells gauged during this event are depicted on Figure 1-3. Table 2-4 includes a summary of LNAPL gauging and removal data. A copy of the field record completed during the LNAPL-gauging event is included in Appendix B.

2.3 MONITORING WELL REPAIRS

AECOM subcontracted Maher Services of North Reading, Massachusetts to replace roadboxes and concrete pads at six monitoring wells in Wilmington and North Reading. On September 27-29, 2021, Maher Services with oversight from AECOM, replaced roadboxes and concrete pads at five monitoring wells (AE03, AE04, AE103R, TRC-102, and TRC-103) in the Eastern Parking Lot and at one monitoring well (STM-3) along the edge of Concord Street in North Reading. These six monitoring well locations are depicted in Figure 1-3 with a yellow circle around the well symbol. Maher Services jackhammered out the existing roadboxes and concrete/asphalt and placed this material into 55-gallon drums for recycling. The replacement roadboxes are traffic-rated cast iron with minimum 12 to 18-inch long steel skirts. The new concrete pads were reinforced with wire mesh.

During roadbox replacement on September 29, Maher Services cut down the top of polyvinyl chloride well casing at one well, AE03, to accommodate the locking expansion plug within the roadbox. On October 15, 2021, AECOM surveyed the new top of casing reference elevation at monitoring well AE03 using a TopCon RX 2805 level (US Environmental Rental SN: 5000-1010). AECOM used the top of casing elevations from four existing monitoring wells (AE-100R, GZA-102S, PZ-2S, and TRC-101). As shown in the field notes included in Appendix A, the survey yielded top of AE03 casing elevations of 82.23 and 82.24 feet using the four nearby monitoring wells. The new AE03 top of casing elevation post September 29, 2021, is 82.23 feet. The top of casing elevation prior to September 29, 2021, was 82.41 feet.

2.4 INVESTIGATION-DERIVED WASTE MANAGEMENT

During the groundwater-sampling event completed in September 2021, five 55-gallon drums of purge water and decontamination rinse water were generated. This investigation-derived waste (IDW) was properly containerized and temporarily stored at a central staging area on-site, pending characterization and off-site disposal in accordance with Lockheed Martin Corporation procedures.

Similar to past years, this IDW was characterized as hazardous waste based on the elevated trichloroethene and tetrachloroethene concentrations. Clean Harbors Environmental Services (CHES) removed the drums under a uniform hazardous waste manifest on December 2, 2021. A copy of the manifest documenting receipt at the CHES Braintree, MA facility on December 2, 2021, is included in Appendix C.

During the monitoring well repair activities completed September 27-29, 2021, three drums of concrete, asphalt and metal were generated. This material was characterized as non-impacted debris as it was free of soils. On December 2, 2021, CHES removed the debris under a standard bill of lading (BOL) to the EL Harvey facility in Westborough, Massachusetts, for recycling. A copy of the signed BOL is included in Appendix C.

2.5 INDOOR AIR SAMPLING

In accordance with the OMM Program, AECOM performed annual indoor air monitoring during the heating season in January 2022. In October 2017 the United Parcel Service (UPS) began occupying Building 1, under a lease with the former property owner, Wilmington Realty Trust (WRT), and has conducted seasonal operations from October through December in 2017, 2018, and 2019. In September 2020, UPS began full-time occupancy within Building 1 with active operations six days-per-week Monday through Saturday. UPS operations were active during the indoor air sampling on January 18, 2022. In order to obtain samples as representative of the indoor air as possible, AECOM collected indoor air samples when the trucks were out on delivery between approximately 9:00 am and 5:00 pm.

AECOM recorded indoor air and ambient air temperature and barometric pressure readings onsite. During sampling on January 18, 2022, the ambient air temperature ranged from a low of 27 degrees Fahrenheit (°F) to a daytime high of 36°F. Building 1 indoor air temperatures ranged from 58°F to 66°F on the first floor, and from 63°F to 65°F on the second floor. The heating, ventilation, and air conditioning units were operational in Building 1 during the sampling event. The units were preset by UPS to maintain cool conditions and prevent freezing of pipes within the building. As a result, the heating units kicked on/off occasionally and were not continually running during the January 18, 2022 sampling event.

Barometric pressure readings on January 18, 2022, ranged from 748.9 to 765.1 millimeters as measured with a portable barometer onsite.

Prior to and during the sample collection, on January 11, 2022, AECOM completed an indoor air quality building survey per WSC #16-435 Vapor Intrusion Guidance dated October 14, 2016 (MassDEP, 2016a). The purpose of such survey is to document general building information such as construction, structural integrity, utility, materials storage, operations, and occupancy information that could be relevant to the indoor air sampling event. The survey was completed based on visual inspection of the building and information contained in prior survey forms. A copy of the completed survey is included in Appendix D.

Indoor air screening for volatile organic compounds (VOCs) was conducted with a photoionization detector (PID) (Ion Sciences Tiger with 10.6 electron volt lamp) on January 18, 2022, concurrent with the sample collection. The PID readings were recorded at each of the indoor air sample locations, at holes, drains, trenches, or cracks in the floor, and near the materials that could potentially be sources of VOCs. The PID readings at the indoor and ambient air sample locations were all less than 1 part-per-million by volume (ppmv). Additionally, PID readings of less than 1 ppmv were noted at holes, drains, and joints in the floor, and near the materials that could potentially be sources of VOCs within Building 1. These PID readings are all similar to past PID screening results conducted in Building 1.

The January 18, 2022 indoor air sampling event included the collection of air samples from five locations (IA-2, IA-3, IA-4, IA-7, and IA-8) on the first floor and one second floor location (IA-9) of Building 1. All indoor air samples were co-located (within approximately 10 to 20 feet) with the prior indoor air locations sampled from 2009-2021. Historical sample locations IA-10 on the mezzanine of Building 1, IA-5 in Building 3, and IA-6 in the guard shack physically no longer exist. One field duplicate sample was collected at location IA-8 by collecting two canisters concurrently immediately adjacent to each other.

One ambient background air sample (22A-AA1-1) was collected outside the south end of Building 1 during the same period as the indoor air sampling event. The ambient air sample location south of Building 1 under the awning was selected to shield the canister from any potential light rain or snowfall, and to be consistent with recent years. Sample locations are shown on Figures 2-1 and

2-2. The field records, including indoor air sampling records and photographs, are provided in Appendix D.

All samples were collected into 6-liter, batch-certified SUMMA® canisters using eight-hour calibrated regulators set by the laboratory. The SUMMA® canisters were submitted to Alpha Analytical, located in Mansfield, Massachusetts, under chain-of-custody within 24 hours of sampling. All samples were analyzed for Massachusetts Contingency Plan volatile organics in air via Method TO-15 with selective ion monitoring. Analytical results are discussed in Section 6 of this document.

2.6 ACTIVITY AND USE LIMITATION

On July 13, 2015, WRT placed a voluntary activity and use limitation (AUL) on the southwestern portion of the site, encompassing Buildings 1, 1A, and 2, and the EPL. A copy of the AUL is included in Appendix E. The AUL prevents uses of the site which would be inconsistent with maintaining a condition of No Substantial Hazard under the Massachusetts Contingency Plan. The prohibited uses include residential, school, playground, park, or daycare use, as well as activities that would result in exposure to or the disturbance of potentially contaminated soils, bedrock, groundwater, and indoor air, unless appropriate precautions to prevent human exposure are taken as described in the AUL.

The AUL does not restrict the use of groundwater for drinking water purposes. However, the Stickney Well in North Reading and the Reading municipal wells south of the Ipswich River remain inactive, and no drinking water wells exist within one half mile of the site. AECOM checked the Massachusetts online drinking water well data portal (https://eeaonline.eea.state.ma.us/portal#!/search/drinking-water) annually to confirm that no new drinking water wells have been installed within 0.5 miles of the site in the towns of Wilmington, Reading, or North Reading between January 21, 2016 and February 9, 2022.

Based on site inspections and monitoring activities conducted from January 1, 2016 through May 1, 2022, the conditions of the AUL continue to be met.

SECTION 3
GROUNDWATER FLOW EVALUATION

AECOM Technical Services, Inc. (AECOM) conducted a site-wide round of water level measurements on August 31, 2021, prior to commencing the groundwater-sampling event. Table 2-1 presents a summary of all water levels measured along with the resulting groundwater and surface water elevations.

Groundwater contours were developed for three depth intervals, 0 to 60 feet (ft) below ground surface (bgs), 61 to 121 ft bgs, and 122 to 250 ft bgs. These intervals were used for evaluation in prior reports submitted to the Massachusetts Department of Environmental Protection and will be used going forward to evaluate site groundwater flow for consistency. Although the 0 to 60 ft bgs interval includes both overburden and shallow bedrock groundwater elevations, this is consistent with the conceptual site model of bedrock groundwater in the Eastern Parking Lot (EPL) discharging to the deep overburden beneath the wetlands. The deep interval contour consists of only bedrock groundwater elevations; the middle interval is predominantly bedrock groundwater elevations (except for well AE-105D, which is screened in deep overburden from 73 to 75 ft bgs). AECOM assigned the YRC Freight (YRC) overburden and bedrock wells to the same three depth intervals based on well screen depth and elevations. Groundwater piezometric contours generated from the groundwater elevations summarized in Table 2-1 are depicted on Figures 3-1, 3-2, and 3-3.

The groundwater contours are consistent with previous depictions that show shallow (0 to 60 ft bgs) groundwater generally flowing to the east-northeast on the subject property, then trending more eastward beneath the wetlands, and finally southeast at Concord Street towards the Ipswich River. The intermediate (61 to 121 ft bgs) and deep (122 to 250 ft bgs) intervals show groundwater flowing generally to the east-northeast from the EPL and to the east-southeast beneath the wetlands.

The groundwater contour maps (Figures 3-1, 3-2, and 3-3) include elevations from 20 wells (AE-106-S-M-D, AE-106-R1-R5, AE-111-R1-R7, MW-1-S-R, MW-12S, and MW-13-S-R) on the YRC property measured on August 31, 2021. The contours generated during the August 2021 event are based on a smaller data set compared to the groundwater contours from 2018 and 2019, when

YRC had concurrently conducted water level measurements of wells on its property in addition to the 20 measured in 2021.

Because the YRC property is located on a bedrock knob that is higher in elevation than surrounding areas, natural radial groundwater flow from the YRC property is typically observed. The groundwater contours derived from the August 31, 2021 site-wide measurements are similar to previous years and indicate radial flow from the YRC property. As shown in Figures 3-1, 3-2, and 3-3, this radial flow from YRC causes diversion of flow from the eastern portion of the Hilco Redevelopment Partners property around the YRC property. A review of the January 2022 *Remedy Operation Status/Remedial Monitoring and Release Abatement Measure (RAM) Status Report* for the YRC site (Release Tracking Number 3-2363) indicates that the groundwater recirculation system was not operational at YRC during the August 31, 2021 gauging event. Groundwater recirculation was discontinued in June 2021 at the YRC property, and the current remedial activities involve groundwater monitoring only (CCC Environmental Services, 2022). A groundwater contour map provided in the January 2022 *YRC Remedy Operation Status/Remedial Monitoring and RAM Status Report* indicates bedrock groundwater flow on October 21, 2021, within the YRC treatment area, was to the southeast consistent with previous observations during non-pumping conditions (CCC Environmental Services, 2022).

Water level trends presented in this section of the report include groundwater hydrographs from established wells for the period of 1987 through 2021. Hydrographs from 10 wells located within the site boundary are presented in Figure 3-4. In general, groundwater levels did not fluctuate greater than plus/minus 3 ft over the period of record. As expected, due to lower storativity, the bedrock wells tended to fluctuate more than did the overburden wells. The water level fluctuations observed in bedrock wells GZA-102R1 and GZA-105R between 1991 and 2006 are believed to be due to on-site pumping from bedrock extraction wells in the former Tank Farm area and in the EPL. Between 2016 and 2021, all plots generally show the same pattern of fluctuations that range from approximately 1 to 3 ft and are likely due to the wide variations in annual precipitation during this period. A plot of monthly precipitation is presented in Figure 3-5 that also includes the annual precipitation recorded every year from 2016 through 2021. The mean precipitation rate for this area is approximately 45 inches per year. As shown in Figure 3-5, the years 2017, 2019, and 2020 received near average annual precipitation. Drought conditions were observed in 2016

(34.69 inches), whereas high levels of precipitation were recorded in 2018 (58.7 inches) and 2021 (62.5 inches).

For the Former General Electric Company facility property, shallow groundwater elevations recorded on August 31, 2021 were higher than in September 2020. Groundwater elevations in overburden and areas with shallow depth to bedrock onsite near the source area were up approximately 1 to 3 ft from 2020 to 2021 and were some of the highest groundwater elevations recorded at the site since 2012 to 2014. This is believed to be a result of above average precipitation recorded in the area in 2021 (see Figure 3-5).

SECTION 4
LIGHT NON-AQUEOUS PHASE LIQUID MONITORING AND PRODUCT RECOVERY

This section presents the results of the light non-aqueous phase liquid (LNAPL) monitoring, including discussion of the performance of the monitored natural attenuation relating to the LNAPL, and of the LNAPL remedial objectives and the progress during the reporting period toward meeting these objectives.

4.1 LIGHT NON-AQUEOUS PHASE LIQUID FREE PRODUCT RECOVERY

AECOM Technical Services Inc. (AECOM) performs LNAPL free product recovery intermittently as detailed in the Temporary Solution Statement (AECOM, 2017a). AECOM did not deploy any absorbent socks during this monitoring period, as a measurable thickness of LNAPL greater than 0.1 foot (ft) was not detected in any monitoring wells gauged during the monitoring events completed in December 2021 and February 2022.

4.2 LIGHT NON-AQUEOUS PHASE LIQUID MONITORED NATURAL ATTENUATION PERFORMANCE

The sections below include details related to the presence of LNAPL at the site and the monitored natural attenuation (MNA) of site LNAPL.

4.2.1 Demonstration that Monitored Natural Attenuation is Occurring as Expected for Light Non-Aqueous Phase Liquid

During this reporting period, LNAPL was not detected at a measurable thickness greater than 0.1-ft in any monitoring well when gauged. These results are consistent with seasonal fluctuations observed since 2010, as the thicknesses and frequency of LNAPL detections have decreased overall. The presence of LNAPL over the past 10 years has primarily been limited to wells CW-1 and CW-2 with occasional sheen in well PZ-2S. Wells CW-1 and CW-2 are shallow wells installed within a former excavation immediately downgradient of where the bedrock surface dips to the east beneath the Eastern Parking Lot (EPL). The current conceptual site model indicates that the presence of

LNAPL in these wells is typically observed during periods of low water levels which apparently allow small amounts of residual LNAPL to weep from petroleum-impacted bedrock into the wells. Table 2-4 includes a summary of the historical LNAPL measurements, and Figure 4-1 depicts the reduction of the LNAPL plume onsite from 1992 to the present.

Although the very limited LNAPL plume size has not changed significantly in some time, it continues to generate a dissolved plume of petroleum hydrocarbons. In September 2020 and September 2021, AECOM completed a natural source zone depletion (NSZD) assessment utilizing both temperature and soil gas screening methods to evaluate the rate of LNAPL depletion through the natural mechanisms of volatilization, dissolution, and biodegradation (Interstate Technology and Regulatory Council, 2018). A detailed memorandum presenting the NSZD assessment, background, calculations, and results was included as Appendix C to Post-temporary Solution Status Report Number 9 submitted to Massachusetts Department of Environmental Protection (MassDEP) in November 2021. Table 4-1 presents a summary of the NSZD rates. The results of the NSZD assessment are summarized below.

A quantitative analysis showed that NSZD rates, provided below, ranged from approximately 100 to 2,800 gallons per acre per year (gal/ac/yr), with a median rate of approximately 670 gal/ac/yr, based on rates from both the soil gas screening and temperature profiling methods. These NSZD rates are consistent with values typically reported in the literature, ranging from 300 to 7,700 gal/acre/yr, with the middle 50% of the NSZD rates ranging from 700 to 2,800 gal/acre/yr (Garg et. al., 2017).

- LNAPL depletion rates estimated from the soil gas data ranged from approximately 100 to 970 gal/ac/yr, with an average value of approximately 440 gal/ac/yr.
- LNAPL depletion rates estimated from the temperature profiling ranged from approximately 420 to 2,800 gal/ac/yr, with an average value of approximately 1,400 gal/ac/yr.

These estimated NSZD rates, although seemingly high for an old, weathered LNAPL body, are not unreasonable considering:

- An LNAPL smear zone thickness of approximately 5 ft based on site water table fluctuations;

- Soil porosity of approximately 0.3, based on the range of porosity values estimated for coarse sands and gravels (0.25) and fine sands (0.35) observed within the smear zone depth interval (AECOM 2017b).

Given the above values for smear zone thickness and soil porosity, the median estimated depletion rate of 670 gal/acre/yr (approximately 0.002 cubic ft per square ft per year) is equivalent to an annual reduction in LNAPL saturation of approximately 0.14 percent of pore space per year.

Historical fluid level gauging data at the site indicate that the extent of LNAPL in monitoring wells has gradually declined over time as shown in Figure 4-1. This decline indicates that LNAPL saturation has gradually decreased to residual saturation levels, likely in the range of 2 to 19 percent of pore space (Brost and DeVaull, 2000), consistent with the small annual reduction in LNAPL saturation estimated from the NSZD results at the site.

Historical data and results of the NSZD assessment support the selected remedial alternative outlined in the Phase III Remedial Action Plan (AECOM 2017c) that entails continued monitoring and removal of LNAPL in wells when present. The NSZD rates are expected to fluctuate year to year with seasonal variation in groundwater elevations and temperature fluctuations within the area of residual LNAPL impacts onsite (approximately 0.5-0.7 acres). The NSZD processes will continue to decrease the volatile organic compounds and volatile petroleum hydrocarbon (VPH) fraction concentrations in groundwater.

Further discussion of the extractable petroleum hydrocarbons (EPH) and VPH fractions associated with the LNAPL is presented in Section 5.7.3.

4.2.2 Change in Conditions Affecting Light Non-Aqueous Phase Liquid Monitored Natural Attenuation

During this reporting period, there have been no changes in conditions affecting LNAPL MNA. As shown in Figures 4-2 through 4-5, detectable LNAPL thicknesses generally coincide with increased depth to groundwater. Groundwater elevations naturally fluctuate year-to-year, and as a result, the NSZD rate and the potential for the presence of LNAPL in wells CW-1 and CW-2 also fluctuate. Groundwater elevations from September 2021 in overburden and areas with shallow depth to bedrock were 1.5 to 3 ft higher than in September 2020 and were some of the highest groundwater elevations recorded at the site since 2012 to 2014. The depths to water measured in monitoring wells

during this reporting period are similar to those measured in past periods when little to no measurable LNAPL was detected.

4.2.3 Verification that the Light Non-Aqueous Phase Liquid Plume is not Expanding

Response actions have been performed previously to assess LNAPL mobility and to meet the requirements of 310 Code of Massachusetts Regulation (CMR) 40.1003(7)(b). Based on the extensive measurement and evaluation of the LNAPL present at the site, it is apparent that the LNAPL is stable, as defined at 310 CMR 40.0006. The LNAPL footprint is not expanding as shown in Figure 4-1, nor is LNAPL migrating through any subsurface strata or discharging to a surface water body, structure, or utility. The extent of LNAPL has been well defined and measured regularly, with successful product removal via three former recovery wells operating between 1992 and 2002 and through subsequent manual and passive measures from 1999 to present. LNAPL at the site has micro-scale mobility, as it continues to be observed in small amounts intermittently in wells CW-1 and CW-2 when the water table is depressed sufficiently for residual LNAPL to weep from bedrock into soil.

Graphs of the depth to groundwater compared to LNAPL thickness over time in wells CW-1, CW-2, PZ-2S, and TRC-201R are presented in Figures 4-2 through 4-5. These graphs show that, in general, greater LNAPL thickness tends to coincide with increased depth to groundwater. The amount of LNAPL recoverable during periods of low water levels has decreased over time due to the LNAPL removal efforts. As a result, LNAPL removal via passive measures is currently minimal. The lack of LNAPL in monitoring wells TRC-101, AE-03, AE-04, and PZ-2S bounds the area around CW-1 and CW-2, where LNAPL is periodically detected.

4.2.4 Verification of the Absence of Non-Stable Light Non-Aqueous Phase Liquid

Since December 2010, well CW-1 has had little evidence of LNAPL while CW-2 generally exhibits a sheen. Both wells have had periodic measurable LNAPL thickness generally ranging from 0.01 to 0.03 ft, with the thickest measurements of 0.12 ft in CW-1 observed in September 2016 and 0.08 ft in CW-2 in September 2015. The two thickest measurements were taken when the seasonal depth to groundwater was the greatest observed on-site in over 10 years. LNAPL has not been detected in TRC-101 since 2002. LNAPL has not been detected in wells AE-03 or AE-04 since their installation

in 2012. It is apparent that the LNAPL remaining at the site is limited, stable, and only has micro-scale mobility at most, based on the behavior of the LNAPL in the wells.

4.2.5 Verification of Attainment of Remedial Objectives for Light Non-Aqueous Phase Liquid

The remedial objectives for LNAPL are being attained by continued monitoring and passive recovery (when possible), as detailed below and in the Temporary Solution Statement submitted to the MassDEP in May 2017. Given the intermittent presence of LNAPL in monitoring wells in the EPL area and the limited recoverability of LNAPL (approximately 2.81 gallons removed between December 2010 and November 2017), it has been demonstrated, in accordance with the MassDEP LNAPL Guidance (MassDEP, 2016a), that active LNAPL recovery is no longer feasible. However, based on recent gauging data, LNAPL with micro-scale mobility remains within the area adjacent to the former Tank Farm and EPL.

A remedial alternative evaluation was presented as Table 5-1 of the Phase III Remedial Action Plan (AECOM, 2017c) relating to residual petroleum contaminants at the aquifer capillary fringe in the former Tank Farm and EPL areas, where free product with micro-scale mobility has been observed. Continued monitoring of natural attenuation processes and passive recovery of product, if possible, was selected as the alternative for LNAPL present in these areas. These areas have been shown to have low levels of volatile organic compounds in groundwater and soils, but contain EPH/VPH, particularly the C5-C8 aliphatic and C9-C10 aromatic fractions, above standards, in addition to the potential for free-phase LNAPL with micro-scale mobility.

The selected remedial alternative, which entails monitoring and passive removal of LNAPL (if present), is being performed and appears to be proceeding toward attainment of the remedial objectives for LNAPL. Given the limited presence of measurable LNAPL from 2017 to 2022, frequent monitoring of LNAPL thickness in the EPL is no longer necessary. Lockheed Martin plans to reduce LNAPL gauging to once per year beginning in the fall of 2022 for the next five-year monitoring period.

SECTION 5
EVALUATION OF GROUNDWATER QUALITY CONCENTRATION TRENDS

This section provides an evaluation of the concentration trends and distribution of the chemicals of concern (COC) in site groundwater: arsenic, 1,4-dioxane (1,4-D), petroleum hydrocarbons, and chlorinated volatile organic compounds (CVOCs).

The Massachusetts Department of Environmental Protection (MassDEP) has established three categories for groundwater within the Massachusetts Contingency Plan (MCP, 310 Code of Massachusetts Regulations [CMR] 40.0932) that relate to the following types of groundwater exposures:

- GW-1 applies to groundwater assumed to be a current or potential source of drinking water.
- GW-2 applies to groundwater considered to be a potential source of vapors that could migrate into building air.
- GW-3 applies to all groundwaters in the Commonwealth since it is assumed that it all eventually discharges to surface water.

The site is located within an Interim Wellhead Protection Area for the inactive North Reading Stickney public water supply (PWS) well and a Zone II for nine emergency backup PWS wells in Reading (Revay Well #1, Well #2, Well #3, B Line Well, Town Forest, Well #82-20, Well #66-8, Well #13, and Well #15). Therefore, site groundwater is categorized as GW-1.

A portion of site groundwater, which has an average depth less than 15 feet (ft) below ground surface (bgs) and is within 30 ft of Building 1/1A at 50 Fordham Road, is also categorized as GW-2. Additionally, site groundwater within 30 feet of occupied buildings along Concord Street, where the average depth to groundwater is less than 15 ft bgs, is categorized as GW-2.

All site groundwater is categorized as GW-3.

5.1 QUALITY ASSURANCE AND QUALITY CONTROL

In August 2021, AECOM Technical Services, Inc. (AECOM) collected groundwater samples from 174 monitoring wells/screens. All samples were analyzed for volatile organic compounds (VOCs) with select samples analyzed for additional parameters, as detailed in Table 2-2. Upon receipt of the laboratory analytical reports, the data contained in each report was validated and reviewed for compliance with the MassDEP Compendium of Analytical Methods (CAM) performance standards, as detailed in Policy WSC-02-3209 (MassDEP, 2010). Results of the validation are discussed in detail in the data validation memoranda prepared with each laboratory data package included in Appendix F.

The results of the validation of the chemical data indicate that the data are valid as reported and may be used for decision-making purposes. Most of the data were accepted, with qualifiers added where required. As noted in the data validation memoranda, select data points were rejected. The rejected data were limited to non-detect results of one polycyclic aromatic hydrocarbon (PAH) compound from the extractable petroleum hydrocarbon (EPH) analysis, acenaphthylene, from four wells, AE03, GZA105D, GZA105S, and TRC101, as the relative percent difference between the laboratory control sample and duplicate (LCS/LCSD) were out of range. Acenaphthylene is not a key COC for the site. In addition, non-detect dissolved gases data were rejected from well AE103D as dissolved gases were not recovered in the matrix spike/matrix spike duplicate (MS/MSD) sample despite the QC analysis being rerun on this sample.

Laboratory analytical results for dissolved iron and manganese exceed the total iron and manganese results from wells AE100R5 and AE105R1. The laboratory analytical result for dissolved iron exceeds the total iron result from well GZA105R. The concentrations were confirmed by the laboratory. The total and dissolved results for iron and/or manganese in these samples are qualified as estimated (J).

The analytical results met the requirements for “presumptive certainty” status for all compounds for which there is a CAM protocol under the MCP. See Appendix F for further details.

5.2 ANALYTICAL RESULTS – ARSENIC

A summary of the 2016-2021 arsenic analytical results is presented in Table 5-1. The arsenic concentrations are consistent from 2016 through 2021. The total and dissolved arsenic results are

similar in all wells analyzed indicating that the arsenic present is predominantly dissolved arsenic. Eight of the 36 wells sampled had dissolved and total arsenic concentrations above the GW-1 standard of 10 micrograms per liter (µg/L) in 2021. The dissolved arsenic plume in groundwater at four intervals (overburden and upper, middle, and lower bedrock) is presented in Figures 5-1 through 5-4. These figures depict the 2016, 2017, 2018, 2019, 2020, and 2021 plumes from results in the wells sampled each year. The extent of the plumes is the same with concentrations on the same order of magnitude at each interval from 2016 to 2021 with insignificant differences.

Concentration trend graphs of the dissolved arsenic results from all wells sampled in September 2021 are presented in Appendix G. The graphs include all available historical dissolved arsenic results for these wells. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 5-2. Fifteen monitoring wells have enough data from which to generate statistical trends. A downward trend (at 80% or at both 80% and 90% confidence levels) is noted in six monitoring wells. These include three overburden wells: AE-03 and GZA-10 at the Eastern Parking Lot (EPL), and AE-105S in the wetland, plus three bedrock wells: AE-102RR-6 in the EPL, TRC-301R-4 in the wetland, and STM-8R-1 at Transect C. An upward trend (at 80% or at both 80% and 90% confidence levels) is noted in four monitoring wells: GZA-101R in the Building 1 Tank F area, EMW-11R2 and GZA-06 at the EPL, and MW-4A in the wetland. In each of these wells the concentrations remain at the same order of magnitude and below the GW-1 standard in each well except EMW-11R2 where the concentration is equal to the GW-1 standard. The remaining five monitoring wells (AE-102M, AE-103S, GZA-105S, GZA-14A, and TRC-102) show no trend or non-significant trends.

Based on these results, dissolved arsenic concentrations are similar to past results. No significant upward trends are evident. The plume is identical from 2016 to 2021 and is stable in overburden and bedrock intervals.

5.3 ANALYTICAL RESULTS – 1,4-DIOXANE

A summary of the 2016-2021 1,4-D analytical results is presented in Table 5-3. The 1,4-D concentrations are of the same order of magnitude from 2016 to 2021 in all wells with the exception of well AE-101S, which exceeded the GW-1 standard (0.3 µg/L) in 2021 after being non-detect from 2016-2019 and below GW-1 in 2020. A total of 42 wells show 1,4-D concentrations above the GW-1 standard of 0.3 µg/L in 2021. The 1,4-D plume in groundwater at four intervals (overburden

and upper, middle, and lower bedrock) is presented in Figures 5-5 through 5-8. These figures depict the 2016, 2017, 2018, 2019, 2020, and 2021 plumes from results in wells sampled each year. The extent of the plumes is the same with concentrations fluctuating within the same order of magnitude in each of the four intervals from 2016 to 2021.

Concentration trend graphs of the 1,4-D results from all wells sampled in September 2021 are included on the CVOC trend graphs presented in Appendix G. The graphs include all available historical 1,4-D results for these wells that were analyzed via United States Environmental Protection Agency (USEPA) SW-846 Method 8270 or 8270 selective ion monitoring. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 5-8. Forty-two monitoring wells sampled have enough data from which to generate statistical trends. Ten wells in the EPL, Transect A, and wetland/Transect B show a downward trend (at 80% or at both 80% and 90% confidence levels). Eleven wells, mostly in Transect A with a few source area (Building 1) and Transect C wells, show an upward trend (at 80% or at both 80% and 90% confidence levels). In each of the 12 wells with upward trends, the concentrations remain at the same order of magnitude. The remaining 21 of 42 wells show no trend or non-significant trends.

Based on these results, 1,4-D concentrations are of the same order of magnitude as past results. The 2021 plume geometry is like the 2016-2020 plumes and is stable in the overburden and bedrock intervals.

5.4 ANALYTICAL RESULTS – PETROLEUM HYDROCARBONS

A summary of the 2016-2021 EPH and volatile petroleum hydrocarbon (VPH) analytical results is presented in Table 5-4. The EPH and VPH concentrations are similar in 2016, 2017, 2018, 2019, 2020, and 2021 in all wells with changes discussed herein. As discussed in Section 4 above, petroleum light non-aqueous phase liquid (LNAPL) has been identified near the former Tank Farm and EPL. Since 2010, the periodic presence of LNAPL has been limited to wells CW-1 and CW-2 where the bedrock dips to the east beneath the EPL. Sampling for EPH and VPH is being conducted to monitor the levels of petroleum hydrocarbons present in a focused group of wells (AE-03, AE-04, GZA-105S, GZA-105D, and TRC-102 with five wells AE-100R-1, GZA-102S, PZ-2S, TRC-101, and TRC-103 added in 2018) immediately surrounding CW-1 and CW-2. Several EPH and VPH compounds including various PAHs, benzene, toluene, ethylbenzene, xylenes (BTEX), naphthalene,

and hydrocarbons have been detected at concentrations below the GW-1 standard. Detected concentrations above GW-1 standards from 2016 to 2021 include:

- C5-C8 hydrocarbons in 2016 and 2017 and C11-C22 hydrocarbons in 2017 in GZA-105D;
- C5-C8 hydrocarbons in 2018 in AE-100R-1;
- C9-C10 hydrocarbons in AE-03 from 2016-2021;
- C9-C10 hydrocarbons from 2018-2021 and C9-C18 hydrocarbons in 2020 in TRC-101;
- C9-C18 hydrocarbons in PZ-2S in 2021;
- Toluene in AE-23R beneath Building 1 from 2016-2021;
- PAHs:
    - Benzo(a)pyrene in five wells, four in the EPL (AE-03, PZ-2S, TRC-101, and TRC-102) and EMW-11R-2 at the edge of the wetland in 2018;
    - Dibenzo(a,h)anthracene and indeno(123-cd)pyrene in GZA-105D in the EPL in 2017;
    - Chrysene in GZA-14 in 2016;

None of these PAH exceedances of GW-1 were observed in 2019, 2020 or 2021.

A significant increase in C9-C18 hydrocarbons (3,000 µg/L) was detected in well PZ-2S in 2021. Isolated spikes such as this have been detected before in two wells: 1,060 µg/L in GZA-105D in 2017 and 1,100 µg/L in TRC-101 in 2020. In both cases the C9-C18 hydrocarbon concentrations were non-detect in the prior year, and non-detect since. As such, it is anticipated that the elevated detection in PZ-2S in 2021 will also drop back to non-detect levels in future sampling rounds.

These localized fluctuations include more decreases than increases in 2021 dissolved phase petroleum hydrocarbon compound concentrations which coincide with a 1 to 3 ft rise in the overburden and shallow bedrock groundwater elevations from 2020 to 2021 and higher precipitation totals in recent years (Figures 3-4 and 3-5).

Elevated concentrations of C5-C8 and/or C11-C22 hydrocarbons were detected at several wells in bedrock (AE-23R, AE-26R-1, AE-28R-2, AE-29R-6. AE-102RR-6, AE-103R-1, EMW-11R-2, AE-104R-4, and AE-109R-5) from 2016-2021. As explained in Section 5.5, hydrocarbon

concentrations at these wells are attributed to false positive VPH results due to interference from elevated CVOC concentrations.

There were no exceedances of GW-2 or GW-3 standards for EPH/VPH compounds in 2021.

Concentration trend graphs of the petroleum results from all wells sampled in September 2021 (whether analyzed for EPH/VPH or not) are presented in Appendix G. The graphs depict BTEX, methyl-tertiary-butyl ether (MTBE), naphthalene, and calculated VPH fractions of all available historical results for these wells. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 5-5. The BTEX, MTBE, and naphthalene, where detected, are observed at low concentrations entirely below GW-1, GW-2, and GW-3 standards for the past decade 2012 through 2021. Therefore, this text summarizes only the trend graph results for the calculated VPH fraction data and excludes data from wells with documented false positive VPH results as noted above. For the 12 wells with enough VPH fraction data to run statistics, an upward trend at both 80% and 90% confidence levels is noted in one well, TRC-101. Downward trends (at 80% or at both 80% and 90% confidence levels) are noted in six wells (AE-04, AE-100R-1, AE-105R-4, GZA-105D, GZA-105S, and TRC-102) in the former tank farm EPL area and Transects A and B. The remaining five wells show no trends or non-significant trends for calculated VPH fractions.

Based on these results, petroleum concentrations are like past results with fluctuations in concentrations of select compounds and some downward trends at this time. The 2021 petroleum plume geometry is like the 2016-2020 plume geometry and is stable or shrinking in the overburden and bedrock intervals.

5.5 INTERFERENCE OF CHLORINATED VOLATILE ORGANIC COMPOUNDS CAUSING FALSE POSITIVES IN VOLATILE PETROLEUM HYDROCARBON ANALYSES

In the former Tank Farm EPL area and in the Building 1 former Tank F area, source materials were released directly into the overburden, and subsequently into shallow fractured bedrock because the overburden has limited thickness onsite. The top of the shallow fractured bedrock ranges from 3 to 45 ft bgs beneath the former Tank Farm EPL area and in the Building 1 former Tank F area. Comingling with CVOCs may account for some of the hydrocarbon concentrations migrating deeper into bedrock; however, in the absence of significant downward gradients, detections of lighter phase

hydrocarbons are not expected at depth in bedrock in areas away from source areas. In contrast, in 2016-2021, elevated total petroleum impacts (particularly C5-C8 aliphatics) were detected in deep bedrock wells EMW-11R-2, AE-102RR-6, and AE-104R-4 that also displayed elevated CVOC concentrations. There are no significant downward gradients observed at the site and these observations of petroleum hydrocarbons in deep bedrock away from source areas have been determined to be false positive detections due to analytical method interference from chlorinated solvents.

In 2016, the MassDEP recognized potential interference issues associated with the 2004 VPH analytical method (MassDEP, 2004) known as VPH by the gas chromatography/photoionization detector/flame ionization detector (GC/PID/FID) method (MassDEP, 2016b). In 2017, MassDEP issued an alternate method for quantifying VPH using gas chromatography/mass spectrometry (GC/MS) (MassDEP 2017). Certain organic compounds not associated with the release of petroleum products, including chlorinated solvents, alkyl benzenes, ketones (e.g., methyl ethyl ketone), and ethers, may be detected using the VPH by GC/PID/FID Method and may contribute to the collective response quantified within an aliphatic or aromatic hydrocarbon range. In 2018, MassDEP issued a new CAM referred to as WSC-CAM-IV A for the VPH by GC/MS Method to provide more detailed guidance regarding compliance with the quality control requirements and performance standards (MassDEP, 2018).

To better quantify petroleum hydrocarbon concentrations in groundwater, and to separate potential CVOC interferences, in September 2018 AECOM submitted groundwater samples from four wells for analysis of VOCs via Method 8260, VPH via the MassDEP GC/PID/FID Method at Eurofins Spectrum Laboratories, and VPH by MassDEP GC/MS Method at Alpha Analytical Laboratories. The laboratory data were included in Post-temporary Solution Status Report Number 4 submitted to the MassDEP in May 2019. In three of the four wells sampled, the VPH-GC/MS Method did not identify C5-C8 aliphatics or C9-C12 aliphatics where those compounds were identified using the VPH-FID/PID Method and clearly showed interference from tentatively identified non-VPH compounds. These results were supported by the VOC-8260 data (i.e., lack of identification of BTEX and alkyl-benzene compounds). A review of the data indicated that the interferences causing false positive results for C5-C8 aliphatics and C9-C12 aliphatics in the VPH-FID/PID Method were predominantly from CVOCs (tetrachloroethene [PCE], trichloroethene [TCE], 1,1-dichloroethane [1,1-DCA], 1,1-dichloroethene [1,1-DCE], cis-1,2-dichloroethene [cis-1,2-DCE], and

trans-1,2-dichloroethene [trans-1,2-DCE]). One of the three samples did show the presence of many alkyl-benzene compounds and no CVOCs. The VPH-GC/MS and VPH-GC/FID/PID results were similar for this sample.

The VPH-GC/MS Method is suitable for volatile petroleum products, including gasoline and the volatile fractions of mineral spirits, kerosene, #2/diesel fuel oil, and jet fuels (MassDEP, 2017). The site petroleum hydrocarbon of interest is Stoddard Fuel which contains the shorter chain volatile hydrocarbons. In November 2020, AECOM submitted an LNAPL sample from well CW-2 collected in September 2020 to Alpha Analytical for fingerprint analysis. Alpha provided qualitative information regarding the LNAPL sample based on tentative interpretation of chromatographic pattern recognition and boiling point ranges; the LNAPL is predominantly an unresolved complex petroleum hydrocarbon mixture eluting between n-Octane (C8) and n-Octadecane (C18) and is similar to a weathered mineral spirit or aviation fuel type product. Stoddard Fuel is also known as a mineral spirit.

The existing site groundwater data indicate that the petroleum hydrocarbons detected contain mostly VPH range (C5-C8 and C9-C10) hydrocarbons. Due to the presence of elevated CVOCs, which may interfere with analysis of VPH by the GC/PID/FID Method and cause artificially elevated VPH readings, the VPH by GC/MS Method is suitable for quantifying the VPH levels in site groundwater. Based on these results, Lockheed Martin Corporation proposed to switch the VPH analysis to the GC/MS Method under the Operations, Maintenance, and/or Monitoring (OMM) Program with EPH still to be analyzed by MassDEP EPH Method (GC/PID/FID). However, the lack of demand for the VPH-GC/MS method by the Licensed Site Professional community forced the only remaining laboratory (Alpha Analytical Laboratories) to discontinue running this method in July 2019. Therefore, Lockheed Martin Corporation evaluated alternate analytical methods to identify those wells currently being sampled for VPH using the GC/FID/PID method that lead to false positive VPH results.

In September 2020 and September 2021, AECOM submitted groundwater samples from multiple wells for PIANO (acronym for n-paraffins [P], iso-paraffins [I], aromatics [A], naphthenes [N] and olefins [O]) analysis at Alpha Analytical Laboratories. A PIANO analysis is a forensic GC/MS analytical tool for fingerprinting light-end refined products, e.g., gasoline and jet fuel, in contaminated soil and groundwater. This method identifies and measures 144 volatile petroleum

hydrocarbon compounds. AECOM submitted 6 samples in 2020 and 13 samples in 2021. In September 2020, AECOM selected six wells for PIANO analysis: two overburden wells (AE-03 and TRC-101) as they exhibit petroleum impacts and little to no CVOC impacts, plus four bedrock wells in Transect A (AE-102RR-6, AE-103R-1, AE-104R-4, and EMW-11R2) which exhibit elevated CVOC and C5-C8 hydrocarbon concentrations in bedrock groundwater away from the source areas. In September 2021, AECOM submitted 13 samples from 4 wells (AE-102RR-6, AE-103R-1, AE-104R-4, and EMW-11R2) to compare 2020 and 2021 results, as well as 4 wells (AE-23R, AE-26R-1, AE-28R-2, and AE-29R-6) in the Building 1 Former Tank F Area, 3 wells in the EPL (GZA-105S, GZA-105D, and GZA-105R), and 1 additional bedrock well in Transect A (AE-109R-5). The laboratory analytical results of the 2020 and 2021 analyses are presented in Table 5-6.

The PIANO analytical results from Alpha indicate that all 144 compounds were below laboratory detection limits in 2 bedrock wells in 2020 (AE-102RR-6 and AE-103R-1) and in 9 overburden and bedrock wells in 2021 (AE-26R-1, AE-29R-6, GZA-105D, GZA-105R, EMW-11R-2, AE-102RR-6, AE-103R-1, AE-104R-4, and AE-109R-5). In 2020, in the other two bedrock wells, AE-104R-4 and EMW-11R-2, all compounds were below laboratory detection limits, except for low concentrations of toluene. Similarly, in 2021, only low concentrations of single compounds were detected (i.e., indane in GZA-105S and 1,2,4-trimethylbenzene in AE-28R-2). In 2021, toluene was the lone compound detected in well AE23R at an elevated concentration, which is consistent with historical toluene concentrations in this well. In contrast, in 2020, 19 and 25 light-end refined petroleum products were detected in both overburden wells AE-03 and TRC-101, respectively. In 2021, 5 light-end refined petroleum products were detected in shallow bedrock well AE-100R-1.

For the wells analyzed, these results support the conclusion that, despite having comingled chlorinated VOCs and petroleum products in groundwater at the site, the petroleum products are not detected at depth in bedrock away from the source area, and that elevated concentrations of chlorinated VOCs are causing false positives in the VPH GC analyses (VPH is a GC method with no MS).

Based on this evaluation, Lockheed Martin Corporation will discontinue sampling of EPH/VPH at depth in overburden and bedrock wells away from source areas and will focus only on nine overburden wells in the EPL and one shallow bedrock well AE-100R-1 in the former tank farm

onsite where LNAPL has formerly been detected. This reduced monitoring is defined in the future monitoring scope presented in Section 10.

5.6 ANALYTICAL RESULTS – VOLATILE ORGANIC COMPOUNDS

A summary of the annual 2016 through 2021 VOC analytical results is presented in Table 5-7. The detected VOC concentrations are consistent from 2016 to 2021. Ten different CVOCs were detected in groundwater in 2021 at concentrations above MCP groundwater standards. These compounds include: 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1-DCA, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, toluene, and vinyl chloride (VC). One or more of these ten constituents were detected above GW-1 standards at 98 different well screen/port locations. One or more of the following CVOCs (1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, and VC) were detected at concentrations greater than MCP GW-2 standards (within 30 feet of a building with depth to groundwater less than 15 ft) in the following wells sampled within 30 ft of or beneath Building 1 in 2021: AE-23R, AE-23S, AE-24, AE-25R, AE-26R1, AE-26R2, AE26R3, AE26R4, AE-26R5, AE-26S, AE-27R, AE-28R1, AE-28R2, AE-28R3, AE-28R4, and GZA-101R. Only PCE and TCE were detected at concentrations greater than GW-3 standards, TCE at 14 well screen/port locations under Building 1, in the EPL, and Transect A, and PCE at 1 well screen/port location (AE-23R) beneath Building 1.

Consistent with observations from 2016-2020, the highest total CVOC concentration (212,660 µg/L) observed at the site in 2021 is in upper bedrock well AE-23R located beneath Building 1. The concentration of TCE (150,000 µg/L) detected in 2021 exceeds the upper concentration limit (UCL) of 50,000 µg/L. Concentrations of TCE have historically exceeded the UCL in this well. This was the only UCL exceedance for any constituent at any monitoring well location in 2021. In 2021, the highest PCE concentration (56,000 µg/L) was also detected in AE-23R, which is above the GW-3 standard but below the UCL for PCE. The current and historical PCE and TCE concentrations at AE-23R suggest the potential for dense non-aqueous phase liquid (DNAPL), however, DNAPL has never been detected in AE-23R when gauged.

Figures 5-13 through 5-24 present the 2016-2021 PCE, TCE, and total CVOC plumes in groundwater at four intervals (overburden and upper, middle, and lower bedrock). These figures depict the 2016, 2017, 2018, 2019, 2020, and 2021 plumes from results in wells sampled each year. The total CVOCs is a sum of the eight CVOCs predominantly detected onsite including: PCE, TCE,

VC, cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE, 1,1-DCA, and 1,2-DCA. The 2016-2021 PCE, TCE, and total CVOC plumes are similar in size at all four intervals with the following order of magnitude differences in concentrations:

- One order of magnitude increase of TCE in AE-100R-1 from 2.5 to 44 µg/L.
- One order of magnitude increase of 1,4-D in AE-23R from non-detect to 12 µg/L.
- One order of magnitude increase of vinyl chloride in AE26R-1 from 2.5 to 130 µg/L, and in AE-26R-2 from non-detect to 33 µg/L.

Each of these wells are located in the Building 1 and former Tank Farm source area where fluctuations in concentrations are not unexpected.

Concentration trend graphs of the CVOC results from all wells sampled in 2021 are presented in Appendix G. The graphs depict all available historical PCE, TCE, cis-1,2-DCE, toluene, VC, and 1,4-D results for wells sampled in September 2021. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 5-8.

In September 2021, 172 monitoring well screen/port locations were sampled. Of those 172, 132 have enough data from which to generate statistical trends at this time. Thirty-eight percent of the 2021 CVOC data (165 of 435 records) show no trend or non-significant trends. Downward trends at (80% or at both 80% and 90% confidence levels) for parent compounds (i.e., PCE and TCE) are noted in 58 of the 172 well screens sampled across the site in 2021 in the bedrock at Building 1, overburden and bedrock in the EPL, and Tank F area, in the overburden in the downgradient wetland, and in overburden and bedrock in Transects, A, B, and C. Upward trends (80% or at both 80% and 90% confidence levels) of daughter products (e.g., cis-1,2-DCE, and VC) are noted in 60 well screens sampled in 2021 mainly in middle to lower bedrock and to a lesser extent in overburden and upper bedrock in Building 1, the EPL, and Transects A, B, and B1/2, and also in overburden in the downgradient woods, wetland, and Transect C.

The Mann Kendall results indicate that 26 well screen/port locations have upward trends (80% or at both 80% and 90% confidence levels) for parent compounds (i.e., PCE and/or TCE). These include: AE-100R-3, AE-100R-4, AE-100R-5, AE-100R-6, AE-101R-1, AE-101S, AE-102RR-5, AE-102RR-6, AE-103R-6, AE-105R-5, AE-108R-2, AE-108R-3, AE-108R-4, AE-108R-5, AE-112R-3, AE-23R, AE-26R-1, AE-26R-4, AE-26R-5, AE-28R-2, AE-28R-4, EMW-10D,

EMW-11R1, EMW-11R-2, GZA-105R, and MW-7. Twenty-three of these wells are in areas of elevated CVOC concentrations in the source areas and Transect A, with only three wells in the wetland and Transect B, therefore, fluctuations in concentrations are not unexpected.

The STM-8 well cluster is a key monitoring point since it is located at the furthest extent of the plume. The results from this well cluster are indicative of ongoing attenuation of parent compounds to daughter products at the tail end of the plume. In STM-8D, the concentration of cis-1,2-DCE over the last eight sampling rounds in 2014-2021 has consistently been one order of magnitude higher than PCE and TCE. The maximum PCE and TCE concentrations were 2 µg/L from 2015 through 2019, and non-detect in 2020 and 2021, whereas cis-1,2-DCE concentrations have ranged from 17.9 µg/L in 2016 to 3.9 µg/L in 2021. The concentration ratio of parent compounds to cis-1,2-DCE is consistently low, indicative of degradation.

5.7 MONITORED NATURAL ATTENUATION

This Post-temporary Solution monitoring period consists of active performance of a comprehensive monitored natural attenuation (MNA) groundwater sampling program for site management. Details for each COC are provided below.

5.7.1 Arsenic Monitored Natural Attenuation Performance

This section presents an evaluation of arsenic MNA performance.

5.7.1.1 Demonstration that Monitored Natural Attenuation is Occurring as Expected for Arsenic

The presence of dissolved arsenic is considered to be a temporary deviation from the state of naturally-occurring conditions typical in this region. The presence of organic COC such as petroleum hydrocarbons and VOCs in site groundwater has temporarily altered the natural redox conditions from aerobic to anaerobic, causing dissolution of naturally-occurring insoluble forms of arsenic in site soils/weathered rock to the dissolved state. Plume figures suggest that dissolved arsenic concentrations are related to localized conditions immediately downgradient from the former Tank Farm and former Tank K source areas and are not expansive in nature. It is anticipated that as the concentrations of organic COC decrease over time and the aquifer returns to its normal aerobic redox conditions, dissolved arsenic levels will decrease naturally. This appears to be the

case based on the depictions of the limited arsenic plume, particularly downgradient where contaminant concentrations are lowest.

5.7.1.2 Changed Conditions Affecting Arsenic Monitored Natural Attenuation

There are no new data during this monitoring period that would indicate new environmental conditions or new releases of contaminants have occurred, which could reduce MNA efficiency for arsenic in groundwater.

5.7.1.3 Absence of Toxic Transformation Products of Arsenic

There are no toxic transformation products from natural attenuation of arsenic.

5.7.1.4 Verification that Arsenic Plume is not Expanding

As shown in Figures 5-1 through 5-4, the extent of the plumes is the same with concentrations on the same order of magnitude in each interval from 2016 to 2021. In addition, dissolved arsenic concentrations have decreased slightly in wells GZA-14A, AE-103S, and AE-105S. The dissolved arsenic concentration decreased significantly in GZA-10 from 2019 to 2021.

5.7.1.5 Demonstration of Effective Institutional Controls

The institutional controls under the activity and use limitation (AUL) at the site remain effective in limiting potential exposure to arsenic in groundwater. Although there are no institutional controls regarding the restriction of groundwater as a drinking water source at the site, the municipal wells near the site remain inactive and no drinking water wells exist within 0.5 miles of the site.

5.7.1.6 Verification of Attainment of Remedial Objective for Arsenic

The remedial objective for arsenic is reduction of arsenic concentrations in overburden and bedrock groundwater over time through MNA. Given the elevated concentrations of organic COC (petroleum hydrocarbons and VOCs) contributing to dissolved arsenic concentrations, the time frame for a general decrease in arsenic concentrations or a decrease to below applicable standards is on the order of decades. Based on groundwater data collected during this reporting period, the existing groundwater plume for dissolved arsenic is stable and not expanding. Therefore, the remedial objective for arsenic in groundwater is being met.

5.7.2 1,4-Dioxane Monitored Natural Attenuation Performance

This section presents an evaluation of 1,4-D MNA performance.

5.7.2.1 Demonstration that Monitored Natural Attenuation is Occurring as Expected for 1,4-Dioxane

It is understood that the presence of 1,4-D is related to the CVOC contamination as it was most likely a co-contaminant. The 1,4-D distribution appears consistent with the trends observed for the CVOCs during this sampling event (see Section 5.7.4). While the literature has identified the possibility of both metabolic (energy source) and co-metabolic (co-oxidation) degradation pathways of 1,4-D under certain conditions, these biological processes are unlikely to significantly affect the levels on-site in reaching the low-level regulatory criteria in the near term. A combination of these and physical attenuation processes would contribute to the long-term natural attenuation of 1,4-D.

5.7.2.2 Changed Conditions Affecting 1,4-Dioxane Monitored Natural Attenuation

There are no new data during this monitoring period that would indicate that new environmental conditions or new releases of contaminants have occurred, which could reduce MNA efficiency for 1,4-D in groundwater.

5.7.2.3 Absence of Toxic Transformation Products of 1,4-Dioxane

Although not considered a significant attenuation mechanism for 1,4-D at the site, current literature indicates that 1,4-D may biodegrade to various compounds such as ethylene glycol, glycolic acid, or oxalic acid (Rodriguez, 2016). These compounds are non-toxic and expected to biodegrade rapidly in the environment, and therefore, are not included in this monitoring program.

5.7.2.4 Verification that 1,4-Dioxane Plume is not Expanding

As shown in Figures 5-5 through 5-8, the extent of the 1,4-D plumes are the same with concentrations on the same order of magnitude in each interval from 2016 to 2021. Slight increases and decreases in concentrations are noted in some wells. Slight concentration increases are primarily detected in wells within Transect A where elevated CVOCs are present. The Ricker Method Plume Stability analysis results for 1,4-D indicate stable or decreasing trends for all three plume metrics (area, average concentration, and mass indicator) in the overburden and deep bedrock units. In the upper and middle bedrock zones, the 1,4-D plume stability analysis resulted in a decreasing, but not statistically significant, trend for all three Ricker Method plume metrics (Appendix H). Therefore, the 1,4-D plumes are considered stable and not expanding.

5.7.2.5 Demonstration of Effective Institutional Controls

The institutional controls under the AUL at the site remain effective in limiting potential exposure to 1,4-D in groundwater. Although there are no institutional controls regarding the restriction of groundwater as a drinking water source at the site, the municipal wells near the site remain inactive and no drinking water wells exist within 0.5 miles of the site.

5.7.2.6 Verification of Attainment of Remedial Objective for 1,4-Dioxane

Evaluation of 1,4-D is being addressed with continued sampling and analysis under the Post-temporary Solution OMM program. Recent monitoring data indicate increasing concentrations in some wells in middle and lower bedrock and to a lesser extent in overburden. This is likely related to fluctuations in CVOC concentrations, which along with 1,4-D concentrations are expected to fluctuate over time given the anticipated timeframe (decades or more) for MNA to reduce overall concentrations of CVOCs and 1,4-D. The groundwater remedial objective for 1,4-D will be attained through MNA as shown by long-term trend analysis. Based on groundwater data collected during this reporting period, there is evidence that the existing groundwater plume for 1,4-D is not expanding. Therefore, the remedial objective for 1,4-D in groundwater is being met.

5.7.3 Petroleum Hydrocarbons Monitored Natural Attenuation Performance

This section presents an evaluation of petroleum hydrocarbon MNA performance.

5.7.3.1 Demonstration that Monitored Natural Attenuation is Occurring as Expected for Petroleum Hydrocarbons

Relative to the LNAPL presence and distribution described in Section 4 above, the petroleum hydrocarbon plume has not changed significantly. While the LNAPL thickness has varied over the past decade and is only observed as a sheen in wells CW-1 and CW-2, certain wells in the former Tank Farm/EPL area (AE-03, AE-04, GZA-105D, PZ-2S, and TRC-101) have shown recent fluctuations in both VPH and EPH fractions. This observation may be due to fluctuations in groundwater elevations flushing the smear zone and the continued dissolution of LNAPL constituents into the aqueous phase, which would further decrease the residual LNAPL and make the dissolved constituents more available to natural attenuation processes over time, as documented by the 2020-2021 natural source zone depletion (NSZD) assessment summarized in Section 4.2.1.

5.7.3.2 Changed Conditions Affecting Petroleum Hydrocarbons

There are no new data during this monitoring period that would indicate that new environmental conditions or new releases of contaminants have occurred, which could reduce MNA efficiency for petroleum hydrocarbons in groundwater.

As detailed in Section 5.5, the 2020 and 2021 groundwater data from the PIANO and SW8260 analytical methods confirm false positive interferences from elevated CVOC concentrations, particularly in bedrock wells away from source areas onsite. Based on this data, Lockheed Martin will stop monitoring EPH/VPH in wells at depth and away from the source areas and focus monitoring to overburden and shallow bedrock wells in the EPL.

5.7.3.3 Absence of Toxic Transformation Products of Petroleum Hydrocarbons

Petroleum hydrocarbons typically degrade to less toxic forms as they undergo biological degradation in the environment. The most toxic petroleum hydrocarbons include PAHs and smaller aromatic compounds such as BTEX. Based on the 2016-2021 analytical results, there have been some noted fluctuations in petroleum hydrocarbon concentrations but no significant increases in the amounts of PAHs or BTEX compounds.

5.7.3.4 Verification that Petroleum Hydrocarbons Plume is not Expanding

As shown in Figures 5-9 through 5-12, the 2016, 2017, 2018, 2019, 2020, and 2021 plumes of petroleum hydrocarbons in overburden and bedrock are nearly identical in shape in all four intervals from 2016 to 2021 with some reduction in size from 2017 to 2021. The plumes are therefore considered stable and not expanding.

5.7.3.5 Demonstration of Effective Institutional Controls

The institutional controls under the AUL at the site remain effective in limiting potential exposure to petroleum hydrocarbons in groundwater. Although there are no institutional controls regarding the restriction of groundwater as a drinking water source at the site, the nearby municipal wells remain inactive, and no drinking water wells exist within 0.5 miles of the site.

5.7.3.6 Verification of Attainment of Remedial Objective for Petroleum Hydrocarbons

The remedial objective for petroleum hydrocarbons is reduction of the concentrations in overburden and bedrock groundwater over time through MNA. Based on groundwater data collected during this

reporting period, there is evidence of some biodegradation of petroleum hydrocarbons and the existing groundwater plume for petroleum hydrocarbons is stable and not expanding. Additionally, the results of the NSZD assessment confirm LNAPL reduction through natural processes, which in turn will reduce dissolved-phase petroleum hydrocarbon concentrations over time. Therefore, the remedial objective for petroleum hydrocarbons in groundwater is being met.

5.7.4 Mass Flux Evaluation of Chlorinated Volatile Organic Compounds

This section provides the results of a mass flux evaluation of the 2021 CVOC data. The results are compared to the same analysis conducted in 2016 to evaluate changes in mass flux over the last five years. Mass flux/mass discharge analysis is an effective approach to site characterization, risk assessment, and remedial planning (ITRC, 2010). The USEPA Scientific Advisory Board (USEPA, 2001) recommends that site characterization and monitoring should be proactively designed to incorporate mass flux estimates. Mass flux (J) is defined as the mass moving across a unit area of porous media (aquifer) and mass discharge (M) is defined as the mass of contaminant in groundwater passing through a given cross sectional area (ITRC, 2010). Although the strict definition of mass flux is mass discharge per unit area (in units of mass per time per area), many researchers and practitioners use the term mass flux to denote the rate of "mass discharge" or "total mass discharge." This document will use the term "mass flux" to represent data in units of mass per time passing by a plume transect perpendicular to groundwater flow. The calculation typically requires the following information:

- Concentration of contaminant (C) in groundwater at a given time from discrete upgradient and downgradient locations (mass/length^3)
- Hydraulic conductivity (K) of the aquifer (length/time)
- The hydraulic gradient (i) of the aquifer (length/length)
- Cross sectional area (length^2) of the groundwater plume

The Mass Flux Toolkit software (ITRC, 2010) was used to calculate J and M along mass flux transect lines situated perpendicular to groundwater flow at four locations of the site. The four transect lines roughly coincide with the following locations along the CVOC plume:

- within Building 1
- at Transect A on the eastern edge of the EPL

- at Transect B in the wetland
- at Transect C along Concord Street

Details of the rationale, setup, and performance of the model including a summary of the input and output data are provided in Appendix J.

The limitations of this mass flux analysis are that only PCE and TCE were used to calculate mass flux, as they represent the majority of the groundwater contamination. In addition, the site geology and number/location of wells in the monitoring well network may not be ideal for an accurate quantification of the mass flux, however, they are suitable to allow comparison of relative changes in mass flux from one transect to the next.

The calculated mass flux of PCE and TCE in overburden and bedrock across the four transects from 2016 and 2021 is shown in Table 5-9. This table presents the sum of mass flux in overburden and bedrock and the overall sum of mass flux for each transect along with the percent change in mass flux from 2016 to 2021. A plot of the total mass flux with distance from the source area in overburden and bedrock for 2016 and 2021 is provided in Figure 5-25.

The tables and figures cited above provide the following general insights about mass flux and the overall conceptual site model (CSM):

- Significant reductions in total mass flux in the overburden has occurred at all transects between 2016 to 2021. As shown in Table 5-9, between 2016 to 2021, the percent (%) reduction in mass flux in the overburden has decreased in the range of 39.0% to 89.2%. The highest reductions were seen in both the Building 1 Transect (89.2%) and Transect A (84.6%).
- The changes in mass flux over the last 5 years in the bedrock aquifer showed an increase of 17.8% at the Building 1 Transect and a slight decrease (3.8%) at Transect A. The observed increase of mass flux at the Building 1 Transect is most likely due to wide fluctuations of dissolved phase PCE and TCE concentrations in the source due to the potential presence of DNAPL. It is not uncommon to see large variations of dissolved phase concentrations in areas where DNAPL is known or suspected. The slight decrease (3.8%) at Transect A is an indication that concentrations are steady and not changing significantly over time in the bedrock at Transect A.
- In both 2016 and 2021, there is a significant (one order of magnitude) decrease in mass flux from Transect A to Transect B, i.e, approximately 5 gallons per day (g/d) to 0.1 g/d.

- Due to a combination of elevated total VOC concentrations around 20,000 µg/L and high total borehole transmissivities at AE-101R, AE-102RR, and AE-103R, significantly more of the mass flux at Transect A is in the bedrock than in the overburden.
- There is negligible mass flux across Transect C.

To further illustrate mass flux in the bedrock across Transect A, the predicted PCE mass flux calculated in the Mass Flux Toolkit for bedrock were contoured using kriging methods in Surfer 8.04 (Golden Software Inc., 2003). The contouring results show that the core of the mass flux in bedrock at Transect A passes directly through well AE-102RR over a width of approximately 150 feet and at a depth interval from approximately 110 to 170 ft bgs. The resulting contours are shown in Figure 5-26 . Outside of the area higlighted in red, the PCE mass flux is observed to significantly decrease (i.e., by orders of magnitude). This observation coupled with the observed concurrent downgradient transect mass flux decreases suggests that ongoing attenaution processes are capable of managing the mass flux into the future.

5.7.5 Diffusion

This section describes the process of diffusion as it relates to attenuation of CVOCs in fractured rock settings. Also, the results of matrix diffusion modeling simulations using the CRAFLUSH fracture plane model demonstrate the importance of matrix diffusion as an attenuation mechanism of CVOCs in fractured bedrock at the site.

5.7.5.1 Matrix Diffusion Process

Diffusion describes the spread of particles (or compounds) through random motion from regions of higher concentration to regions of lower concentration. In groundwater, diffusion is driven by chemical gradients and not hydraulic gradients; therefore, diffusion can cause compound concentrations in groundwater to increase in upgradient directions. Diffusion can also act to attenuate plumes, even in fractured rock. While fractures dominate advective transport in most crystalline fractured rocks, the presence of matrix porosity may also be an important attenuation mechanism. According to Schild, et al. (2001), matrix porosities of crystalline rocks are usually less than 1% (0.01) and are attributed to intra- and inter-granular micro-cracks. The primary porosity of bedrock at the site has been measured to range from 0.015 to 0.045 (AECOM, 2017b). Although nowhere near as large as the primary porosity of sedimentary rocks (10-20%), the amount of matrix porosity in crystalline rocks may still allow for moderate contaminant storage and attenuation.

Under these circumstances, diffusive contaminant transport occurs between the rock matrix and the open fractures.

The conceptual model of source zone evolution following a release of DNAPL to fractured rocks and its subsequent disappearance due to diffusion effects is described by Parker et al., 1997. Following a release of chlorinated solvent DNAPL into a fractured rock system, the DNAPL will dissolve into flowing groundwater giving rise to dissolved phase plumes. Following the release, dissolved PCE and TCE will diffuse into the primary porosity of the rock. This process is referred to as forward matrix diffusion (Kueper et al., 2014). A schematic diagram illustrating forward matrix diffusion is presented in Figures 5-27a and 27b.

Following the initial release of soluble contaminants to fractured media, rapid diffusion into the available rock matrix occurs. The end result of the rapid forward matrix diffusion into the rock matrix is that, depending on the matrix porosity, a fair amount of contaminant will reside within the matrix in a relatively short period. According to a study conducted by VanderKwaak and Sudicky (1996), the rock matrix attained equilibrium with the contaminant mass moving through secondary fractures within one year of it entering the system.

The rock matrix porosity acts as a reservoir that can sustain long-term release of contaminants back into fractures through reverse or back-diffusion as illustrated in Figure 5-27 (Reynolds and Kueper, 2002; Lipson, et al., 2005). Unlike the forward matrix diffusion process, which is relatively rapid due to initially high concentration (presumptive DNAPL) gradients, the back-diffusion process will be much slower due to a slowly decreasing concentration gradient between the matrix and dissolved CVOCs in the open fractures.

A modeling study completed by Reynolds and Kueper (2002) for a fractured sedimentary rock site discovered that despite gradually lower concentration gradients that may be re-established during source zone remediation activities, groundwater cleanup times can exceed hundreds or even thousands of years due to slow back-diffusion of CVOCs out of the downgradient plume rock matrix into the secondary fractures.

For fractured rock media with measurable matrix porosity, one implication of the forward matrix diffusion process is that PCE and TCE, migrating through the bedrock fractures, will travel at a rate slower than that of the groundwater (Parker et al., 2007). Using a one-dimensional flow model,

Lipson et al. (2005) concluded that plumes in fractured bedrock decelerate as they grow. Lipson et al. (2005) determined that the retardation factor attributable to forward matrix diffusion increases with time and distance, eventually reaching an asymptotic value (β) given by:

$$\beta = \{(N_m)/ (N_f)\} \times R'$$

where N_m is the primary porosity, N_f is the secondary or fracture porosity, and R′ is the retardation factor due to diffusion into the rock matrix. The average matrix porosity (N_m) for site bedrock is 0.023 based on rock core samples collected from the site and a site-specific N_f value of 1.61E-5 was calculated using the Cubic Law for groundwater flow in fractured bedrock (AECOM, 2017b). This yields an asymptotic R′ value (β) = 1429 x R′. Therefore, according to this model, as the bedrock plume travels from the source area with groundwater flow, its rate of migration becomes increasingly retarded with distance and time attaining a maximum R′ rate that is approximately 1429 times slower than that of advective groundwater flow.

In addition to bringing about a 'retardation' effect to plume velocity, a second implication of forward matrix diffusion is that most dissolved phase mass may be stored in the micro-fractures and micro-cracks in the matrix, not the secondary open fractures. For example, the ratio of dissolved CVOC storage capacity in the matrix to the fractures (N_m/N_f) at the site is 1429.

5.7.5.2 CRAFLUSH Diffusion Modeling

Groundwater monitoring data along Transects A and B show that PCE and TCE concentrations in the core of the groundwater plume are 90 to 99% less in Transect B than in Transect A. Given the limited evidence for significant biotic and abiotic degradation (see Section 5.7.6), it is hypothesized that diffusion into the rock matrix is responsible for this large difference in contaminant concentration as groundwater migrates from Transect A to Transect B. To test this hypothesis, the CRAFLUSH model (Sudicky and Frind 1982) was employed using site-specific input parameters (AECOM, 2017b). The overall objective for employing this screening model was to determine if the difference in concentration between Transects A and B could be explained by diffusive uptake into the micro-fractures and micro-cracks in the rock matrix.

The results of the CRAFLUSH modeling simulations, using site-specific input parameters, indicates that PCE concentrations (or, mass discharge) will decrease by approximately 85% between Transect A and B (Transect B is approximately 500 ft downgradient of Transect A). This simulation

result is in reasonable agreement with field data along Transects A and B. The CRAFLUSH simulation likely underestimates the PCE attenuation because biodegradation, abiotic degradation, dilution, and dispersion processes, are not considered in the model. The CRAFLUSH modeling technical memorandum is provided in Appendix J.

5.7.6 Chlorinated Volatile Organic Compounds Monitored Natural Attenuation Performance

This section presents an evaluation of CVOC MNA performance. Site CVOCs have been monitored in the same fashion from 2016 through 2021. The 2016-2021 CVOC data have been relatively consistent, with natural fluctuations observed due to seasonal variability, changes in water levels year-to-year, and fluctuations in concentrations where CVOCs are elevated in the former source areas onsite. This section focuses on discussion of the most recent 2021 data, with supporting evaluations of the 2016 through 2021 data where applicable, to provide lines of evidence for evaluating MNA. In addition, the Ricker Method Groundwater Plume Analytics evaluation was conducted as a means to highlight CVOC (and 1,4-D) plume stability and shrinkage. This evaluation is summarized in Section 5.7.6.5 and a copy is provided in Appendix H.

5.7.6.1 Demonstration that Monitored Natural Attenuation is Occurring as Expected for Chlorinated Volatile Organic Compounds

This section documents the review of the 2021 CVOC and associated MNA data which indicate that the subsurface conditions at the site are complex and continue to yield differing interpretations of where natural attenuation (NA) is observed and other areas where NA appears limited. Based on statistical trends that are used to evaluate the effectiveness of the remedial components in achieving cleanup levels (i.e., migration of site COC, and changes in COC concentrations in both time and distance from source area) some monitoring well locations show clear indications of MNA (both biological and abiotic), while other monitoring wells have limited indications of MNA (i.e., some select parameters suggest MNA). However, taking the entire set of data and site considerations into account, the main conclusion from the ongoing MNA evaluation is that the observed COC plume configuration and size has not increased or exhibited further migration, thus demonstrating the natural attenuation mechanisms remaining functional at the site. A summary of the MNA parameters analyzed in groundwater 2016 – 2021 is provided in Table 5-10.

The majority of the monitoring wells located underneath Building 1 and within Transects A, B, and C indicate reducing conditions in the groundwater (dissolved oxygen [DO] levels less than 1 milligram per liter [mg/L] and oxidation-reduction potential as low as -275 millivolts [mV]). The presence of reducing conditions is conducive to the reduction of CVOCs from reductive dechlorination processes (biological or abiotic), if other factors are also favorable. A summary of the 2021 geochemical parameters is provided in Table 2-3.

Based on data collected to date, evidence of reductive dechlorination of CVOCs is observed at the site (at varying degrees), in both the overburden and bedrock. Complete mineralization of CVOCs is also observed in a few wells, based on the presence of ethene and ethane (e.g., AE-103R-5). The detection of these biodegradation end products is attributable to either ongoing biological or abiotic reductive dechlorination. Methane is also present at increased levels in a few wells (e.g., EMW-11R-2), indicating that redox conditions have progressed sufficiently for reductive dechlorination. Elevated sulfide levels were present in select wells indicating evidence of some sulfate reduction observed from the 2021 analytical data. The presence of degradation daughter products such as cis-1,2-DCE or VC, relative to their parent PCE and TCE concentrations, further supports ongoing biodegradation.

Reductive dechlorination of chlorinated compounds is associated with the accumulation of daughter products and an increase in the concentration of chloride ions. Parent and daughter products related to the reductive dechlorination and/or abiotic transformation of chlorinated ethenes (PCE, TCE, cis-1,2-DCE, VC, ethene-ethane-acetylene, and chloride) observed during the 2021 groundwater-sampling event for selected wells were plotted on radar plots (Figure 5-28). Larger colored hexagonal areas indicate stronger evidence of degradation than smaller areas. The figures show that wells AE-108R-1, AE-106D, GZA-12, AE-106D, and AE-03 demonstrate that biodegradation and/or abiotic transformation processes are occurring to some extent and more than in other wells evaluated. As can be seen in Figures 5-21 through 5-24, there are a number of wells that contain concentrations of CVOCs below 100 µg/l. These not only include wells further downgradient in the plume, but also select wells in Transect A and the EPL. At these low concentrations, it is well known that reductive dechlorination processes may be inhibited, or exhibited cis-1,2-DCE “stall”, without added electron donor (natural organic carbon, petroleum hydrocarbons, or remedial amendments) as the levels of the CVOCs are not significant enough to act as sufficient electron acceptors for the process. The relative plume stability in all four zones is

also illustrated in Figures 5-21 through 5-24. Review of these figures indicates the general stability and/or decrease of source concentration areas along with observed areal extents of the CVOC impacts in the respective zones.

As parent product (i.e., PCE/TCE) degrades through daughter products (i.e., cis-1,2-DCE and VC) to end products (i.e., ethene/ethane) chloride ions are sequentially removed from the various CVOCs. This process provides another way to evaluatethe occurrence and progress of NA processes such as reductive dechlorination. This line of evidence (LOE) is evaluated by determining what is referred to as the chlorine index/chlorine number. The chlorine index/number provides an estimate of the average number of chlorine atoms present on the CVOCs as they move downgradient. With PCE/TCE/cis-1,2-DCE/VC/ethene having from 4 to 0 chlorine atoms, respectively, it is possible to determine the average chlorine number based on the observed concentrations of PCE through VC, molecular amount to convert concentration to moles, and the total number to CVOC moles at a given location. In general, as the chlorine number decreases from 4 to 0 this is an indication of ongoing reductive dechlorination of the parent product to end products. As the parent product decreases and the daughter/end products increase, the chlorine number decreases. Using data from the site from 2015 through 2021 and plotting the chlorine number at a monitoring well location and the given distance from the former source area, a consistent decrease the chlorine number from the source area to downgradient areas of the plume can be observed as shown in Figure 5-29. Additionally, the data in Figure 5-29 has been fit with linear trend lines which show that the downward slope of these lines has increased slightly in 2020 and 2021 as compared to 2015 through 2019. The observed decrease in chlorine number from upgradient to downgradient in the plume is supportive of ongoing attenuation/transformation of the parent CVOCs in the former source area.

Hydrologic and geochemical conditions amenable to natural attenuation are likely to change over time and could adversely impact the remedial effectiveness. Geochemical data (DO, manganese, iron, nitrate, sulfate, and methane) from the 2021 groundwater sampling event for selected wells were plotted on radar plots shown on Figure 5-30. Smaller sized colored hexagonal graph areas indicate more favorable conditions for reductive dechlorination than larger hexagonal areas when comparing select well locations to background and other site wells. The figures for the wells evaluated indicate that wells AE-03, AE-102M, and AE-108R-1 show more favorable geochemical conditions than other wells evaluated.

Groundwater samples from select monitoring locations and intervals were submitted for microbial population and reductase gene analyses using the Microbial Insights QuantArray™ in 2016, 2017, and 2021 (Table 5-11 and Figure 5-31). Samples were collected from locations in former source areas and extended through downgradient Transect A and B. Overall interpretation of the microbial data suggests that the overburden and bedrock portions of the aquifer have some capacity to support microbial degradation. The microbe responsible for the complete reductive dechlorination of PCE/TCE to ethene, *Dehalococcoides* (DHC), has been detected in a number of monitoring well locations along the length of the observed plume, albeit at less than optimal populations (cells/milliliter [cells/mL]). The general rule of thumb is that DHC populationss should be $1x10^{+4}$ cells/mL or higher to support robust reductive dechlorination. At the site DHC populations generally range from $1x10^{+1}$ to greater than $1x10^{+3}$ cells/mL, where detected, but monitoring well AE28R-2 has detected DHC concentrations greater than $1X10^{+4}$ cells/mL. Addditonally, specific reductase genes (tceA, bvcA, and VCR reductase) also need to be present to facilitate the reductive dechlorination from c-DCE through VC to ethene. As with DHC, the reductase genes are also found to be present but again the population values are relatively low. While the reductase gene populations are low, the fact that they are detectable indicates that microbial activity is ongoing. The observed microbial results are also supported by the detection of dissolved gases (methane, ethane, and ethene) which are the end products of reductive dechlorination. The low microbial populations are likely being impacted by lower values of total organic carbon and the presence of higher concentrations of nitrate and sulfate in portions of the site. That said, the presence of the specific microorganisms combined with other lines of evidence (i.e., parent-daughter transformation, dissolved gases, etc.) suggest that biological attenuation, while not the primary mechanism, is contributing to the ongoing natural attenuation of CVOCs at the site (at least in specific areas of the site). Considering the fact that MNA normally requires extended time frames, the above microbial results support the fact that biological processes are ongoing but at a slower rate. Although these results are not unexpected based on the available data, the overall evaluation does not suggest that MNA should be abandoned for other remedial approaches.

Compound specific isotope analysis (CSIA) can be utilized to provide another LOE to support the biological transformation and attenuation of CVOCs in groundwater. To that end, CSIA sampling has been completed at a select number of monitoring well locations in 2016, 2017, and 2021 (Table 5-12 and and Figure 5-32) with a similar distribution to the microbial analysis outlined in the

previous paragraph. In general, with respect to the interpretation of CSIA data, the enrichment of the C^{13}/C^{12} ratio (i.e., reported values become less negative) indicates the biological transformation of a contaminant as it moves along a given flowpath (e.g., plume centerline) as compared to observed source area C^{13}/C^{12} ($\delta^{13}C$) ratios that have undergone little to no biological degradation. Microbes preferentially degrade C^{12} over C^{13}. Overall, the results of the CSIA data indicate similar results to the microbial data. Enrichment of the $\delta^{13}C$ value is observed downgradient of the source area to varying degrees in the overburden and bedrock intervals. The yellow horizontal line in Figure 5-32 represents the most negative $\delta^{13}C$ value for the parent compound PCE. The dotted blue horizontal line in Figure 5-32 represents a $\delta^{13}C$ value of 2‰ above the yellow line to provide a margin for possible variability since the exact source of the parent PCE cannot be determined. As an example, in well AE28R-2 the highest DHC populations were observed along with an enrichment in the C^{13}/C^{12} ratio. Further, the enrichment of the C^{13}/C^{12} ratio is also observed with distance from the source area (i.e., Transects A, B and C), particularly in the overburden and upper/middle portions of the bedrock interval. As part of the overall CSIA evaluation the molar fractions of the parent, daughter and end products, as shown in Figure 5-33, were evaluated along the observed CVOC plume centerline (blue dashed line). In general, moving from the upgradient source area to the downgradient (distal) end of the plume a shift in the mole fraction distribution is observed moving from the parent products (i.e., PCE/TCE) to daughter products (i.e., c-DCE and VC).

Further, shifts in the C^{13}/C^{12} ratios ($\delta^{13}C$‰) are also observed for the CVOCs (i.e., PCE, TCE, c-DCE, and VC) as illustrated in Figure 5-34. If the $\delta^{13}C$ value of a contaminant increases by more than 2 ‰ over time or downgradient of the source, it is proof that the compound has degraded. When the original $\delta^{13}C$ value of a contaminant is unknown, published literature values of manufactured, undegraded parent compound (i.e. shaded light orange area) can be used as an approximation and an additional ±2‰ range (i.e. shaded blue area) is included with the assumed manufactured $\delta^{13}C$ value (see Figure 5-34). Any time that a contaminants $\delta^{13}C$ value is greater than 2‰ above the manufactured range, it is conclusive evidence of degradation. The enrichment of the $\delta^{13}C$ values is observed at several monitoring well locations within the existing network and this provides an LOE supporting the ongoing reductive dechlorination of the CVOCs in groundwater. The manufactured ranges for the $\delta^{13}C$ values are provided within the Microbial Insights (MI) CSIA Database. More information on the MI CSIA Database can be found at https://microbe.com/compound-specific-isotope-analysis-csia/.

In addition to the graphical display of the CSIA data as shown in Figure 5-32, CSIA data can be evaluated using what are referred to as Modified Kuder Plots. Modified Kuder Plots relate the analyzed $\delta^{13}C$ value of a specific contaminant to the mole fraction of the target contaminant left undegraded at each sampling location, based on the following Simplified Rayleigh Equation:

$$\delta^{13}C = \varepsilon\ (lnC/C_0) + \delta^{13}C_0$$

Where: ε = the $^{13}C/^{12}C$ enrichment factor, C/C_0 = the concentration after degradation divided by the concentration prior to degradation, δ13C = the delta value of the isotopic ratio in the sampled target analyte, and $\delta^{13}C_0$ = the delta value of the original target analyte prior to degradation. Modified Kuder Plots also depict two (2) comparison ranges 1) "Abiotic Enrichment Range"; and 2) "Biotic Enrichment Range". These ranges highlight the respective enrichment values that have been published in the literature for the target compound and the site-specific data is plotted and compared to these ranges. An evaluation of this data provides an added LOE for evaluating biotic (blue shaded region) and abiotic (red shaded region) contributions to contaminant degradation. The primary focus of this evaluation is the general trend of the site-specific data with respect to the abiotic and biotic ranges.

Figure 5-35 provides Modified Kuder Plots for PCE, TCE , c-DCE and VC based on the site-specific $\delta^{13}C$ values. For PCE (upper left of Figure 5-35), the dotted trend line (yellow line) of the site-specific $\delta^{13}C$ values indicate evidence of mostly biotic degradation processes. For TCE (upper right of Figure 5-35), the trend line of the observed $\delta^{13}C$ values fit into both abitoic and biotic degradation processes. This is notable since both abiotic and biotic processes are believed to be active at the site. With respect to daughter products (c-DCE and VC) the interpretation of the Modified Kuder Plots is more complicated because the results include daughter products that are being generated from the parent products (with typically more negative $\delta^{13}C$ values) and daughter products that are also being degraded (with typically lower $\delta^{13}C$ values). This complexity is reflected in the c-DCE plot (lower left of Figure 5-35) where two trend lines are potentially feasible based on the site-specific data. Lastly, for VC (lower right of Figure 5-35). Even though CSIA data has not beeen collected for a period of time, the available data provides further evidence related to ongoing degradation processes (both abitotic and biotic) in the subsurface and continues to support to that NA mechanisims are active at in site groundwater . The continued use of CSIA analysis as part of future sampling events will provide additional data to continue to evaluate this LOE and the ongoing NA at the site.

Abiotic degradation by reactive iron minerals may also play a role in the natural transformation of certain CVOCs. This is also supported by the CSIA data discussed above. Iron sulfides such as pyrite have been documented to react with PCE, TCE, and cis-1,2-DCE to cause a complete dechlorination transformation to acetylene and ethene without daughter products. Groundwater hydrogen levels indicate that sulfate reducing conditions could occur, and sulfate is observed at 7-60 milligrams per liter in the aquifer. Although hydrogen sulfide is only present in elevated levels in a few wells (e.g., AE-28R-2, AE-03, TRC-101, and AE-26R-2), sulfide may be sequestered by iron minerals in the soil and rock during the reduction process, generating the reactive minerals needed for abiotic transformation of CVOCs.

Acetylene is a signature product from the abiotic transformation process. Although acetylene is not always observed in groundwater where abiotic degradation is occuring, its presence suggests that abiotic reductive dechlorination may play at least some role in transformation of CVOCs in specific areas of the site. The groundwater at all of these locations is reduced to some extent but noticeable concentrations of acetylene were not observed. However, there were a few limited detections of propane, which is another of the dissolved gases that is indicative of the abiotic pathway. Despite the limited detections of acetylene and propane the abiotic transformation of CVOCs cannot be excluded and therefore can be contributing to the overall attenuation mechanisms in the subsurface.

Other potential natural attenuation processes affecting CVOCs at the former GE site are occurring in both the overburden and bedrock, as detailed in the Phase II Comprehensive Assessment (AECOM, 2017b). These include adsorption, volatilization, dispersion, and diffusion. Diffusion of CVOCs into rock matrix, micro-fractures and micro-cracks is believed to be a prominent attenuation mechanism at the site for bedrock groundwater contamination. Diffusion modeling results discussed in Section 5.7.5 show an 85% attenuation of PCE from Transect A to Transect B and are in general agreement with the mass flux calculations and groundwater monitoring data. Matrix diffusion assists in the retardation and storage of mass, with subsequent forward- and back-diffusion over specific periods of time. Based on the current CSM, the diffusion of CVOCs into the rock matrix micro-fractures and micro-cracks is another important attenuation mechanism at the site for bedrock groundwater contamination.

In summary, based on the collective evaluation of the data from 2016 through 2021, there is evidence of MNA occurring to at least a limited extent in select areas of the site to provide for the ongoing

attenuation and control of the observed dissolved phase groundwater CVOC impacts. The exact processes and their proportional contributions to the overall apparent ongoing attenuation are not clear, but there are a number of lines of evidence that support the continued application of MNA at the site. As noted above, both biotic and abiotic degradation appear to be actively occuring within specific areas and their contribution to attenuation of the CVOC plume in combination with the diffusion of CVOCs into the bedrock mechanism support the continued application of MNA.

5.7.6.2 Changed Conditions Affecting Chlorinated Volatile Organic Compounds Monitored Natural Attenuation

There are no new data during this monitoring period that would indicate new environmental conditions or new releases of contaminants have occurred, which could reduce MNA efficiency for CVOCs in groundwater.

5.7.6.3 Absence of Toxic Transformation Products of Chlorinated Volatile Organic Compounds

Although elevated VC concentrations are detectable in a few monitoring wells, the presence of VC is not unexpected and is likely attributable to ongoing microbial degradation and is considered an indicator of reductive dechlorination where it aligns with elevated parent concentrations. As discussed in Section 2.5, the groundwater at the site is not used for drinking water purposes.

Analytical data from many wells exhibit mixed behavior (upward and downward trends) and the fluctuations are likely the result of different influences, such as reductive dechlorination (transformation of c-DCE to VC and VC to ethene at differing rates), changes in water levels, changes in subsurface geochemical conditions, and high concentrations near source areas. Elevated concentrations of VC were observed in wells AE-28R-1 and AE-28R-3 (located in Building 1-Tank F area), and wells AE-101R-6 and AE-103R-6 (located in Transect A) for the 2021 sampling round. VC is the last CVOC to be degraded through reductive dechlorination because it is the least oxidized of these compounds. Therefore, the rate of reductive dechlorination decreases as the degree of chlorination decreases. In other words, the reductive dechlorination of VC to ethene is a slow reaction under anaerobic conditions, which favors the persistence of VC in PCE and TCE plumes that are undergoing reductive dechlorination. However, as the VC moves out of the anaerobic zone with ambient groundwater flow into more aerobic zones, the concentrations of VC are expected to continue to decrease since VC is known to more quickly biodegrade under aerobic conditions.

5.7.6.4 Verification that Chlorinated Volatile Organic Compounds Plume is not Expanding

Groundwater contamination has been documented at the site since the 1980s. Although groundwater monitoring wells have been sampled at this site for over 30 years, the number of monitoring wells over the entire MCP site has increased significantly over time, particularly between 2012 and 2016. For this reason, the volume of data available for any point in time in the past is not consistent with the volume of data available currently, though the number of wells has not changed since 2016. This situation makes an analysis of changes over time difficult to interpret relative to historical data.

For the 2021 analytical data, observed PCE, TCE and cis-1,2-DCE concentrations have increased in a few select wells. However, PCE and TCE have also generally decreased in a large number of wells. Localized increases in concentrations noted in 2021 are primarily in wells at the source area underneath Building 1, where potential residual DNAPL may be present, and in wells at Transect A. Of the wells evaluated for trend statistics (Table 5-8), there are 94 individual cases in which wells (or well screens/ports) show decreasing concentration trends in PCE, TCE, cis-1,2-DCE, or VC that would be an indication of improving conditions, at all depths in overburden and bedrock wells site-wide from the source area to the downgradient edge of the plume. There are another 43 cases in which cis-1,2-DCE trends appear to be increasing, at wells mostly in the source area and Transect A, and at some wells in Transects B and C. It is believed that these well ports are exhibiting increased daughter product generation based on downward trends and reduction of parent PCE and TCE concentrations. Similarly, 10 cases of increasing trends of VC were documented, that are likely due to the degradation of cis-1,2-DCE. A number of additional well port cases evaluated also exhibited stable trends.

Most of the trend graphs presented in Appendix G show that the visual trend of the groundwater CVOC concentrations are either stable or decreasing over time. This is believed to be the result of ongoing natural attenuation of the plume described above.

As shown in Figures 5-13 through 5-24, the extent of the 2016, 2017, 2018, 2019, 2020, and 2021 PCE, TCE, and total CVOC plumes are similar in each of the four depth intervals. The concentrations are generally on the same order of magnitude with fluctuations discussed herein. The plumes are therefore considered stable and not expanding.

Three-dimensional volumetric calculations of the total CVOC groundwater data were made using the Earth Volumetric Studio (EVS) model (http://www.ctech.com) to create a plume volume used to create a 3-dimentional conceptual visualization of the plume and estimate the plume mass in overburden and bedrock for the years 2017 through 2021. The sum of total CVOCs includes concentrations greater than 50 µg/L of the eight predominantly detected CVOCs (PCE, TCE, cis-1,2-DCE, VC, trans-1,2-DCE, 1,1-DCE, 1,1-DCA, and 1,2-DCA). The power of this visualization is to compare results generated from a similar scope of monitoring well data. These data are, therefore, presented in two figures. Figure 5-36 presents plume visualizations of the 2018, 2019, and 2020 groundwater data, and Figure 5-37 presents 3D visualizations of the 2017 and 2021 groundwater data. The results of this calculation for 2018-2020 indicate total plume masses of 149 kilograms (kg) in 2018 and 2019 and 132 kg in 2020, with apparent decreasing mass in the overburden (23.13 kg to 18.32 kg to 12.53 kg) and variable mass in bedrock (148 kg to 157 kg to 144 kg). The results of this calculation for 2017 and 2021 indicate total plume masses of 141 kg and 126 kg, respectively, with apparent decreases in mass in both overburden (12.79 kg to 9.03 kg) and bedrock (128 kg to 117 kg). The center of contaminant mass within the bedrock is depicted on Figures 5-33 and 5-34.

The decrease in contaminant mass in 2021, which also corresponds to an upgradient movement of the center of plume mass, is consistent with historical data showing that the center of the mass is closer to the source area. Figure 5-38 presents a conceptual site model cross section of the site. This Figure depicts isopleth contours of the 2021 total CVOC concentrations with groundwater trend graphs of wells at the source area, in the EPL and at Transects A, B, and C. These circumstances indicate that the plume is stable or shrinking while undergoing natural attenuation.

Although increased PCE and TCE concentrations have been observed in suspected source areas, which could be due to seasonal and localized changes in groundwater levels, this phenomenon is not unexpected within source areas that have shown historical fluctuations over time. The primary evidence for demonstration of MNA occurring at the site includes a continuing shift of parent to daughter product contaminant concentrations over time (Mann Kendall statistics) in conjunction with a stable groundwater plume. The data presented in this report show that, over time, the extent of the CVOC plume emanating from the former GE facility is stable and the mass of the plume is slowly shrinking.

5.7.6.5 Ricker Method Plume Stability Evaluation

WSP, on behalf of Lockheed Martin, performed the Ricker Method Groundwater Plume Analytics evaluation to evaluate CVOC and 1,4-D plume stability and shrinkage. The use of plume analytics provides for the detailed evaluation of a number of elements including:

- Plume Stability Analysis
- Spatial Change Indicator Analysis
- Mass Flux Evaluation
- Well Sufficiency Analysis

WSP performed the plume analytics evaluation on the following constituents:

- PCE
- TCE
- cis-1,2-DCE
- VC
- 1,4-D
- Total Chloroethenes (molar basis)

A summary of the plume analytic results for each of the four geologic zones (i.e., overburden, upper bedrock, middle bedrock, and lower bedrock) is provided in this section. The complete analysis including graphical displays for each of the above constituents is presented in Appendix H.

Overburden

- The constituent plumes in the overburden are all decreasing or stable. The Spatial Change Indicator™ evaluation for chloroethenes shows that the overburden plume has attenuated significantly in upgradient source areas, as well as in the downgradient plume area. Slight increases are observed in the immediate downgradient portions of the plume and are due primarily to increases in the generation of daughter product cis-1,2-DCE.

- Based on data from 2015 through 2021, there was an average of 28.5% reduction in chloroethenes mass flux from Transect A to Transect B in overburden.

Upper Bedrock

- In the upper bedrock, the chloroethene plume is generally increasing or stable. The Spatial Change Indicator evaluation indicates that the upper bedrock chloroethene plume has attenuated in upgradient source areas but also shows areas of increase in the core of the

plume. The total chloroethene plume area has decreased approximately 8% from 2014 to 2021.

- Based on data from 2015 through 2021, there was an average of 99.1% reduction in chloroethenes mass flux from Transect A to Transect B in upper bedrock.

Middle Bedrock

- The parent chloroethene plumes (PCE and TCE) in the middle bedrock are generally decreasing or stable, whereas the daughter chloroethene plumes are increasing. The total chloroethenes plume mass indicator likewise resulted in an increasing trend; however, the average concentration and mass indicator are observed to be decreasing, but not at a statistical level of significance. It is also observed that the plume-wide molar fractions exhibit a slight decreasing trend in TCE fraction coupled with an increasing trend in cis-1,2-DCE fraction.

- Based on data from 2015 through 2021, there was an average of 95.4% reduction in chloroethenes mass flux from Transect A to Transect B in middle bedrock.

Lower Bedrock

- The parent chloroethene plumes (PCE and TCE) in the lower bedrock are decreasing, whereas the daughter chloroethene plumes are stable to increasing. The total chloroethenes plume, however, exhibits a strong decreasing trend. The 1,4-D plume stability analysis in the lower bedrock likewise resulted in stable or decreasing trends for all three plume metrics.

- The Spatial Change Indicator™ evaluation for chloroethenes shows that the lower bedrock plume has attenuated in the core of the plume. There are observed areas of increase primarily in the site source area and portions of the downgradient plume. The total chloroethenes plume area has increased slightly from 2016 to 2021; however, the plume mass indicator has decreased by approximately 15% during the same period.

- Based on data from 2015 through 2021, there was an average of 97.5% reduction in chloroethenes mass flux from Transect A to Transect B in lower bedrock.

Overall, the results of the plume analytics/plume stability evaluation, using the Ricker Method, provides further compelling evidence that natural attenuation processes are occurring at the site to stabilize and reduce the groundwater plumes.

5.7.6.6 Demonstration of Effective Institutional Controls

The institutional controls under the AUL at the site remain effective in limiting potential exposure to CVOCs in groundwater. Although there are no institutional controls regarding the restriction of groundwater as a drinking water source at the site, the Stickney Well remains inactive and no drinking water wells exist within one half mile of the site.

5.7.6.7 Verification of Attainment of Remedial Objective for Chlorinated Volatile Organic Compounds

The remedial objective for CVOCs at the site is the reduction of dissolved phase groundwater concentrations within the overburden and bedrock zones over time MNA has been implemented and is being demonstrated through the ongoing monitoring of MNA. It is noted that given the elevated concentrations of CVOCs at the site, including mass within bedrock fractures and micro-fractures, the time frame for reduction in overall CVOC concentrations is estimated to be on the order of decades. Data from 2016 through 2021 has been reviewed as part of this first Periodic Review of the Temporary Solution and the results have been documented herein. Based on the available data collected during this reporting period, multiple lines of evidence support ongoing MNA of CVOCs at the site including:

1. Observed COC concentration decreases versus time and distance from the source;
2. Mann-Kendall statistical evaluations supporting typical stable/decreasing trends;
3. Downgradient appearance of daughter and end products (cis-DCE/VC/ethene);
4. Decreasing chlorine numbers from upgradient to downgradient along the plume centerline;
5. Presence of microbial populations capable of the complete reductive dechlorination of PCE/TCE;
6. CSIA data demonstrating the enrichment of the C^{13}/C^{12} ratio from upgradient to downgradient along the plume;
7. Demonstrated reductions in mass flux of CVOCs from upgradient to downgradient transects oriented perpendicular to the primary direction of groundwater flow;
8. Observed geochemical conditions within the plume (i.e., reducing conditions);
9. Evidence of abiotic attenuation processes in addition to biotic processes; and
10. Modeling and associated monitoring data that support the diffusion of CVOCs into the deeper bedrock fracture/rock matrices.

While no one evaluation approach provides a definitive demonstration of NA, collectively all of the lines of evidence provide a fairly significant demonstration that the overall effect of the various attenuation mechanisms is facilitating the ongoing attenuation of the site-specific COC and the existing groundwater plumes for dissolved CVOCs are at a minimum, stable and not expanding. Therefore, the remedial objective for CVOCs in groundwater is continuing to be met.

SECTION 6
INDOOR AIR SAMPLING RESULTS

Table 6-1 presents a summary of the historical laboratory analytical results for each of the air sample locations within Building 1. A copy of the Alpha Analytical Laboratory data package from the January 2022 sampling event is included as Appendix K. Results from the January 2022 air sampling event are summarized below.

6.1 QUALITY ASSURANCE AND QUALITY CONTROL

The quality of the analytical data from the January 18, 2022 sampling event is acceptable for decision-making purposes based on the data validation results. All sampling canisters were batch-certified by the laboratory prior to sampling. There was good precision in the data based on the close agreement of the parent and duplicate samples from IA-8, as observed in Table 6-1. The volatile organic compound (VOC) data were validated and are discussed in detail in the data validation summary memorandum included in Appendix K. Data were evaluated and all were accepted with no qualifications as noted in the data validation memorandum. All results complied with the applicable Massachusetts Department of Environmental Protection (MassDEP) Compendium of Analytical Methods performance standards listed in Policy WSC-02-320 (MassDEP, 2010).

6.2 INDOOR AIR ANALYTICAL RESULTS

The ambient air analytical sample results obtained outside of Building 1 detected several VOC compounds at low concentrations; however, none were above the MassDEP Commercial/Industrial (C/I) Threshold Values (*Vapor Intrusion Guidance WSC#16-435,* October 14, 2016).

The indoor air analytical sample results from Building 1 detected several solvent and petroleum-related VOCs at low concentrations. The detected compounds in Building 1 are consistent with compounds observed in previous indoor air sampling events from 2009 to 2021. The detected concentrations of these compounds in January 2022 are consistent for each sampling

location and are also consistent with concentrations detected in past indoor air sampling events with the changes noted below.

As also observed in January 2021, in January 2022, increased concentrations of acetone, styrene, and naphthalene, as well as benzene, toluene, ethylbenzene, and xylenes (BTEX) were present at sample locations in Building 1. The 2022 detected concentrations of these compounds were higher at the high bay sample locations than in sample locations in the southwest corner room and on the second floor. Each of these compounds were detected in sub-slab vapor samples collected beneath Building 1 between 2009-2013 at concentrations similar to or higher than detected in indoor air in Building 1. The BTEX compounds along with naphthalene and styrene are common constituents of the gasoline and/or exhaust from gasoline combustion engines such as the trucks in the high bay of Building 1. Given that these compounds have historically been detected in Building 1 and were not increasing between 2009-2020, the sub-slab vapors are not considered to be the source of the increases in 2021 and 2022 indoor air concentrations. Also, detected concentrations of other compounds such as chlorofluorocarbon halomethane, 1,1,2-trichloro-1,2,2-trifluoroethane, tetrachloroethene, and trichloroethene, historically present in sub-slab vapor, did not increase in indoor air in 2021 nor 2022. This, along with the timing of the increased concentrations in 2021 aligning with United Parcel Service starting full time operations in fall 2020, indicate that the source of the increased concentrations in indoor air is likely the gasoline contained in, and the exhaust from, the approximately 30 to 40 trucks that drive in and out of Building 1 daily and park within Building 1 each night during operations (Monday through Saturday).

The concentrations detected in indoor air at locations within Building 1 were compared to the MassDEP C/I Threshold Values, as shown in Table 6-1. All concentrations in Building 1 were below the current C/I Threshold Values and therefore do not pose a risk to facility workers.

SECTION 7 CONDITIONS/PROBLEMS AFFECTING THE REMEDIAL ACTION

No conditions or problems were identified during this reporting period that may have the potential to affect the remedial action.

SECTION 8 MODIFICATIONS TO THE MONITORING PROGRAM

No modifications to the monitoring program occurred during this monitoring period. The wells and analytes monitored were as detailed in the updated Operations, Maintenance, and/or Monitoring Program groundwater monitoring plan submitted to the Massachusetts Department of Environmental Protection in September 2018, with one exception: analysis of 1,4-dioxane via Method 8270 was accidentally omitted at monitoring well AE109R5.

SECTION 9
PERIODIC REVIEW OF THE TEMPORARY SOLUTION

This Periodic Review of the Temporary Solution has been prepared in accordance with the requirements contained in 310 Code of Massachusetts Regulations (CMR) 40.1050(4)(b). The Review is based on an evaluation of current site conditions and an assessment of the conclusions and basis for the Temporary Solution. In addition, as part of the feasibility evaluation, the results of the Phase III Remedial Action Plan (RAP) (AECOM, 2017c) have been reviewed and an evaluation of whether new or innovative technologies have been developed that may change the previous conclusions regarding infeasibility of a Permanent Solution for groundwater and light nonaqueous phase liquid (LNAPL) at the site.

9.1 FEASIBILITY OF IMPLEMENTING ONE OR MORE PERMANENT SOLUTIONS

As part of this Periodic Review, the Phase III RAP (AECOM, 2017c) has been reviewed with particular attention given to the identification and potential feasibility of remedial alternatives for achieving a Permanent Solution for the site. As stated in the Phase III RAP (AECOM, 2017c) and Temporary Solution Statement (AECOM, 2017a), a Permanent Solution could not be achieved for groundwater at the site because a condition of "No Significant Risk" could not be demonstrated because groundwater concentrations are above Massachusetts Contingency Plan (MCP) upper concentration limits (UCLs).

According to the MCP, the status of the Temporary Solution shall be re-evaluated every five years to determine whether the Disposal Site (or portions thereof) may be eligible for a Permanent Solution.

The evaluation was completed based on experience of remediation staff and review of recent literature on remediation technologies.

9.1.1 Dissolved Phase Plume (Chlorinated Volatile Organic Compounds, Arsenic, and 1,4-Dioxane)

The Phase III RAP included a screening of seven potential technologies and detailed evaluation of four remediation technologies. Based on that evaluation, monitored natural attenuation (MNA) was the selected remediation approach. As discussed in Section 5, the MNA approach has generally performed as expected in this reporting period (2017 to 2022). The dissolved phase plume has not expanded and an overall gradual decrease in dissolved phase concentrations has been observed. Most importantly, site conditions observed during the reporting period do not pose a risk to human health or the environment.

The selection of MNA for groundwater was based primarily on conditions at the site that rendered other remedial technologies not feasible. The key site conditions and changes since 2017, if any, are discussed below:

- Chlorinated volatile organic compounds (CVOCs) in the bedrock matrix: This condition makes it very difficult to extract CVOCs or to have in-situ treatment reagents make the contact necessary to destroy or transform the contaminants. This condition is unchanged since 2017.

- Contaminants at depth of approximately 230 feet below ground surface: This depth renders contaminants very difficult to access for some technologies (in-situ injections such as chemical oxidation or chemical reduction) and not economically feasible for other technologies (thermal treatment). This condition is unchanged since 2017.

- Primary source of groundwater impacts is present beneath Building 1: The building makes it difficult or infeasible to implement some technologies (injection and extraction). Other technologies (thermal treatment and chemical oxidation) are very difficult to safely implement inside a building. Building 1 is still present and occupied.

- Groundwater contains a mixture of contaminants: The groundwater primarily contains CVOCs but arsenic, 1,4-dioxane, and petroleum compounds are also present at levels above the remedial goals. The combination of contaminants limits the application of some remedial technologies because, in general, technologies that work on organic compounds (CVOCs, 1,4-dioxane, and petroleum) do not work for inorganics like arsenic. Some remedial methods such as in-situ chemical oxidation can have adverse side-effects such as creating more mobile forms of arsenic and other metals. For organics, reductive dechlorination (one of the most common and effective methods for CVOCs) is not effective for 1,4-dioxane or petroleum compounds. The combination of contaminants and thus the difficulties treating all the contaminants has not changed since 2017.

- The area of groundwater impacts is relatively large: The areal extent of the plume is approximately 28 acres. The size of the plume does not render technologies ineffective but can make some technologies not economically feasible.

Site conditions have not changed in a manner that creates an opportunity for use of alternative technologies to MNA.

Research and implementation of new remediation technologies is an on-going process. Remediation staff at AECOM are familiar with advances in remediation technologies through review of academic literature, attending conferences, AECOM's Technical Practice Group, as well as implementation of projects for clients. The 2017 Phase III RAP provided a screening of a comprehensive list of remediation technologies. A completely new or novel technology with potential application to this site has not been identified. However, since 2017, there have been advances and improvements in some of the technologies. Those advances and how they relate to remedies for this site are discussed below.

At the time of the Phase III RAP, implementation of in-situ thermal treatment in bedrock was limited in general and specifically limited only to sandstone materials (sedimentary rock). More recently, thermal treatment vendors have developed some experience with igneous rocks similar to the granite at the site; however, this cannot be considered a fully developed or realized application. Significant challenges have included recovery of desorbed vapors, mobilization of CVOCs to downgradient areas, and uneven/inadequate heat distribution. The other problems for thermal treatment previously identified remain valid, including the presence of the building, the depth of impacts, and the footprint of the plume. While thermal treatment has advanced, it remains infeasible for this site. A further review of thermal treatment is recommended for the next five-year review.

Containment by pump and treat was considered in the 2017 Phase III RAP but not selected. The fundamental drawback of pump and treat identified in 2017 is the inability of pump and treat to extract CVOCs that have diffused into the bedrock matrix and micro-fractures. There has been no change in site conditions. While experiments with increasing desorption of CVOCs by use of surfactants and heating have been attempted, these technologies are not expected to be effective for the low permeability granite with diffusion-limited CVOCs. Other advances in pump and treat include greater use of directional drilling under buildings and new options for above ground treatment of 1,4-dioxane (use of resins instead of oxidation). These advances partially address some of the secondary reasons pump and treat was not selected in 2017. There remains, however, no

realistic expectation that pump and treat can achieve the remediation goals significantly faster than MNA.

In-situ biological treatment was considered in the 2017 Phase III RAP. Since 2017 this technology has become more sophisticated with innovations such as in-situ microcosm testing and additional laboratory methods for specific genes involved in dechlorination. These innovations, together with combination reagents including zero valent iron and reagents to promote favorable geochemical conditions are on-going developments. None of these developments, unfortunately, address the primary challenge of effective delivery in a granitic bedrock system. The potential difficulties with mobilizing arsenic and not treating 1,4-dioxane also remain unresolved.

Inability to effectively deliver reagents, either biological or abiotic, is a common challenge, especially at sites with impacts in bedrock groundwater. Hydraulic and pneumatic fracturing (fracking) has been considered for some sites. The ability of this technology to be precisely deployed without damage to utilities, buildings or others features at this site is uncertain. As discussed in detail in this report, the plume is stable, not expanding, and is not impacting drinking water wells, surface water, or indoor air. Fracking could create pathways to surface water, indoor air, and/or downgradient groundwater. For this site, fracking creates more risks than potential benefits.

9.1.2 Light Nonaqueous Phase Liquid

The 2017 Phase III RAP included screening of five technologies and detailed evaluation of three technologies for LNAPL. The selected remedy was MNA (AECOM, 2017c).

As discussed in Section 4, little LNAPL has been detected from 2016 to 2022. LNAPL appears to be slowly declining as predicted by the modeling conducted in support of the 2017 Phase III RAP. Additionally, rates of natural source zone depletion have been documented for the site. Given these conditions, there appears to be little reason to consider alternative remediation technologies for LNAPL.

In summary, no information, such as emerging technologies that may be more cost-effective and implementable than technologies available at the time the Temporary Solution Statement was submitted, has arisen in the past five years that would alter this conclusion. Therefore, based on a review of this information as presented in the 2017 Phase III RAP, the conclusions of the Phase III (as summarized above) remain valid, and a Temporary Solution continues to be appropriate for

groundwater and LNAPL at the site. MNA remains the best remediation technology for this site. Other remediation technologies have advanced but, thus far, are not suitable replacements for MNA at this site.

9.2 EFFECTIVENESS OF THE TEMPORARY SOLUTION

Over the last five years, there have been significant reductions in groundwater concentrations of CVOCs and LNAPL constituents in overburden. In addition, no changes of any significance to the groundwater concentrations and plume size or stability, have been observed in the bedrock groundwater over the last five years. Therefore, the Temporary Solution continues to be effective and appropriate for site groundwater and LNAPL.

9.3 DEFINITIVE AND/OR ENTERPRISING STEPS

Per 310 CMR 40.0861(2)(h), "definitive and enterprising steps" to achieve a Permanent Solution must be presented when the selected remedial alternative is a Temporary Solution. As specified in 310 CMR 40.0861(2)(h), such steps may include performing pilot tests or bench-scale studies, investigating ways to reduce the costs or risks of implementing a specific remedial alternative, and developing new technologies. These steps are not generally applicable to groundwater or LNAPL at the site. During the past five years potentially feasible options or emerging technologies for reducing concentrations of compounds of concern in groundwater or for the LNAPL have not been identified.

Based on the results of this Periodic Review, a Temporary Solution remains the most feasible and appropriate alternative for site groundwater and LNAPL.

9.4 CHANGES IN ACTIVITIES, USES AND/OR EXPOSURES THAT MAY CAUSE AN ACTUAL OR POTENTIAL INCREASE IN EXPOSURE

Based on an evaluation of site activities and uses over the last five years, current conditions are consistent with those documented during preparation of the Temporary Solution Statement in 2017 and, therefore, there is no actual or potential increase in exposure.

Since the submittal of the Temporary Solution Statement in 2017, no major changes to the site activities and uses have occurred. As discussed in Section 2.6, the site Activity and Use Limitation (AUL) prohibits use of the site for residential, school, playground, park, or daycare use. Building

1A continues to house an indoor public go-cart racing facility (K1 Speed Boston). A sports equipment retailer (CranBarry) occupied Building 1A from 2015 or 2016 through 2021 and recently vacated its space in Building 1A. United Parcel Service (UPS) operated within Building 1 seasonally (October to December) from 2017 to 2019. As of September 2020, UPS started using the building full time, Monday through Saturday as a parcel distribution center and a will-call customer center, holding packages for customer pick up. This usage is similar to that of the former sporting goods retail shop in Building 1A. Ametek Aerospace continues to occupy Building 2 for testing of aerospace equipment. The Guard Shack was razed in 2017, eliminating the potential for indoor air exposure.

Table 9-1 lists the source property on Fordham Road and the commercial/industrial properties that are located on Concord Street downgradient of the site and compares current use to the use documented in 2017. These properties are partially within the site boundary as they extend back into the site's woodland and wetland. Changes to the property use are minimal and therefore, there is no increase in potential exposure.

9.5 UPDATE TO RISK CHARACTERIZATION AND SUBSTANTIAL HAZARD EVALUATION

The results of a Substantial Hazard Evaluation presented in the Temporary Solution Statement submitted to Massachusetts Department of Environmental Protection (MassDEP) in May 2017 were reviewed as part of this Periodic Review. A Method 3 Risk Characterization for human health, public welfare, and safety was completed as part of the Phase II Report (AECOM, 2017c). At that time, a Substantial Hazard Evaluation for human health was conducted.

The Method 3 risk characterization (Collaborative Risk Solutions LLC and AECOM, 2017) performed to support the Temporary Solution Statement evaluated current and potential future exposures for commercial/industrial workers exposed to soil and indoor air, utility and construction workers exposed to soil and groundwater during intrusive site activities, and site trespassers (including local residents) exposed to soil, wetland soil, wetland sediment, and wetland surface water. A future drinking water scenario was evaluated for local residents. A residential soil exposure pathway was not conducted because soil contaminants are limited to the 50 Fordham Road property, which has an AUL preventing residential use.

The risk characterization concluded that a condition of No Significant Risk (NSR) was met for all current exposures and for all future exposures, with the exception of the use of groundwater as tap water. Further, site groundwater concentrations were found to exceed Massachusetts and federal drinking water standards. Therefore, a condition of NSR of harm to human health was not achieved for the site. Due to the exceedance of the MCP UCL for trichloroethene (TCE), a condition of NSR to public welfare was also not achieved. The risk characterization concluded that conditions of NSR of harm to safety and the environment do exist. The Temporary Solution Statement concluded that a condition of No Substantial Hazard to Human Health existed, because groundwater was not used for drinking and was not anticipated to be used for drinking over the next five years.

The risk characterization was implemented using MassDEP Shortforms where available, and AECOM spreadsheets for scenarios lacking Shortforms. Shortforms include the most current default MassDEP risk characterization parameters, including toxicity values, exposure assumptions, and absorption factors, which were also used in the AECOM spreadsheets. These factors have not changed since 2017, and site use and exposure potential has not changed with the exception of the use of Building 1 by UPS and CranBarry vacating Building 1A. Indoor air sampling was conducted annually in January or February from 2017-2022 as part of the OMM Program, including samples in Building 1 and 1A. All sample results were below the MassDEP C/I Threshold values (See Table 6-1) with the exception of 1,2-dichloroethane which is not present in soil or groundwater onsite and, therefore, was attributed to indoor sources within the tenant spaces. Therefore, the results of the risk characterization remain valid; there are no unacceptable risks for current or future receptors due to indoor air, soil, sediment, or surface water.

Groundwater monitoring occurred annually as part of the OMM Program from 2017 to 2021. As discussed in Section 5, there are no significant upward trends for arsenic, 1,4-dioxane, or petroleum hydrocarbons. The arsenic and 1,4-dioxane plume geometries are stable, and the petroleum hydrocarbon plume is shrinking in the overburden and bedrock intervals. Total arsenic concentrations ranged from not detected to 175 micrograms per liter (µg/L) in 2021 samples, with exceedances of the GW-1 standard of 10 µg/L in 10 wells. Concentrations of 1,4-dioxane ranged from not detected to 48 ug/L, with concentrations in most wells exceeding the GW-1 standard of 0.3 µg/L. Three wells exhibited exceedances of GW-1 standards for petroleum hydrocarbon constituents (C9-C18 Aliphatics, or C9-C10 Aromatics). Concentrations of at least one chlorinated VOC exceeded GW-1 standards in most wells. Concentrations of TCE continue to exceed the UCL

in bedrock groundwater in well AE23R beneath building 1. Due to these exceedances, a condition of NSR to human health and public welfare has not been achieved. As was concluded in 2017, the only exposure pathway with unacceptable risk is future use of groundwater as drinking water. Site groundwater is not used as drinking water, and drinking water use is not considered likely during the next five years. As noted in Section 2.6, no drinking water wells are located within 0.5 miles of the site. Therefore, based on an assessment of the 2017 risk characterization, the groundwater and indoor air data collected since then, and no use of groundwater as drinking water, a condition of No Substantial Hazard continues to be present at the site.

The potential risks to the environment and ecological receptors were also evaluated as part of the Method 3 risk characterization (Collaborative Risk Solutions LLC and AECOM, 2017). The Environmental Risk Characterization (ERC) focused on exposures of aquatic organisms to wetland soil, surface water, and sediment located in the wetlands in the eastern portion of the site and downstream in the Ipswich River. Ecological exposures in the upland portion of the site were determined to be insignificant due to the upland commercial land uses and lack of habitat due to the presence of structures and pavement. There have been no major changes to site uses or activities since 2017, so the assumptions of ecological exposures made in the ERC are still valid.

The ERC involved the screening of sediment, surface water, and wetland soil analytical data against the effects-based screening levels per MCP guidance, which have not changed since 2017. The ERC determined that there was no potential for risks based on the results of the ecological screening of samples collected in 2016 in the wetlands on site and in the surrounding area (i.e., “local conditions”), comparisons of soil and groundwater concentrations to the Method 3 UCLs, and the general observations made during site visits in October 2016 that indicated that the wetland supported typical plant and invertebrate communities. In addition, based on modeled dietary exposures for wildlife to post-excavation wetland soils, there were no significant risks to wildlife residing in the wetland. Finally, the transport of contaminants to the surface waters of the Ipswich River were not evident as site-related contaminants were not detected downgradient of the site in the river.

As detailed above and discussed in Section 5, there are no significant upward trends for arsenic, 1,4-dioxane, or petroleum hydrocarbons in groundwater and only one VOC (TCE) was detected in 2021 at one location beneath Building 1 above the UCL. As stated in the ERC, these compounds

were not identified as chemicals of concern in the wetland surface water and were not detected in surface water downgradient in the river. In addition, these compounds were not detected or were detected sporadically at low levels that do not exceed the UCLs from 2017-2021 at two well clusters closest to the Ipswich River (STM-3 and STM-8). Therefore, based on the lack of changes to site activities and uses and the groundwater data collected since the ERC, the conclusions of No Significant Risk to the Environment remain valid and a condition of No Substantial Hazard continues to be present at the site.

In summary, due to risks posed by potential future use of groundwater as drinking water, a condition of NSR to human health and public welfare has not been achieved. However, the exposure potential for human health or the environment is not increased from the conditions evaluated in the 2017 risk evaluation. Therefore, there is no anticipated increased significant risk to human health for current site uses or the environment, and a condition of No Substantial Hazard exists as is required for a Temporary Solution.

9.6 NECESSARY AND REQUIRED RESPONSE ACTIONS TO MAINTAIN THE TEMPORARY SOLUTION

Based on the current site conditions and uses, which are consistent with the conclusions of the 2017 Temporary Solution Statement, no response actions are necessary to maintain the Temporary Solution or the AUL.

9.7 ACTIVITY AND USE LIMITATION

The Temporary Solution for the site includes the implementation of an AUL to eliminate potential human health risks. A copy of the AUL is included in Appendix E.

On July 13, 2015, then owner Wilmington Realty Trust (WRT) placed an AUL on the portion of the site owned by WRT, encompassing Buildings 1, 1A, and 2, and the Eastern Parking Lot. This AUL was established to prevent uses of the property that would be inconsistent with maintaining a condition of No Substantial Hazard under the Massachusetts Contingency Plan (MCP). These prohibited uses include the following:

- Residential, school, playground, park, or daycare use

- Activities that would result in exposure to or the disturbance of potentially contaminated soils, bedrock, groundwater, and indoor air, unless appropriate precautions to prevent human exposure are taken, as described in the AUL

In addition, the AUL imposes certain obligations and conditions to maintain a condition of No Substantial Hazard, including maintenance of concrete floors, management of any excavated soil and/or bedrock under Soil Management Procedures set forth in 310 CMR 40.0030, and appropriate management of any groundwater removed during dewatering activities. Lastly, any activities which could result in exposure to, or disturbance of soil, bedrock, or groundwater must be conducted in accordance with some or all of the following, as determined by a Licensed Site Professional:

- The performance standards for Release Abatement Measures set forth by the MCP at 310 CMR 40.0440 (MassDEP, 2014)
- The soil management procedures pursuant to 310 CMR 40.0030, the Similar Soils Provisions Guidance (WSC# 13500; MassDEP, 2014)
- Construction of Buildings in Contaminated Areas (Policy WSC# 00 425; MassDEP, 2000a)
- Applicable health and safety procedures outlined in 310 CMR 40.0018.

The AUL is recorded on the property deed; therefore, responsibility of maintaining compliance with the AUL requirements transitioned with the sale of the property in December 2021 from WRT to Hilco Redevelopment Partners (HRP). HRP is listed as the current property owner in Section 1.3. Lockheed Martin confirmed as part of the property transfer from WRT to HRP, that HRP is aware of the AUL requirements and is legally bound to follow the requirements of the AUL.

Building 1 was renovated between 2017 and 2020 and is now occupied by UPS. The renovations did not violate the restrictions of the AUL.

The objectives of the AUL are being met and the institutional controls in place at the site are effectively maintaining a condition of No Substantial Hazard.

SECTION 10
FUTURE MONITORING

The Post-temporary Solution Operations, Maintenance, and/or Monitoring Plan schedule of activities for the first five-year period is presented in Table 10-1. This schedule will be implemented according to the updated schedule presented in Table 10-2, which includes activities described below to be completed up to the submittal of the second five-year Periodic Review of the Temporary Solution in May 2027. The schedule presented in Table 10-2 reflects a reduction in monitoring scope as detailed below.

- Lockheed Martin Corporation (Lockheed Martin) will discontinue annual indoor air monitoring of onsite buildings. Despite the results of the human health risk assessment in the 2017 Phase II Comprehensive Site Assessment showing no risk to indoor workers, Lockheed Martin voluntarily performed the indoor air monitoring for the first five years of monitoring under the Temporary Solution. The historical indoor air data from 2009 through January 2022 show that indoor air concentrations within Buildings 1 and 1A pose no risk to indoor workers with results below the Massachusetts Commercial/Industrial Threshold values.

- Following completion of the second quarter 2022 gauging event in May, Lockheed Martin will reduce light non-aqueous phase liquid (LNAPL) gauging and passive removal of LNAPL from quarterly to annually from 2022-2027. Historical LNAPL gauging results document a significant reduction in measurable LNAPL in shallow overburden wells in the Eastern Parking Lot onsite. Measurable LNAPL greater than 0.1 feet has not been detected in the wells monitored since September 2016 and has been limited to a sheen in wells CW-1 and CW-2. Lockheed Martin plans to conduct LNAPL gauging of seven monitoring wells (AE-03, AE-04, CW-1, CW-2 GZA-102S, PZ-2S, and TRC-101) located in the western portion of the Eastern Parking Lot annually each September from 2022 through 2027. If LNAPL thickness of greater than 0.1 feet is detected in a well, an adsorbent sock will be deployed to adsorb the LNAPL for subsequent off-site disposal.

- Lockheed Martin will reduce the groundwater sampling frequency from annually to biennially (every other year) with sampling to occur in 2022, 2024, and 2026. Groundwater analytical data support this reduction in frequency as concentrations are either stable, decreasing, or where increasing are not showing risk-relevant statistical increases. Biennial groundwater sampling of 95 monitoring wells for analysis of site chemicals of concern (i.e., chlorinated volatile organic compounds [VOCs], 1,4-dioxane, petroleum hydrocarbons, and arsenic) and relevant MNA parameters in overburden and bedrock groundwater will be conducted to provide horizontal and vertical coverage at upgradient, source zone, and downgradient locations onsite. Each groundwater-sampling event will include a site-wide

water level measurement round of the wells to be sampled. The next annual groundwater-sampling event will occur in September-October 2022. The 2022-2027 groundwater monitoring plan is detailed in Table 10-3 with the following notes:

- The list of 95 wells to be monitored for VOCs was selected based on a detailed review of historical data and concentration trend statistics (Mann Kendall). The list of wells provides sufficient coverage in overburden and bedrock site-wide as documented by the results of the Ricker Plume Sufficiency evaluation (Appendix H).

- Of the 95 wells to be monitored for VOCs, 35 of these wells will also be monitored for 1,4-dioxane to provide horizontal and vertical coverage in overburden and bedrock site-wide.

- The list of wells to be monitored for total and dissolved arsenic has been reduced to primarily overburden wells, with select bedrock wells where dissolved arsenic concentrations are above the GW-1 standard.

- Based on the significant reduction in total petroleum concentrations, the lack of fuel related VOCs detected in the VOC and/or PIANO (n-paraffins [P], iso-paraffins [I], aromatics [A], naphthenes [N], and olefins [O]) results, and the results of the forensic evaluation to identify petroleum hydrocarbon false positives using the PIANO analysis, the group of wells to be sampled for extractible petroleum hydrocarbons/volatile petroleum hydrocarbons (EPH/VPH) will be reduced to just nine overburden wells (AE-03, AE-04, GZA-102S, GZA-105S, GZA-105D, PZ-2S, TRC-101, TRC-102, and TRC-103) in the Eastern Parking Lot and one shallow bedrock well (AE-100R-1) in the former tank farm area surrounding wells CW-1 and CW-2. Wells at depth in bedrock and away from source areas no longer require monitoring for EPH/VPH.

- Groundwater samples from a focused group of monitoring wells will be submitted for monitored natural attenuation parameters including inorganics, anions/cations, dissolved gases, compound-specific isotopes, and microbial analyses.

- Post-temporary Solution Status and Remedial Monitoring Reports will continue to be submitted semiannually in May and November. The next semiannual report is due to the Massachusetts Department of Environmental Protection (MassDEP) in November 2022.

- Periodic reviews of site conditions will be conducted every five years to evaluate new technologies and their potential to achieve a Permanent Solution. The next five-year review of the Temporary Solution is due to the MassDEP in May 2027.

SECTION 11
LICENSED SITE PROFESSIONAL OPINION AND CONCLUSIONS

Comprehensive Response Actions at the site are limited to active remedial monitoring that includes monitored natural attenuation under Temporary Solution status. It is the opinion of AECOM Technical Services, Inc. that the Remedial Action Performance Standards are being accomplished as outlined in 310 Code of Massachusetts Regulation 40.0897, and as presented in the Temporary Solution Statement submitted to the Massachusetts Department of Environmental Protection by AECOM Technical Services, Inc. in May 2017. Based upon indoor air data collected to date, a critical exposure pathway or imminent hazard does not exist within Buildings 1 and 1A. Based upon light non-aqueous phase liquid gauging data collected during this five-year period, the existing light non-aqueous phase liquid has micro-scale mobility (can flow into a well); however, the light non-aqueous phase liquid is stable and not expanding. Based on groundwater data collected during this five-year period, the existing groundwater plumes for chlorinated volatile organic compounds, petroleum, and dissolved arsenic are stable and not expanding.

The seal and signature of the Licensed Site Professional who reviewed this Post-temporary Solution Status Report No. 10 and Periodic Review of the Temporary Solution are contained on the applicable Massachusetts Department of Environment Protection Permanent and Temporary Solution Statement form (Bureau of Waste Site Cleanup form BWSC104), Comprehensive Response Action Transmittal/Phase 1 Completion Statement form (Bureau of Waste Site Cleanup form BWSC108), and the Remedial Monitoring Report Form, submitted via eDEP.

SECTION 12
PUBLIC NOTIFICATION

The former General Electric facility is part of a joint Public Involvement Plan (PIP) with other Potentially Responsible Parties that was prepared in 2000 by the Massachusetts Department of Environmental Protection (MassDEP). As a PIP site, the former General Electric facility must meet additional regulatory requirements above the minimum requirements of the Massachusetts Contingency Plan.

During the Post-temporary Solution period, Post-temporary Solution Status Reports are required by the Massachusetts Contingency Plan (MCP) to be submitted every six months to the MassDEP. In accordance with the November 17, 2000 PIP (MassDEP, 2000b), these Status Reports are also required to be provided to the designated information repository at the Flint Memorial Library in the Town of North Reading. Members of the PIP mailing list, including the Chief Municipal Officer and Board of Health agents for the towns of Reading, North Reading, and Wilmington, have been notified of the availability of this report by mail. A copy of the letter sent to the PIP mailing list and listed municipal officers concerning the availability of documents in the repository including this status report and five-year review, as required under the PIP (MassDEP, 2000b), is included in Appendix L. The mailing included the updated 2022 Fact Sheet, also included in Appendix L.

Prior to groundwater sampling activities completed during this reporting period and after receipt of associated laboratory analytical results, AECOM Technical Services, Inc. (AECOM) submitted notifications using MassDEP Form BWSC-123 to the property owners listed below:

- Hilco Redevelopment Partners – 40-50 Fordham Road in Wilmington and North Reading
- Howland Development – 87 Concord Street in North Reading
- International Family Church – 99 Concord Street in Wilmington and North Reading
- Town of North Reading – 0 Furbish Pond Lane in North Reading
- North Reading Town Water – Wells along Concord Street in North Reading

- Wilmington Masonry – 62 Concord Street in North Reading
- YRC Freight – 95 Concord Street in North Reading

In addition, AECOM obtained verbal permission from the resident at 3 Furbish Pond Lane in North Reading to measure the depth to water in their private irrigation well, and subsequently provided the resident the groundwater elevation information.

Appendix L includes copies of the Bureau of Waste Site Cleanup forms and related notifications sent to property owners documenting the prior notification of the sampling event and the presentation of the analytical results resulting from that sampling event, as required by the MCP.

SECTION 13
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FIGURES

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Figure 5-1 Dissolved Arsenic in Groundwater – Overburden (0 78 ft bgs)

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Figure 5-6 1,4-Dioxane (SW8270D SIM) in Groundwater – Upper Bedrock (0 60 ft bgs)

Figure 5-7 1,4-Dioxane (SW8270D SIM) in Groundwater – Middle Bedrock (61 120 ft bgs)

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Figure 5-16 PCE in Groundwater – Lower Bedrock (121 232 ft bgs)

Figure 5-17 TCE in Groundwater – Overburden (0 78 ft bgs)

Figure 5-18 TCE in Groundwater – Upper Bedrock (0 60 ft bgs)

Figure 5-19 TCE in Groundwater – Middle Bedrock (61 120 ft bgs)

Figure 5-20 TCE in Groundwater – Lower Bedrock (121 232 ft bgs)

Figure 5-21 Total CVOCs in Groundwater – Overburden (0 78 ft bgs)

Figure 5-22 Total CVOCs in Groundwater – Upper Bedrock (0 60 ft bgs)

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Figure 5-33 CVOC Mole Fractions Along Plume Centerline

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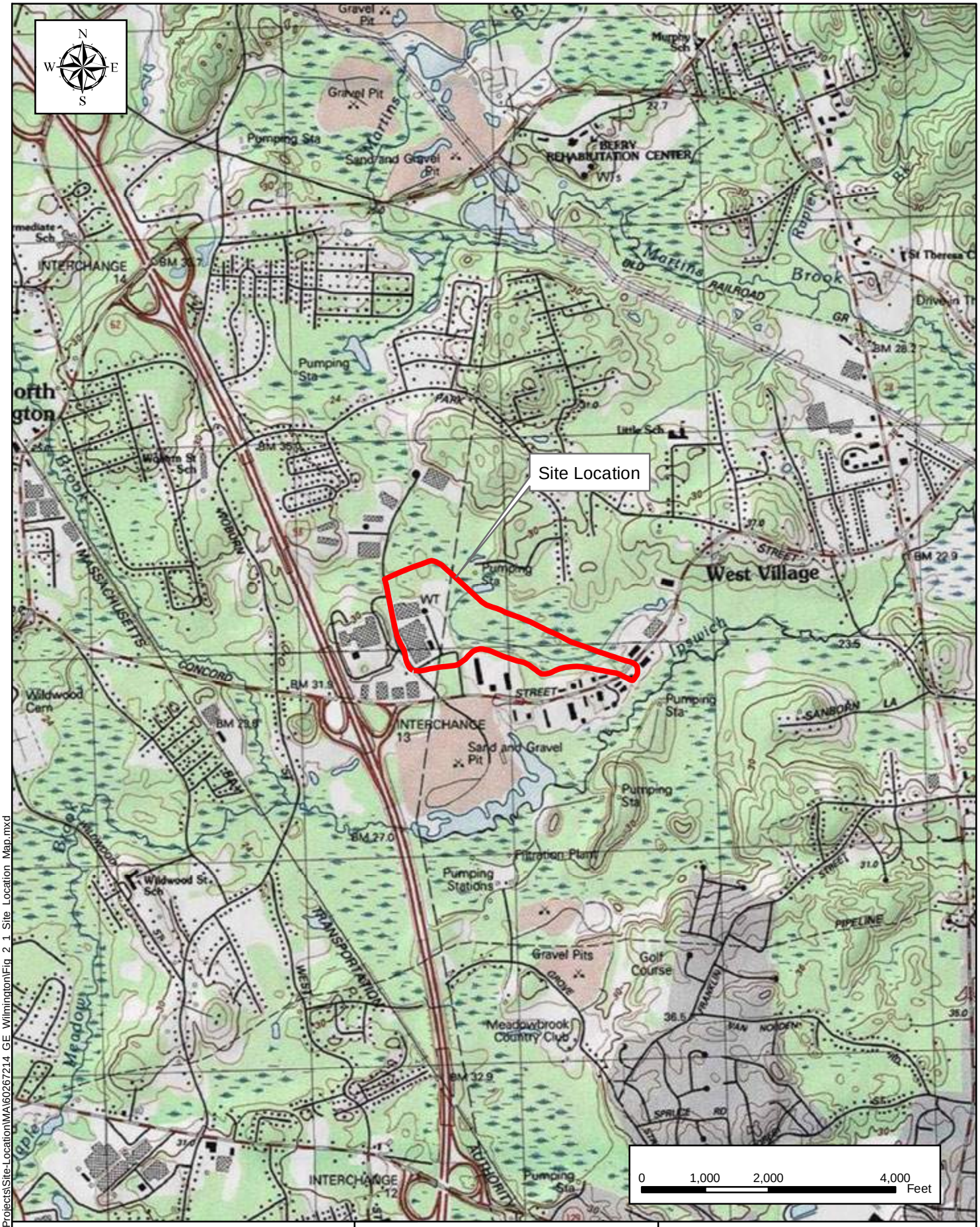
Figure 5-35 CSIA Modified Kuder Plots

Figure 5-36 CVOC Plume Mass – 2018, 2019, 2020

Figure 5-37 CVOC Plume Mass – 2017 and 2021

Figure 5-38 Conceptual Site Model Cross Section



Path: L:\Gisprojects\Projects\Site-Location\MA\60267214 GE Wilmington\Fig 2 1 Site Location Map.mxd

AECOM	Former GE Facility 50 Fordham Road, Wilmington, MA		SITE LOCATION MAP
	DATE: 10/10/2017	PROJECT: 60552044	FIGURE: 1-1

Last saved by: BARRYK(2021-04-12) Last Plotted: 2021-04-12
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\FIG 1-2_SITE PLAN.DWG

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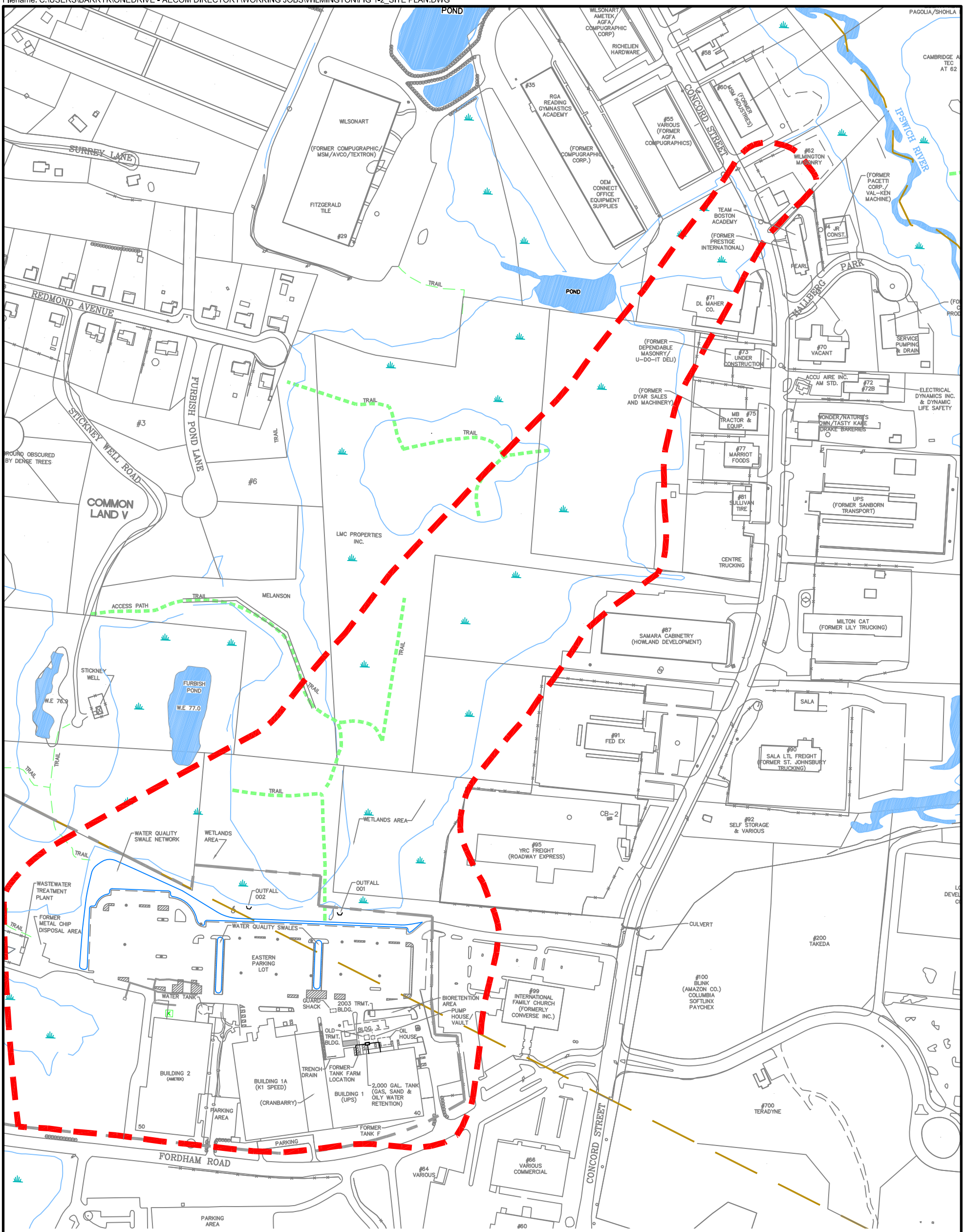

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

SITE PLAN

AECOM

60552044 2021-04-12

FIGURE: 1-2

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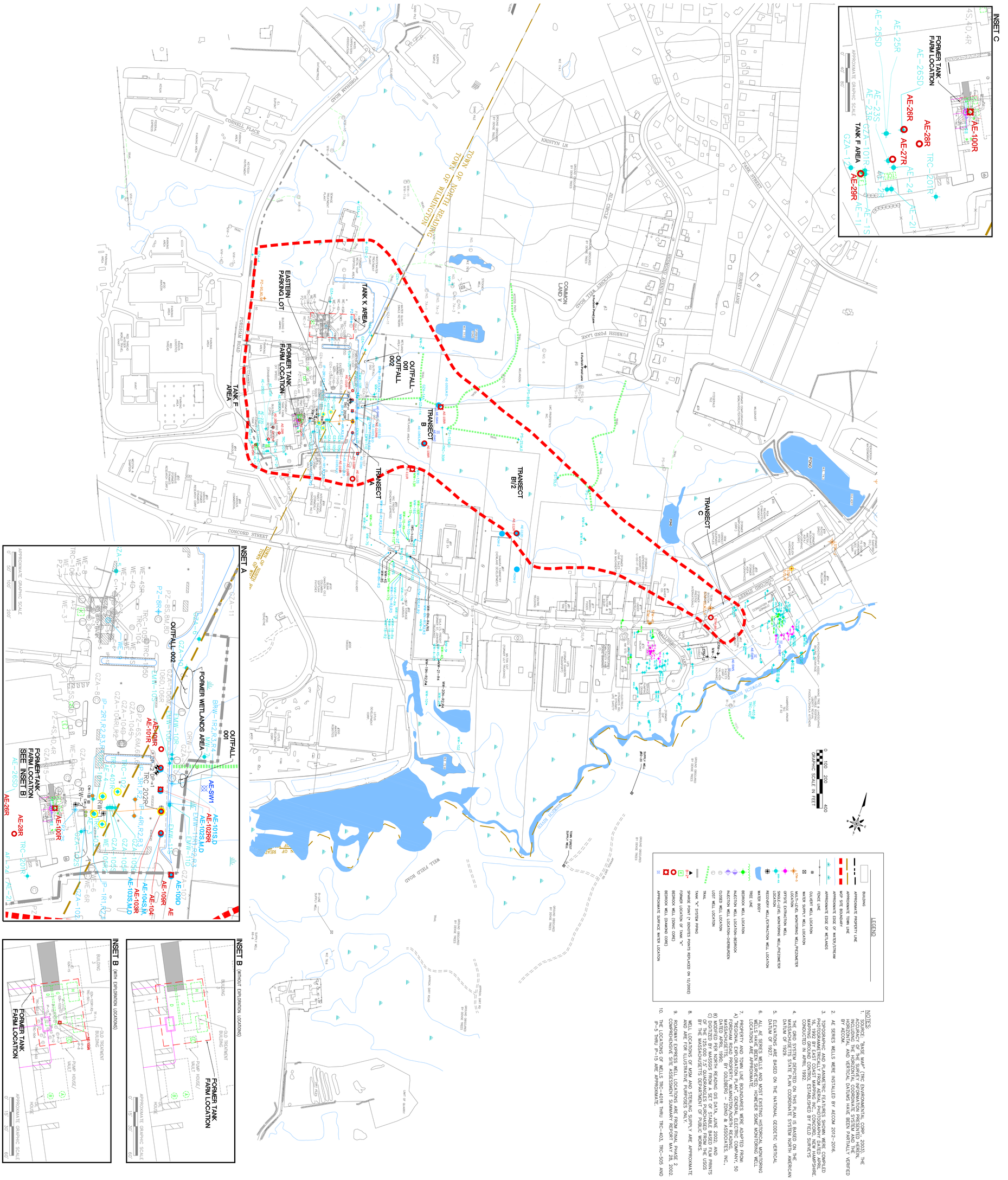


NOTES:

1. SOURCE: "BASE MAP" (TRC ENVIRONMENTAL CORP., 2003). THE ACCURACY OF THE SURVEY INFORMATION PRESENTED HEREIN, INCLUDING THE HORIZONTAL COORDINATE SYSTEM AND THE HORIZONTAL AND VERTICAL DATUMS HAVE BEEN PARTIALLY VERIFIED BY AECOM.
2. AE SERIES WELLS WERE INSTALLED BY AECOM 2012-2016.
3. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED APRIL 16, 1992 BY EAST COAST MAPPING INC., CONCORD, NEW HAMPSHIRE. MAPPING GROUND CONTROL ESTABLISHED BY FIELD SURVEYS CONDUCTED IN APRIL 1992.
4. THE GRID SYSTEM DEPICTED ON THIS PLAN IS BASED ON THE MASSACHUSETTS STATE PLAN COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1929.
5. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1927.
6. ALL AE SERIES WELLS AND MOST EXISTING HISTORICAL MONITORING WELLS HAVE BEEN SURVEYED; HOWEVER SOME MONITORING WELL LOCATIONS ARE APPROXIMATE.
7. PROPERTY AND TOWN LINE BOUNDARIES WERE ADAPTED FROM:
   A) "REGIONAL EXPLORATION PLAN", GENERAL ELECTRIC COMPANY, 50 FORDHAM ROAD PROPERTY, WILMINGTON/NORTH READING, MASSACHUSETTS, BY GOLDBERG - ZOINO & ASSOCIATES, INC., DATED APRIL 1990;
   B) MODIFIED PER NORTH READING GIS DATA, JUNE 2002; AND
   C) DIGITIZED BY MASSGIS FROM A SET OF STABLE BASED FILM PRINTS OF THE 125,000 7.5' QUADRANGLES PURCHASED FROM THE USGS BY THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS.
8. WELL LOCATIONS OF MSW AND STERLING SUPPLY ARE APPROXIMATE AND ARE FOR ILLUSTRATIVE PURPOSES ONLY.
9. ROADWAY EXPRESS WELL LOCATIONS ARE FROM FINAL PHASE 2 COMPREHENSIVE SITE ASSESSMENT SUMMARY REPORT MAY 28, 2002.
10. THE LOCATIONS OF WELLS TRC-401R THRU TRC-403, TRC-505 AND IP-5 THRU IP-15 ARE APPROXIMATE.

Former GE Facility - 50 Fordham Rd, Wilmington, MA

Lockheed Martin Corporation

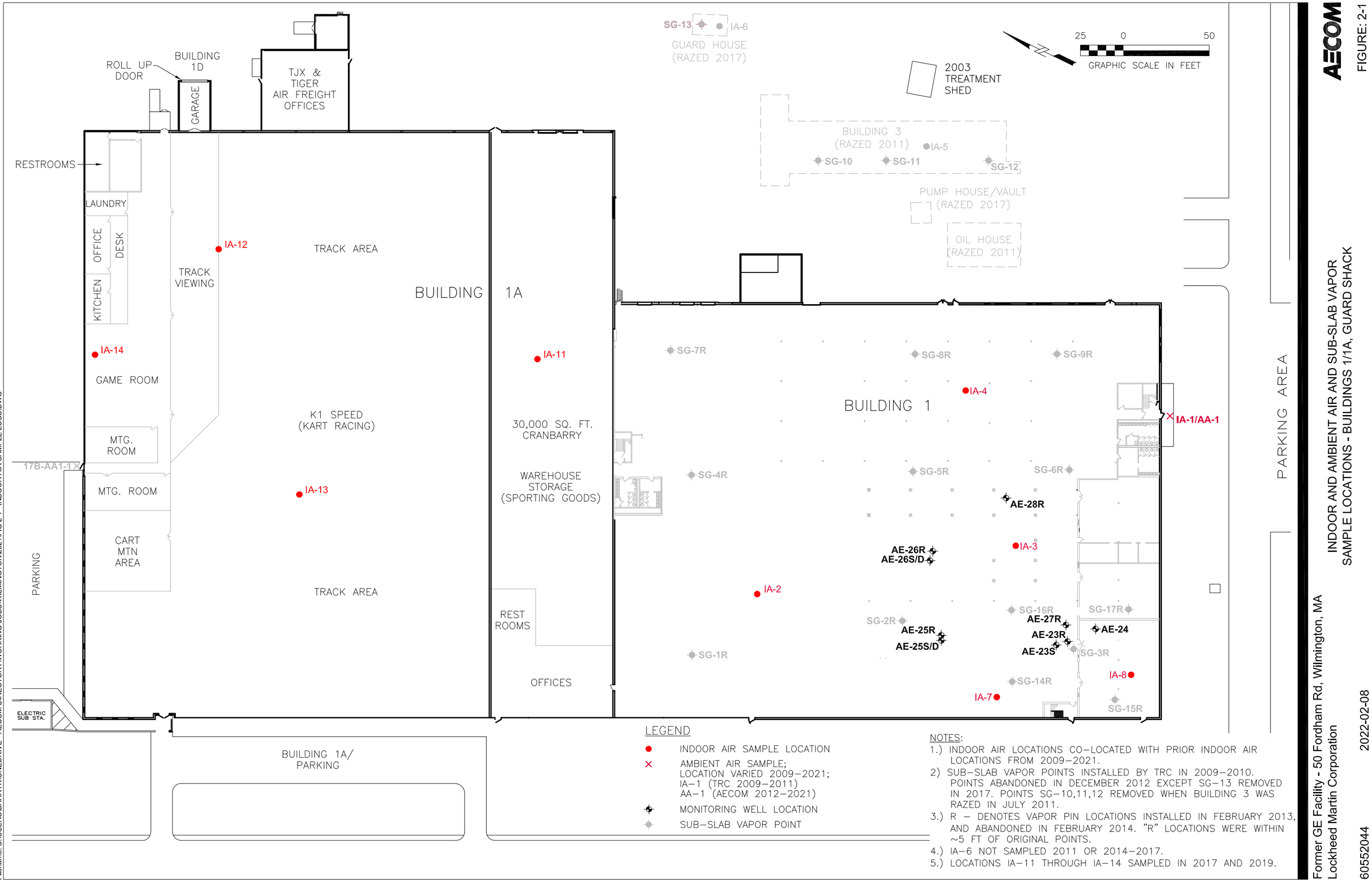
MONITORING WELL LOCATIONS

AECOM

60552044

Date: 2022-21-01

FIGURE: 1-3



LEGEND

- ● INDOOR AIR SAMPLE LOCATION
- × AMBIENT AIR SAMPLE; LOCATION VARIED 2009–2021; IA–1 (TRC 2009–2011) AA–1 (AECOM 2012–2021)
- ⌖ MONITORING WELL LOCATION
- ⌖ SUB–SLAB VAPOR POINT

NOTES:

1.) INDOOR AIR LOCATIONS CO–LOCATED WITH PRIOR INDOOR AIR LOCATIONS FROM 2009–2021.
2) SUB–SLAB VAPOR POINTS INSTALLED BY TRC IN 2009–2010. POINTS ABANDONED IN DECEMBER 2012 EXCEPT SG–13 REMOVED IN 2017. POINTS SG–10,11,12 REMOVED WHEN BUILDING 3 WAS RAZED IN JULY 2011.
3.) R – DENOTES VAPOR PIN LOCATIONS INSTALLED IN FEBRUARY 2013, AND ABANDONED IN FEBRUARY 2014. "R" LOCATIONS WERE WITHIN ~5 FT OF ORIGINAL POINTS.
4.) IA–6 NOT SAMPLED 2011 OR 2014–2017.
5.) LOCATIONS IA–11 THROUGH IA–14 SAMPLED IN 2017 AND 2019.

AECOM

FIGURE: 2-1

INDOOR AND AMBIENT AIR AND SUB-SLAB VAPOR SAMPLE LOCATIONS - BUILDINGS 1/1A, GUARD SHACK

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

2022-02-08

60552044

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved:A.T. ANSI B 11" x 17"

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Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 2-1 - INDOOR AIR SAMPLE LOCS.DWG

25 0 50

GRAPHIC SCALE IN FEET

BUILDING 1A

K1 SPEED
(KART RACING)

30,000 SQ. FT.
CRANBARRY
(SPORTING GOODS)

ELECTRICAL SUBSTATION

BUILDING 1

IA-10

IA-9

OFFICES

LEGEND

● INDOOR AIR SAMPLE LOCATION

NOTES:

1.) INDOOR AIR LOCATIONS IA–9 AND IA–10 WERE ADDED IN AUGUST 2012 ON MEZZANINE (2nd FLOOR) OF BUILDING 1.

2.) MEZZANINE RENOVATED 2017. LOCATION IA–10 NO LONGER EXISTS.

AECOM

FIGURE: 2-2

INDOOR AIR SAMPLE LOCATIONS
BUILDING 1 SECOND FLOOR

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

60552044 2021-03-01

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved:A.T. ANSI B 11" x 17"

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Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 2-2 - INDOOR AIR SAMPLE LOCS.DWG

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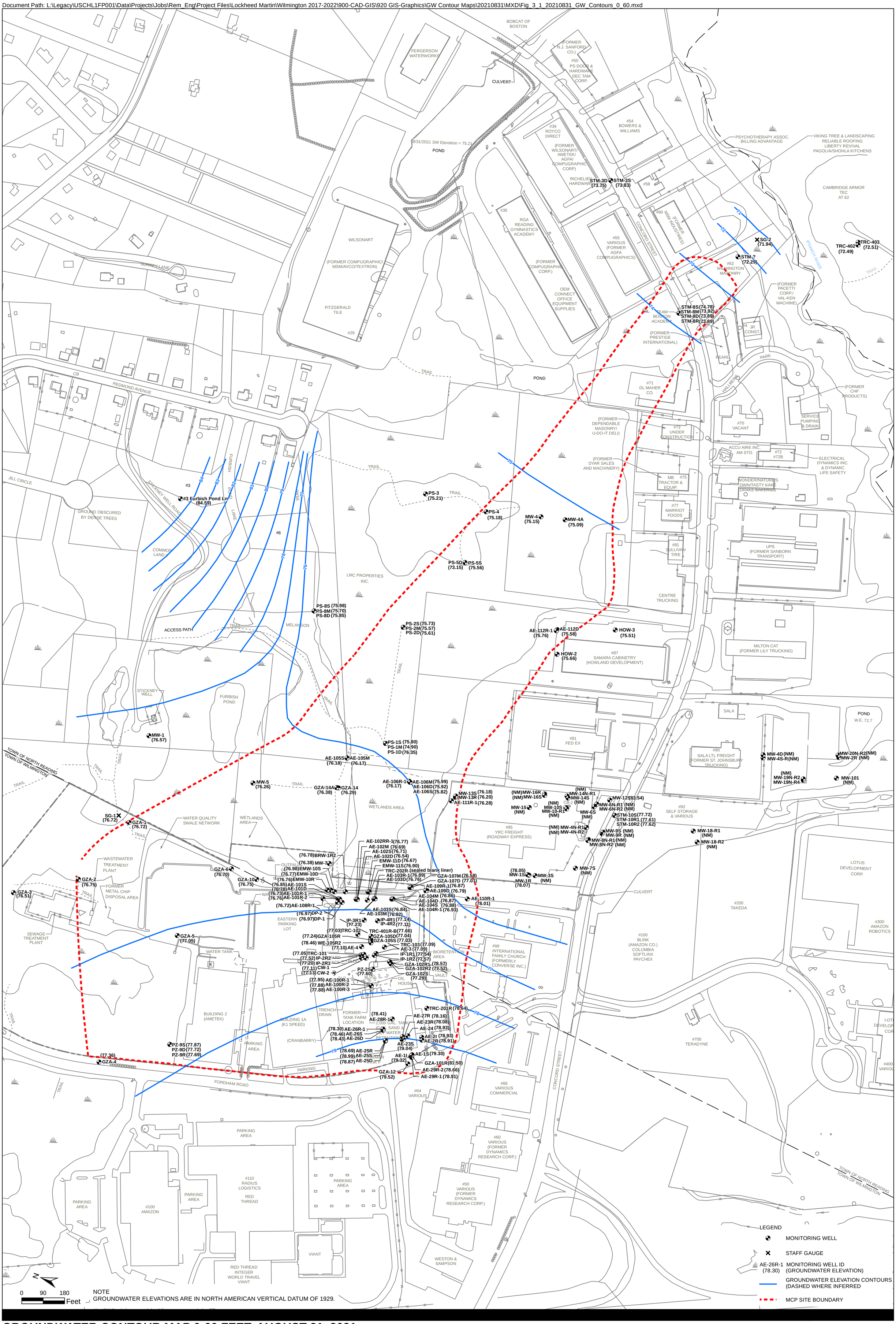

GROUNDWATER CONTOUR MAP 0-60 FEET, AUGUST 31, 2021

FORMER GE FACILITY

50 FORDHAM RD, WILMINGTON, MA

Project No.: 60552044.25

AECOM

FIGURE 3-1

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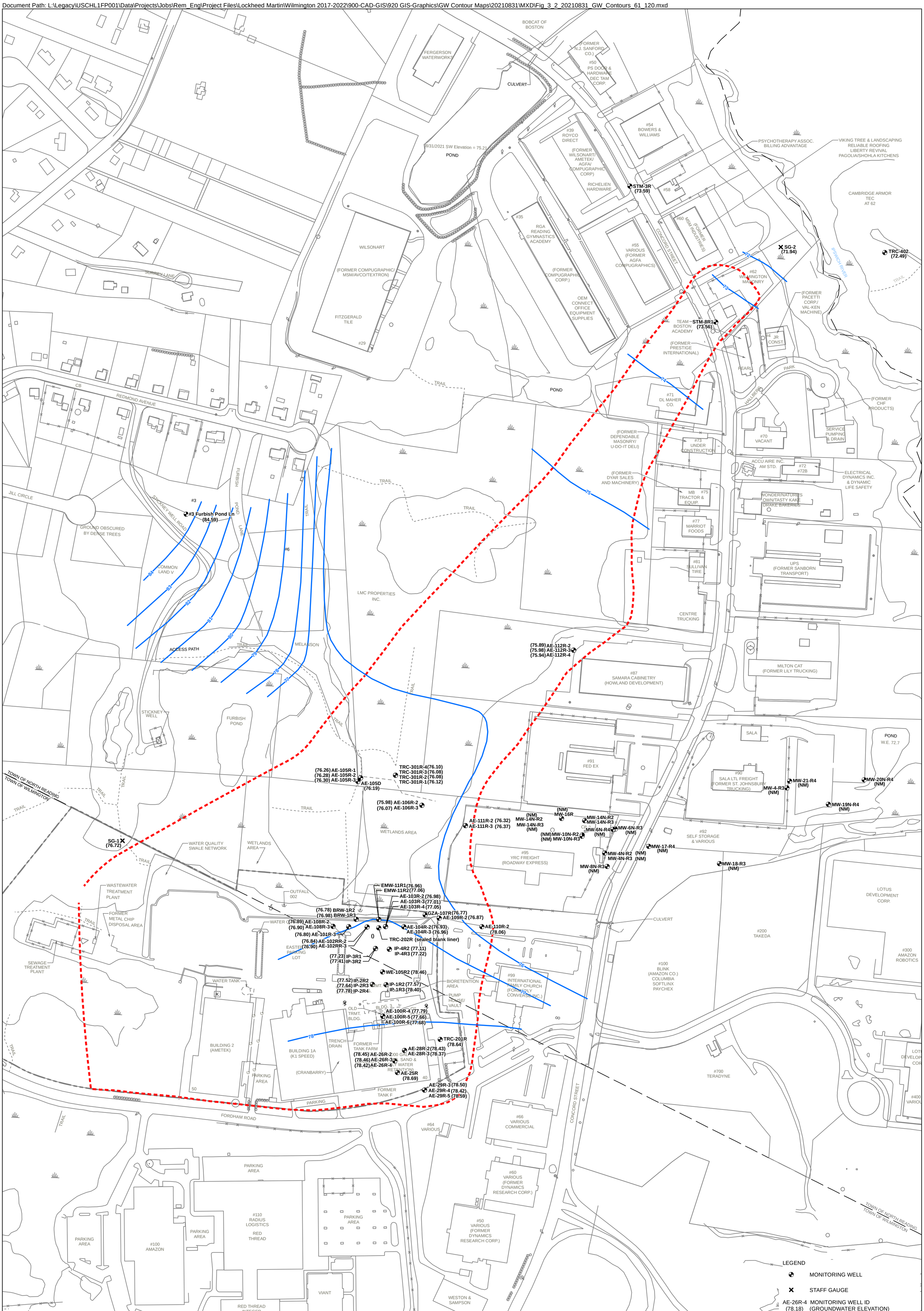

GROUNDWATER CONTOUR MAP 61-120 FEET, AUGUST 31, 2021

FORMER GE FACILITY

50 FORDHAM RD, WILMINGTON, MA

Project No.: 60552044.25

AECOM

FIGURE 3-2

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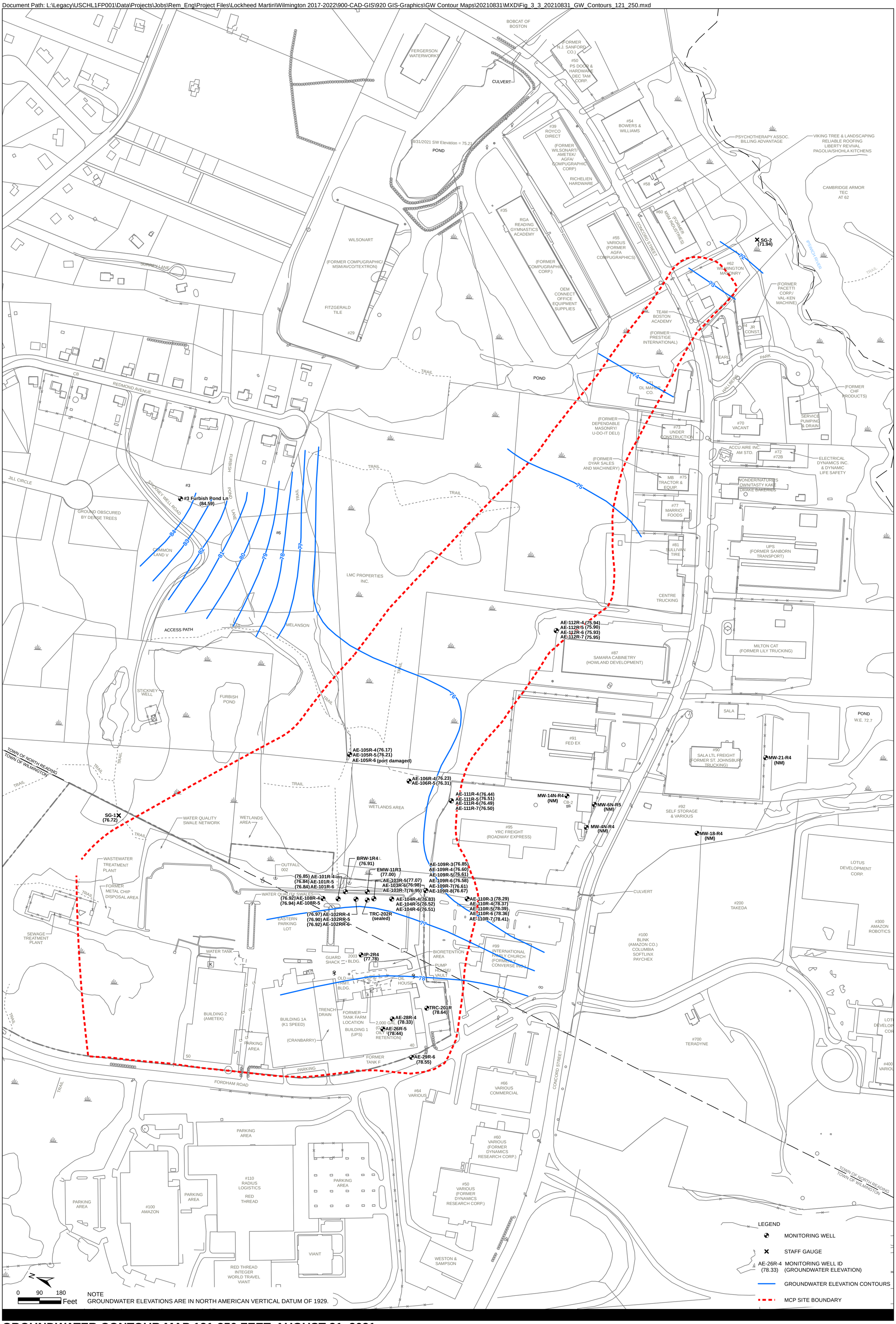


GROUNDWATER CONTOUR MAP 121-250 FEET, AUGUST 31, 2021

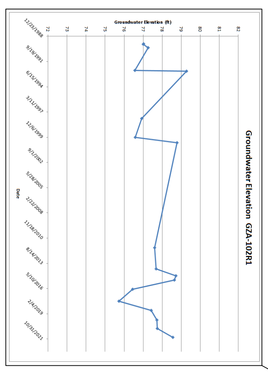
FORMER GE FACILITY

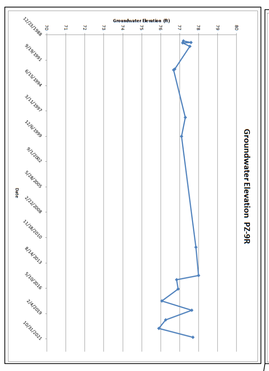
50 FORDHAM RD, WILMINGTON, MA

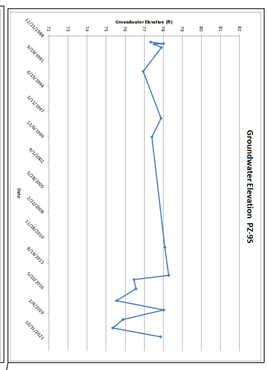
Project No.: 60552044.25

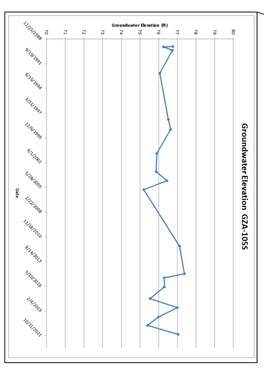
AECOM

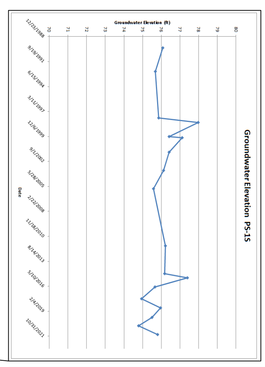
FIGURE 3-3

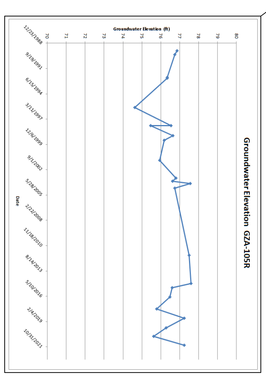


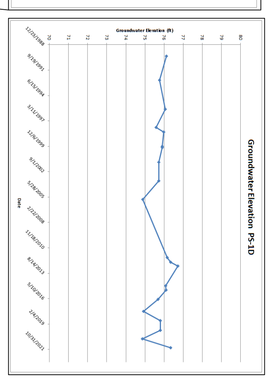


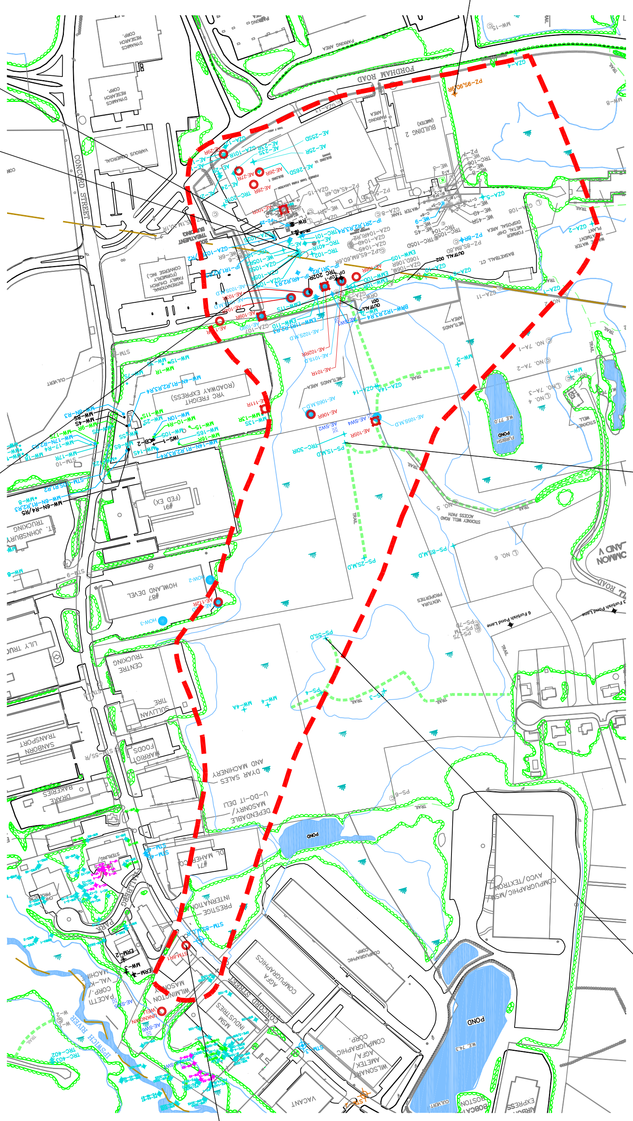


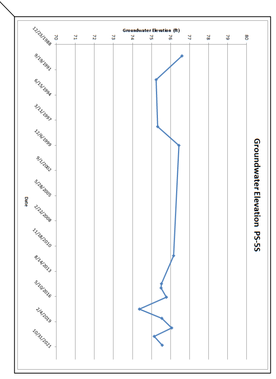


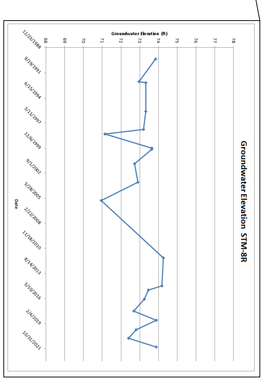


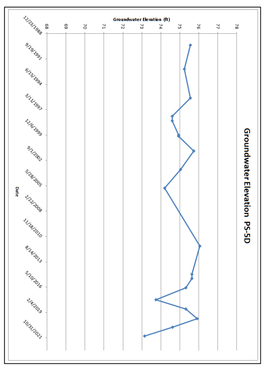












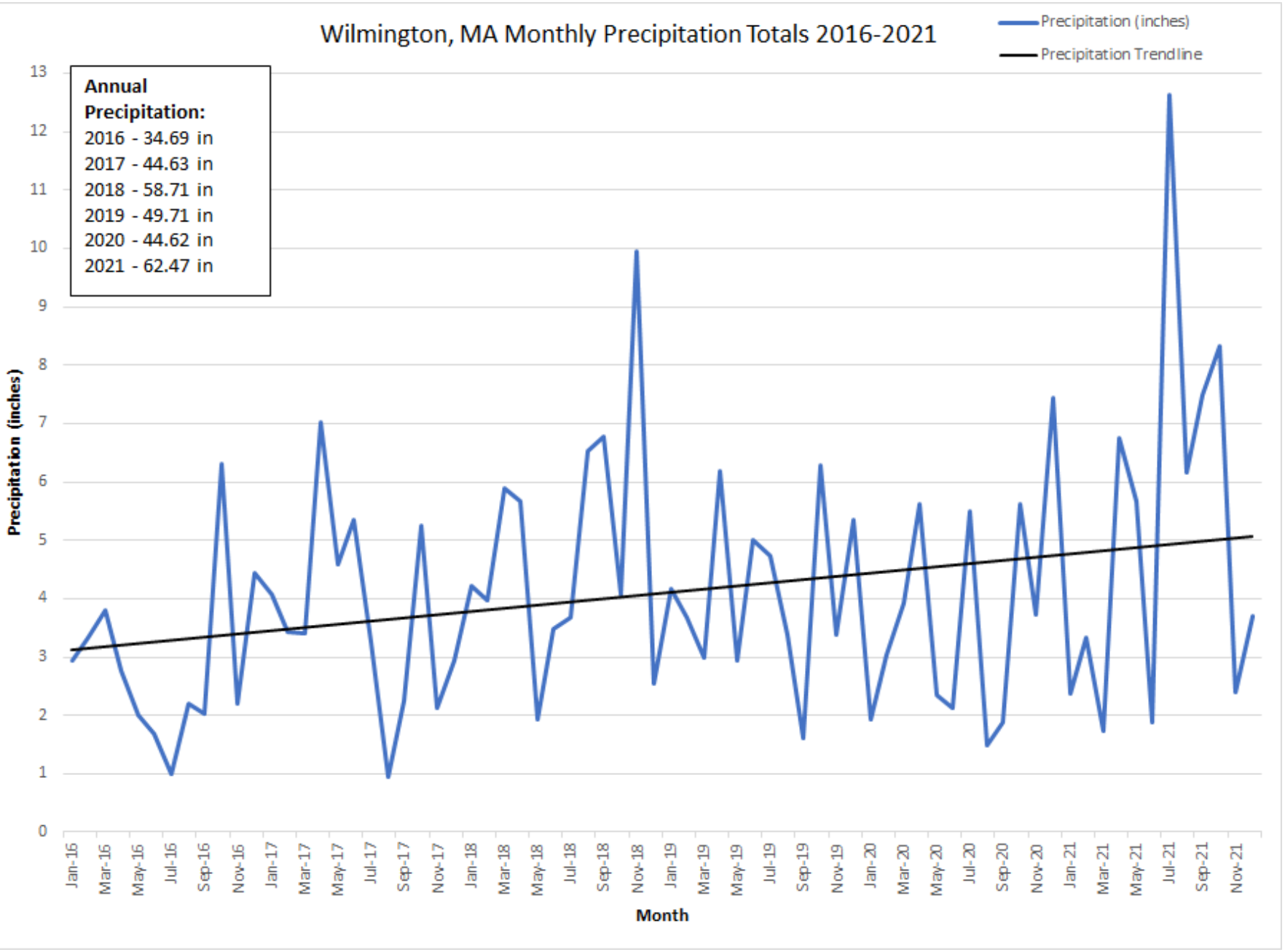
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

GROUNDWATER HYDROGRAPHS

AECOM

60552044 Date: 2022-03-03

FIGURE: 3-4



Source:
www.weather.gov

AECOM

Figure: 3-5

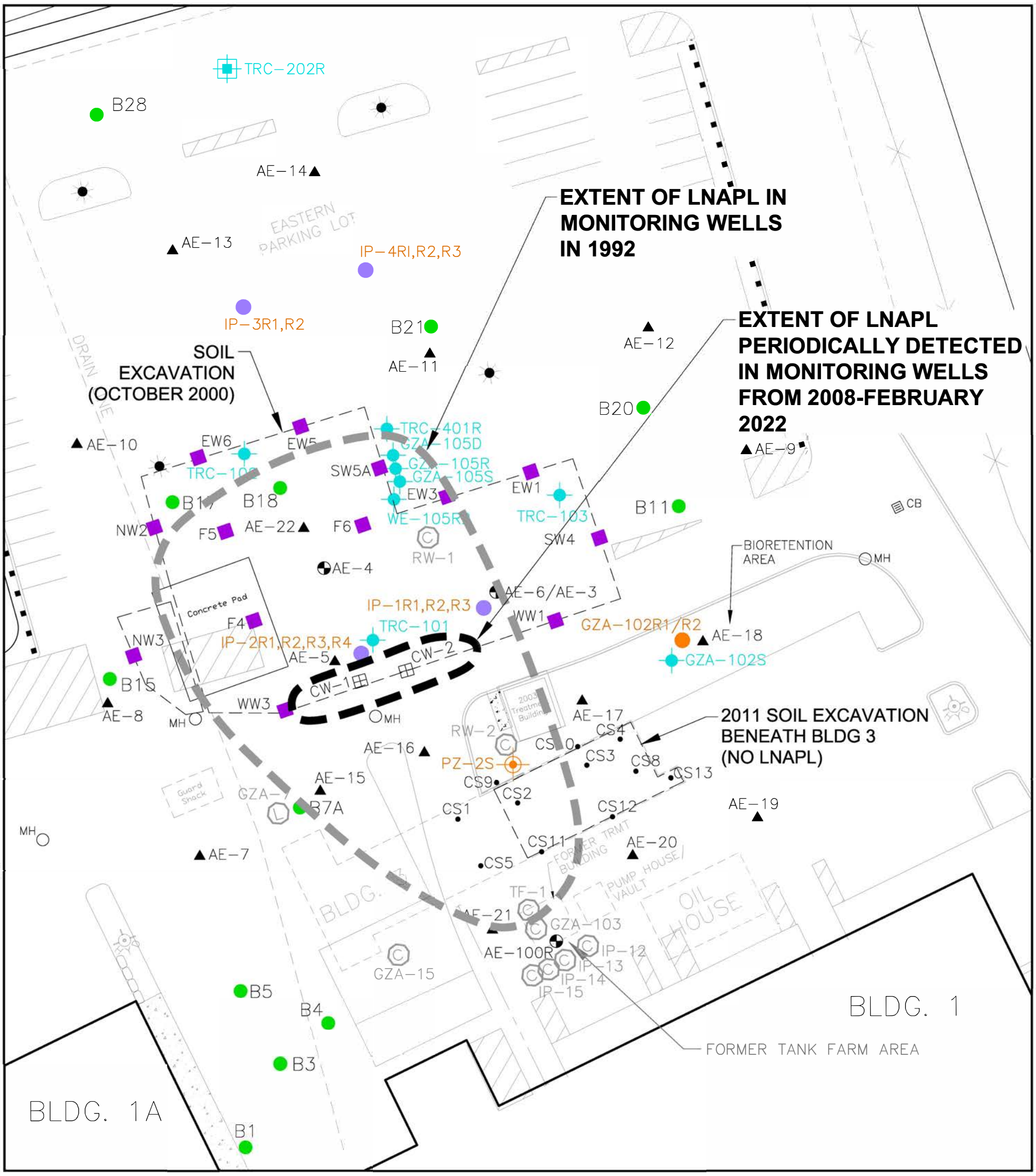
MONTHLY PRECIPITATION TOTALS 2016-2021

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

Date: 2022-03-07

60552044

Last saved by: BARRYK(2022-03-07) Last Plotted: 2022-03-07 Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: S.O. ANSI A 8.5" x 11"
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 3-5_MONTHLY PRECIPITATION.DWG



LEGEND

- MONITORING WELL LOCATIONS
- 2012 SOIL BORING LOCATION
- 1999-2000 SOIL BORING LOCATION (APPROXIMATE)
- 2011 BUILDING 3 POST EXCAVATION SOIL SAMPLE LOCATION (APPROXIMATE)
- 2000 EPL POST EXCAVATION SOIL SAMPLE LOCATION (APPROXIMATE)
- CLOSED WELL LOCATION
- LOST WELL LOCATION
- APPROXIMATE EXTENT OF LNAPL IN 2008-2018 (CW-1, CW-2) [APPROX. 1,792.8 SQ. FT.]
- APPROXIMATE EXTENT OF LNAPL IN 1992 (TF-1, RW-1, RW-2, PZ-2S, GZA-105S, DP-5, DP-6) [APPROX. 19,574.3 SQ. FT.]

SOURCE:

1. EPL Soil Borings (B1, B4, B11, B15, B17, B18, B21, B28) from Phase III RAP Addendum Report (TRC, March 2000)
2. Post Excavation Soil Samples (floor and side walls) and Confirmatory Soil Boring Samples (B7A, B20) from Phase IV As-Built Construction and Final Inspection Report (TRC, January 2001)
3. Building 3 Post Excavation Soil Samples (CS-1 through CS-5, CS-8 through CS-12) from RAM Completion Report (TetraTech, March 2012)
4. Eastern Parking Lot Soil Borings (AE-4 through AE-22, excluding AE-12, -13, -14) from Phase II Comprehensive Site Assesment (AECOM, 2017)

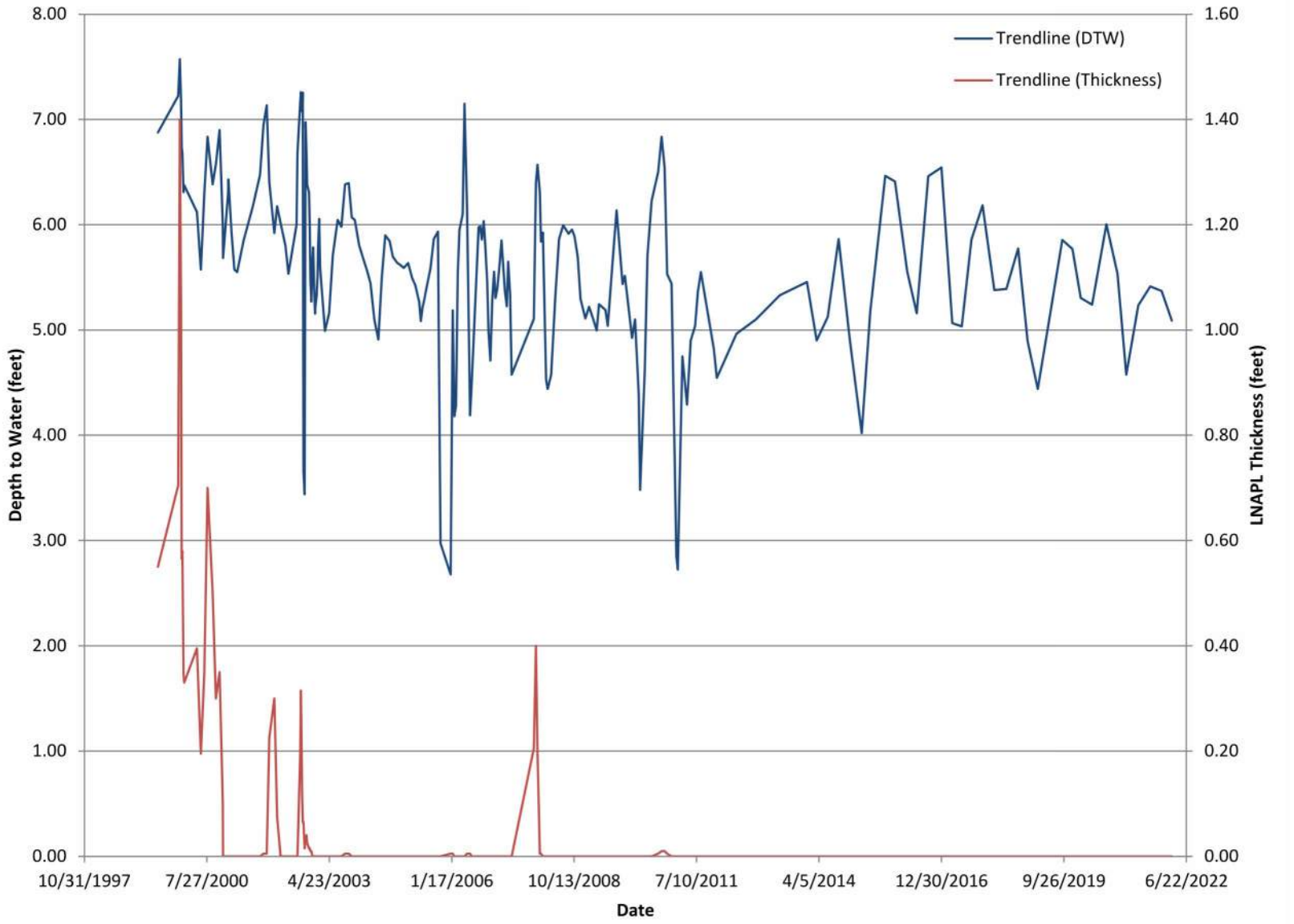
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

TANK FARM - EPL
EXTENT OF LNAPL IMPACTS

60552044 2020-09-14

AECOM

FIGURE: 4-1



AECOM

Figure: 4-2

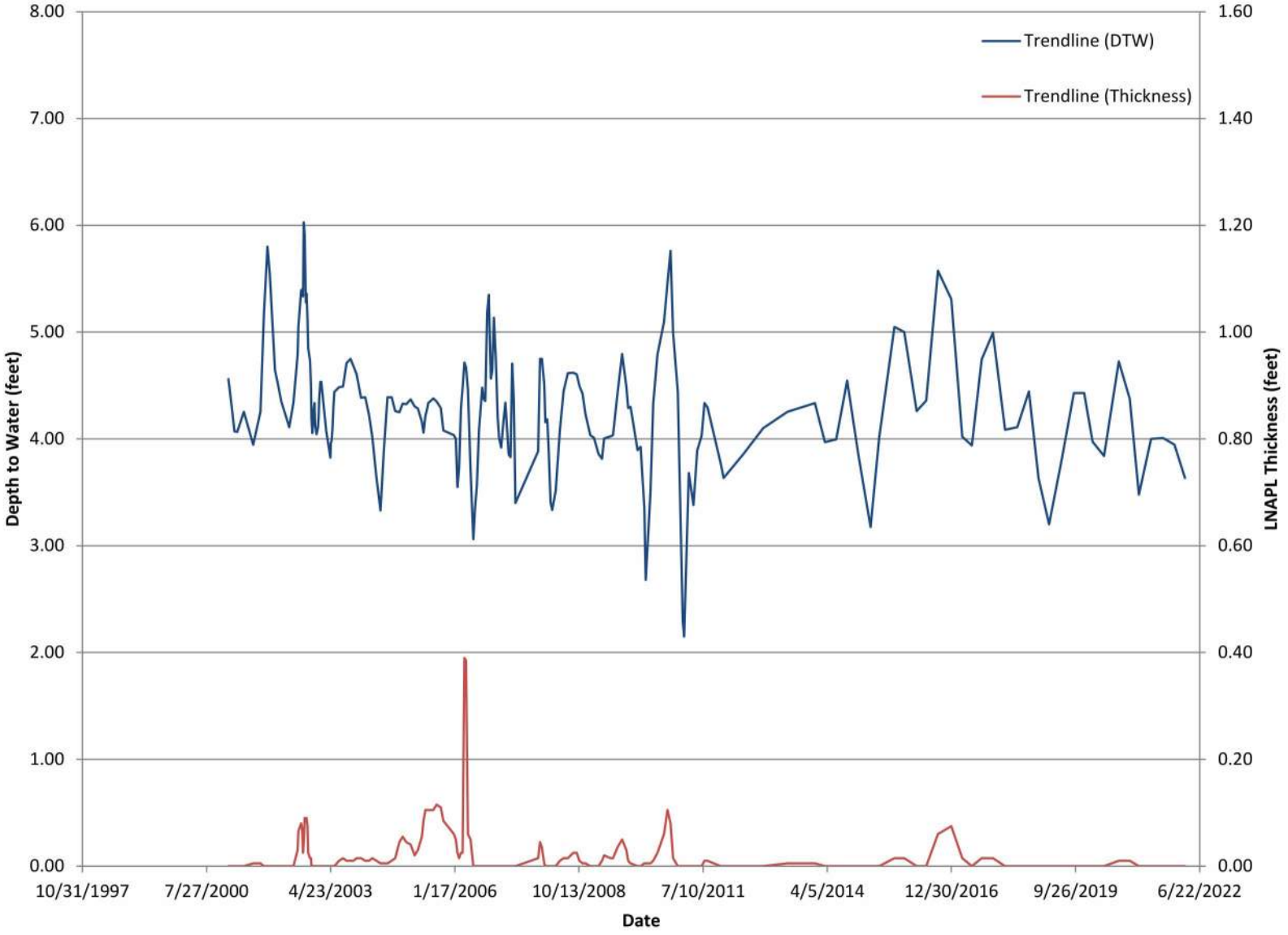
PZ-2S - Depth to Water versus LNAPL Thickness

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

Date: 2022-03-07

60552044

Last saved by: BARRYK(2022-03-07) Last Plotted: 2022-03-07 Project Management Initials: Designer: K.P.B. Checked:S.O. Approved:S.O. ANSI A 8.5" x 11"
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 4-2_PZ-2S - DEPTH TO WATER VS LNAPL.DWG



AECOM

Figure: 4-3

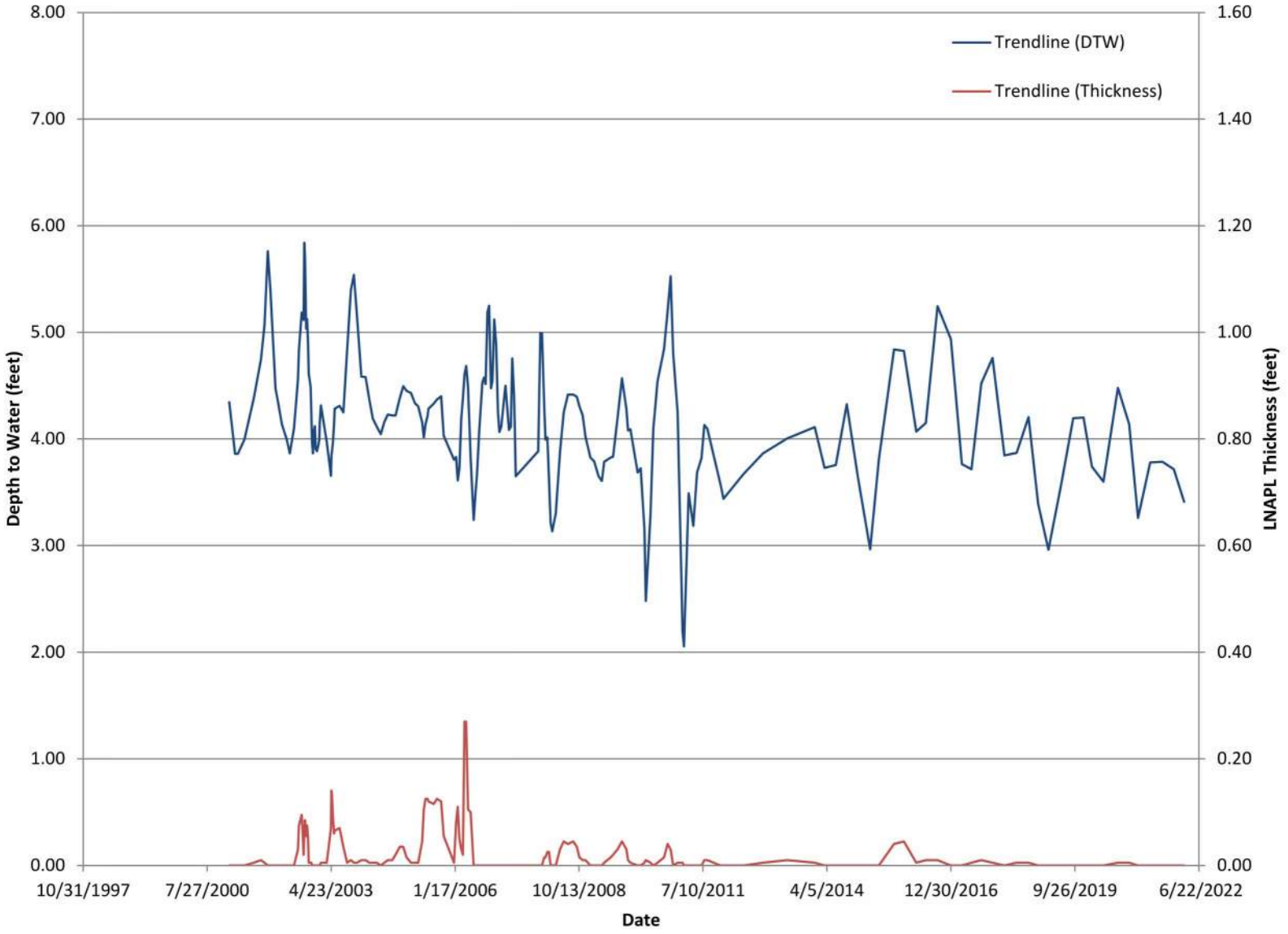
CW-1 - Depth to Water versus LNAPL Thickness

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

Date: 2022-03-07

60552044

Last saved by: BARRYK(2022-03-07) Last Plotted: 2022-03-07 Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: S.O. ANSI A 8.5" x 11"
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 4-3_CW-1 - DEPTH TO WATER VS LNAPL.DWG



AECOM

Figure: 4-4

CW-2 - Depth to Water versus LNAPL Thickness

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

Date: 2022-03-07

60552044

Last saved by: BARRYK(2022-03-07) Last Plotted: 2022-03-07 Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: S.O. ANSI A 8.5" x 11"
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 4-4_CW-2 - DEPTH TO WATER VS LNAPL.DWG

AECOM

Figure: 4-5

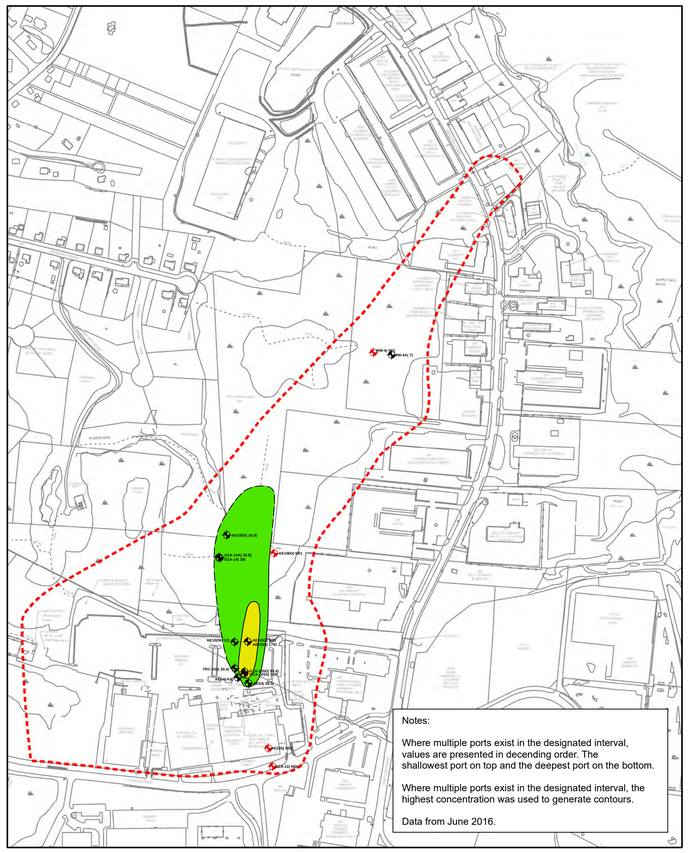
TRC-101 - Depth to Water versus LNAPL Thickness

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

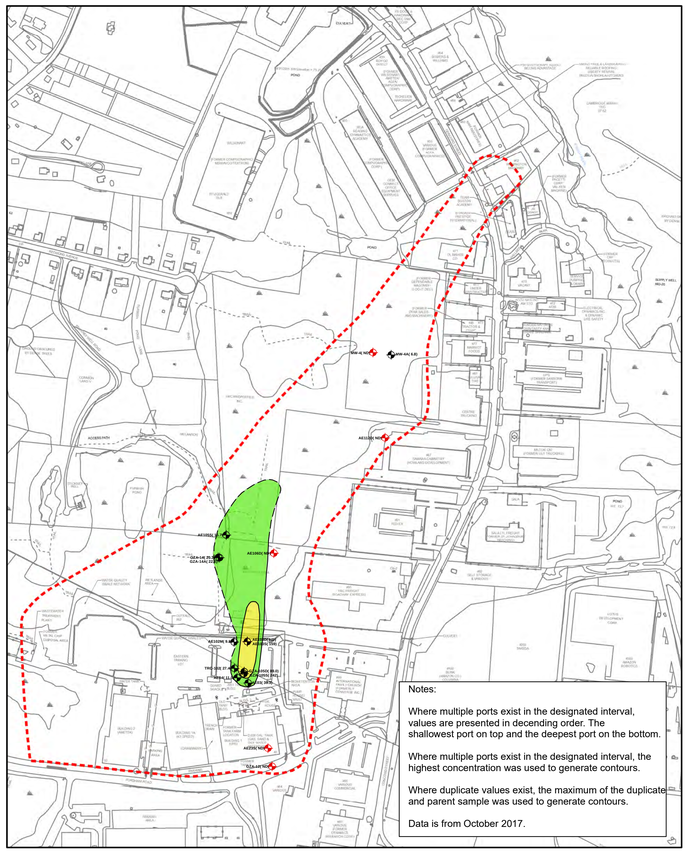
Date: 2022-03-07

60552044

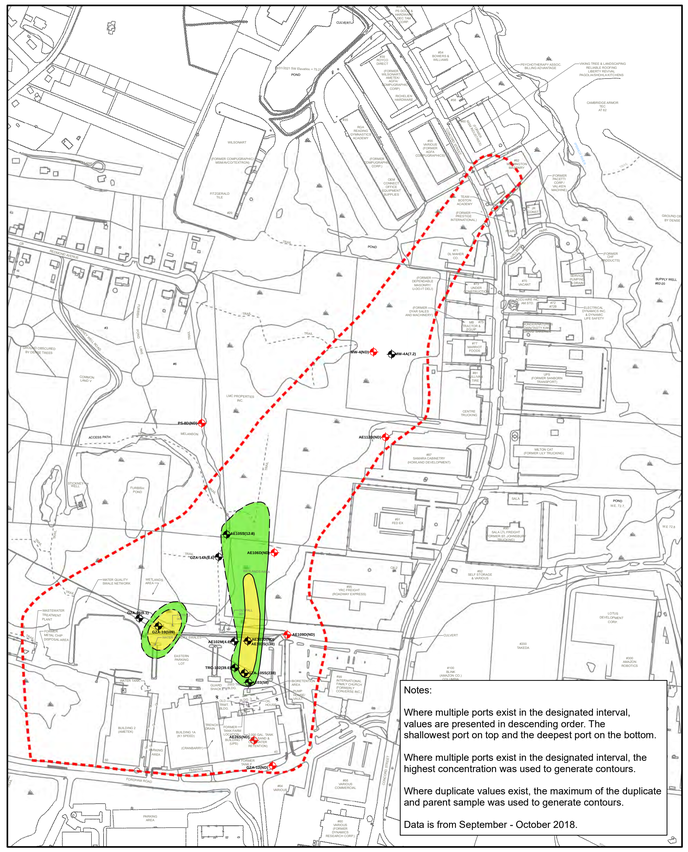
Last saved by: BARRYK(2022-03-07) Last Plotted: 2022-03-07 Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: S.O. ANSI A 8.5" x 11"
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 4-5_TRC-101 - DEPTH TO WATER VS LNAPL.DWG



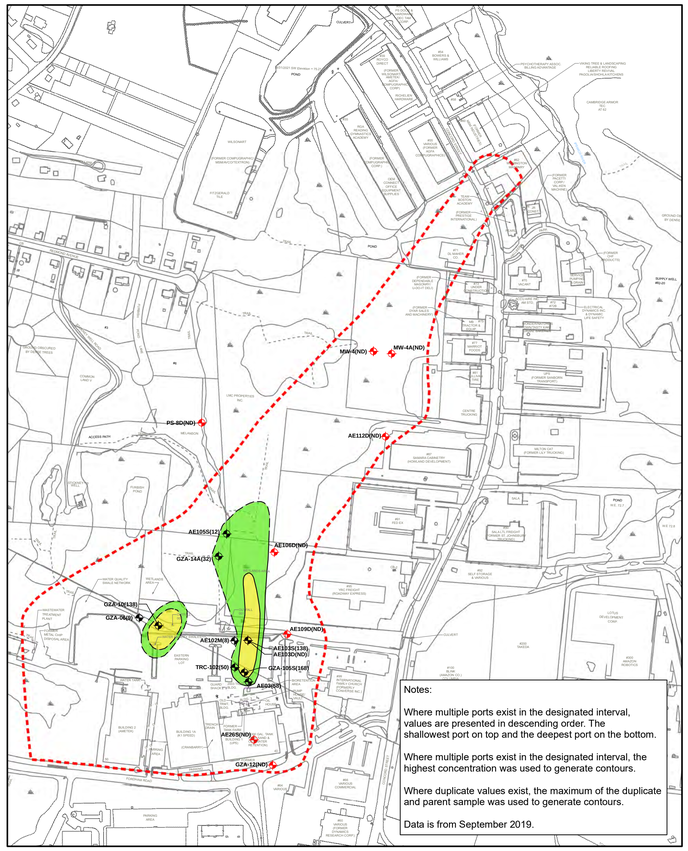
2016 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



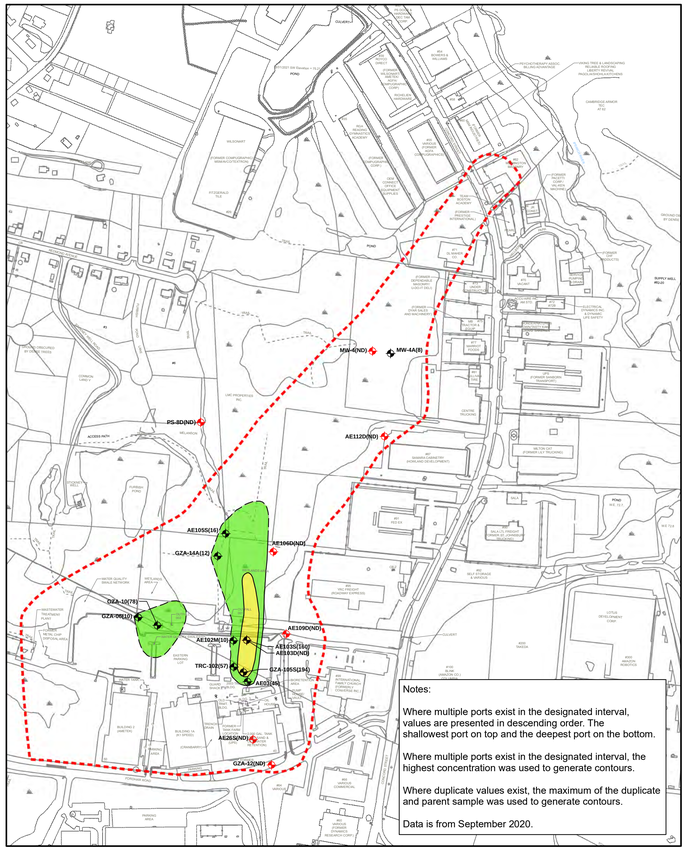
2017 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



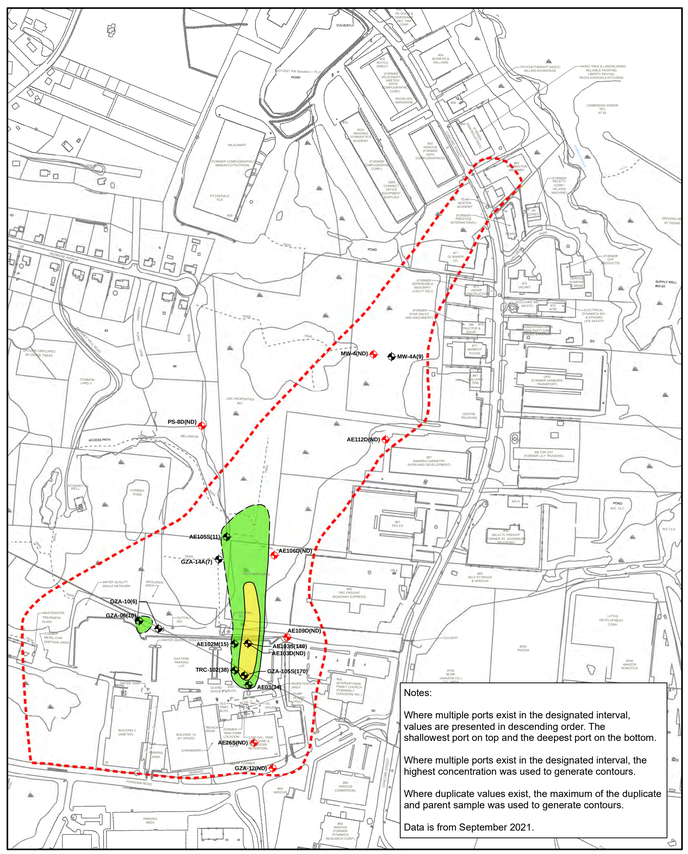
2018 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



2019 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



2020 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



2021 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 10 µg/l

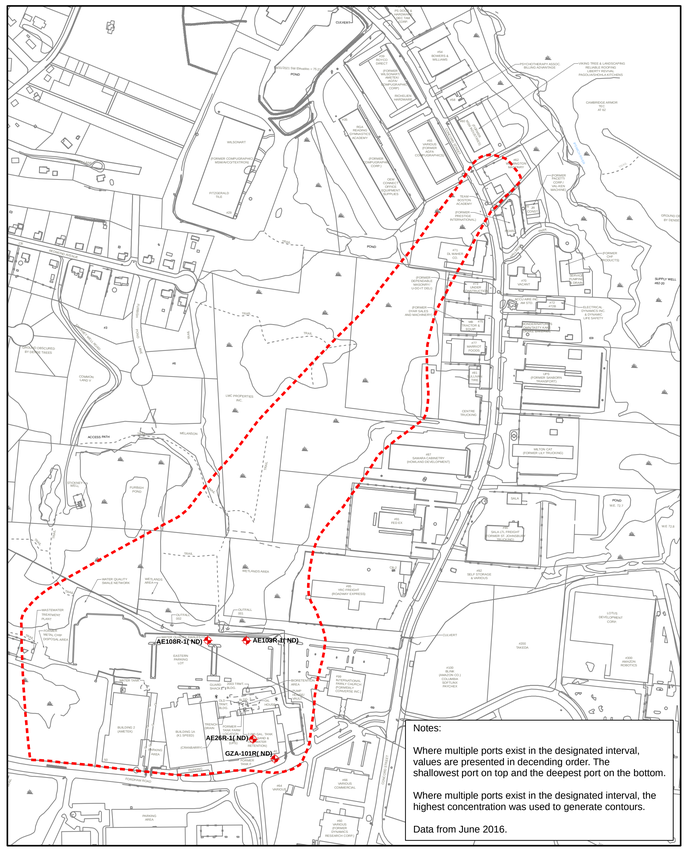
0 100 200 400 600 800 Feet

AECOM

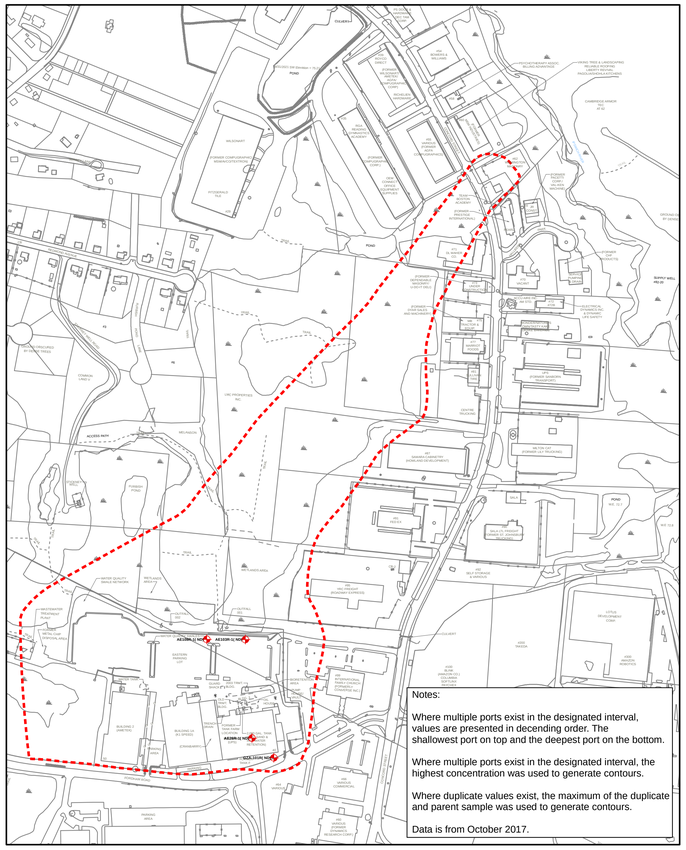
Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)

Figure 5-1

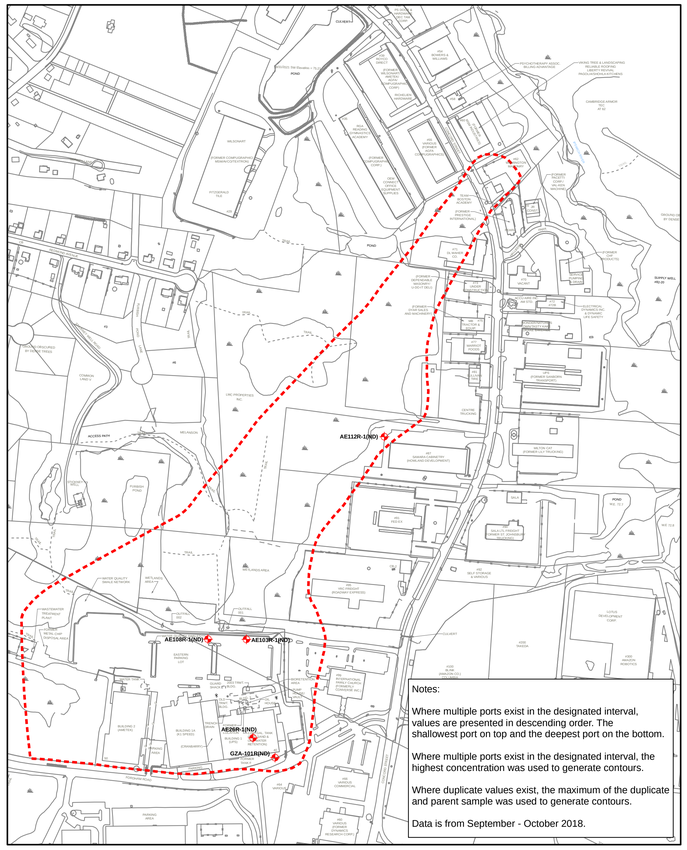
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_1_As_OB_2016_2021.mxd



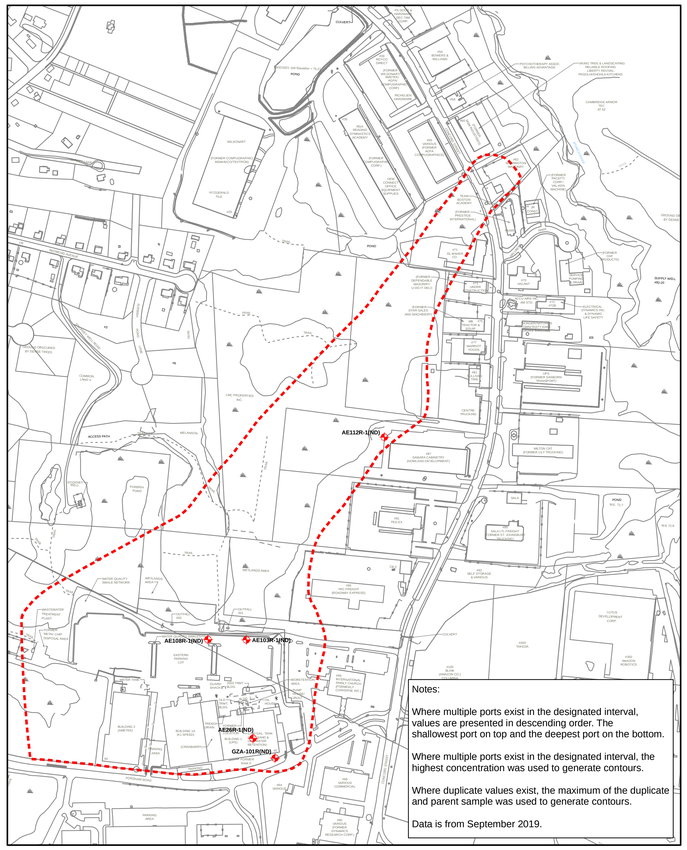
2016 Dissolved Arsenic in Groundwater
Upper Bedrock (0 - 60 ft bgs)



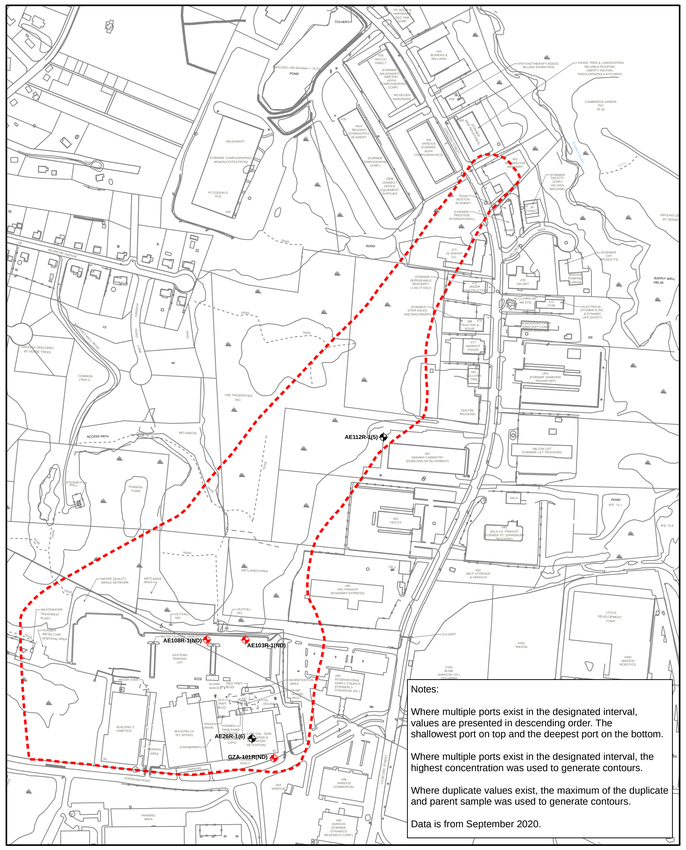
2017 Dissolved Arsenic in Groundwater
Upper Bedrock (0 - 60 ft bgs)



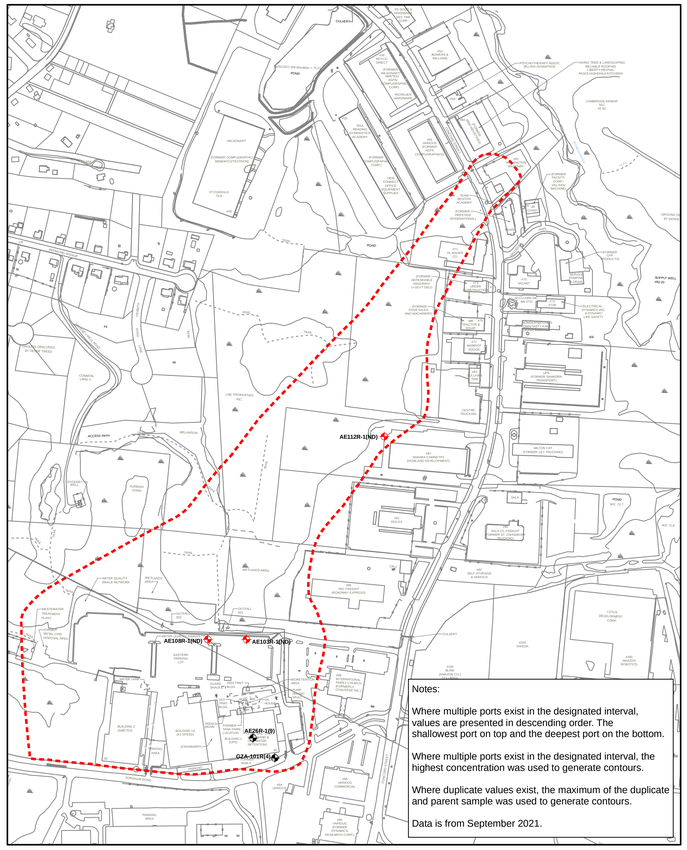
2018 Dissolved Arsenic in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2019 Dissolved Arsenic in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2020 Dissolved Arsenic in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2021 Dissolved Arsenic in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 10 µg/l

N

0 100 200 400 600 800 Feet

AECOM

Dissolved Arsenic in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-2

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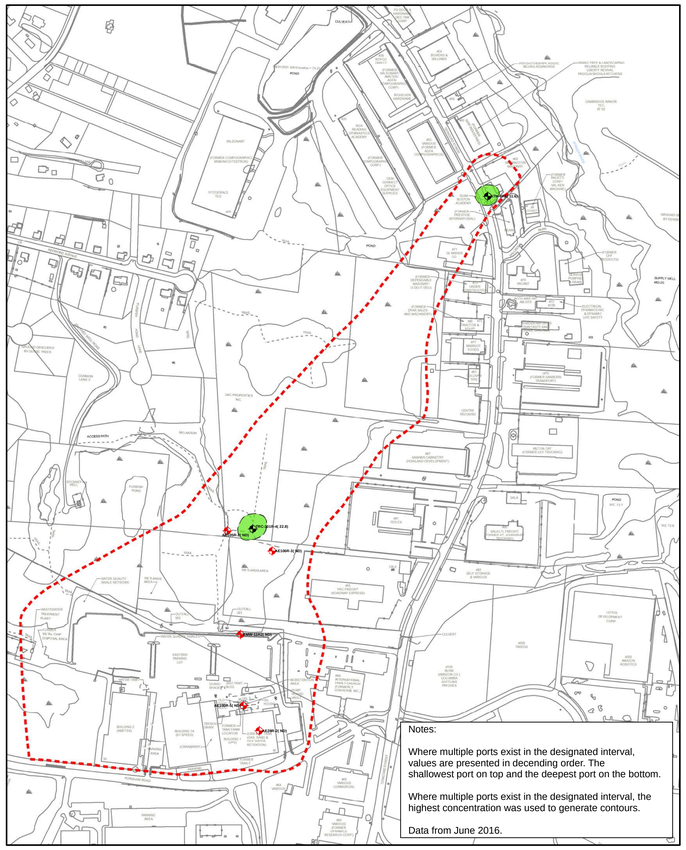
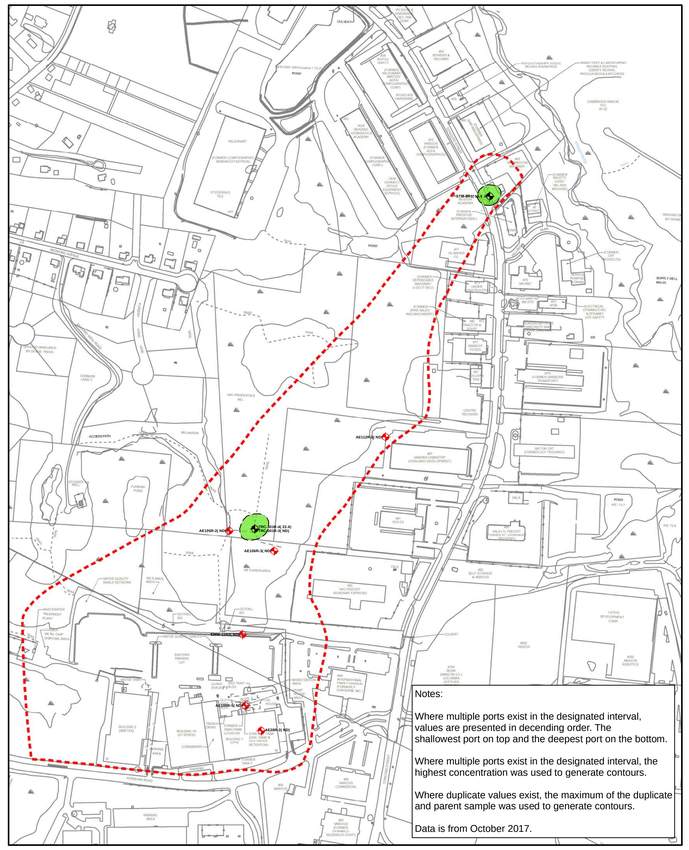
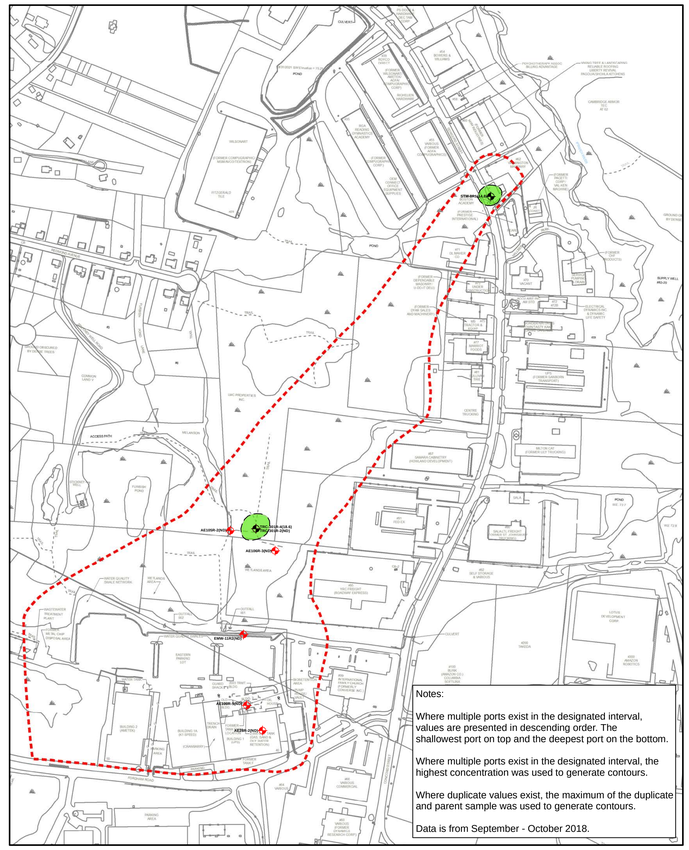


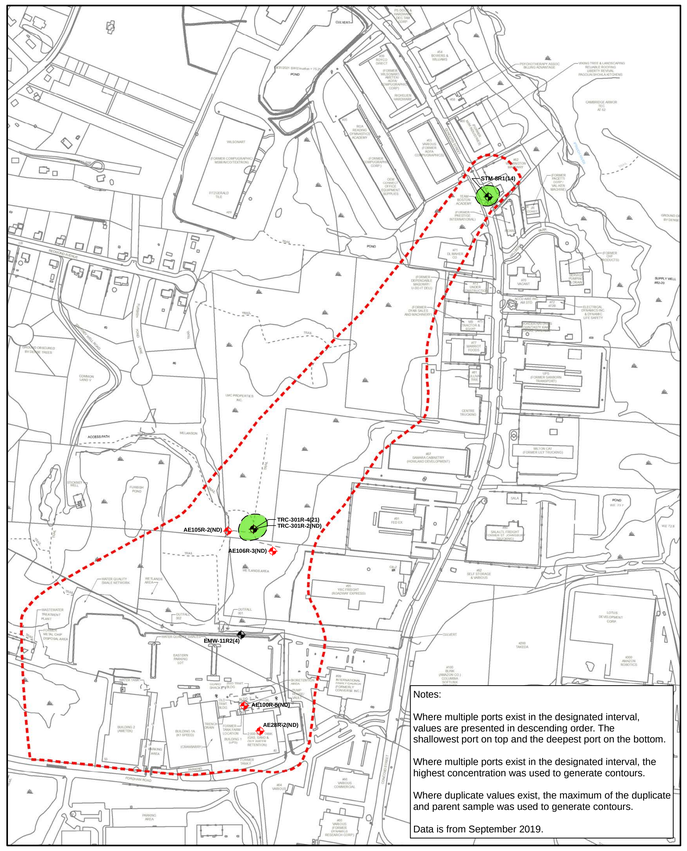
2016 Dissolved Arsenic in Groundwater
Middle Bedrock (61 - 120 ft bgs)



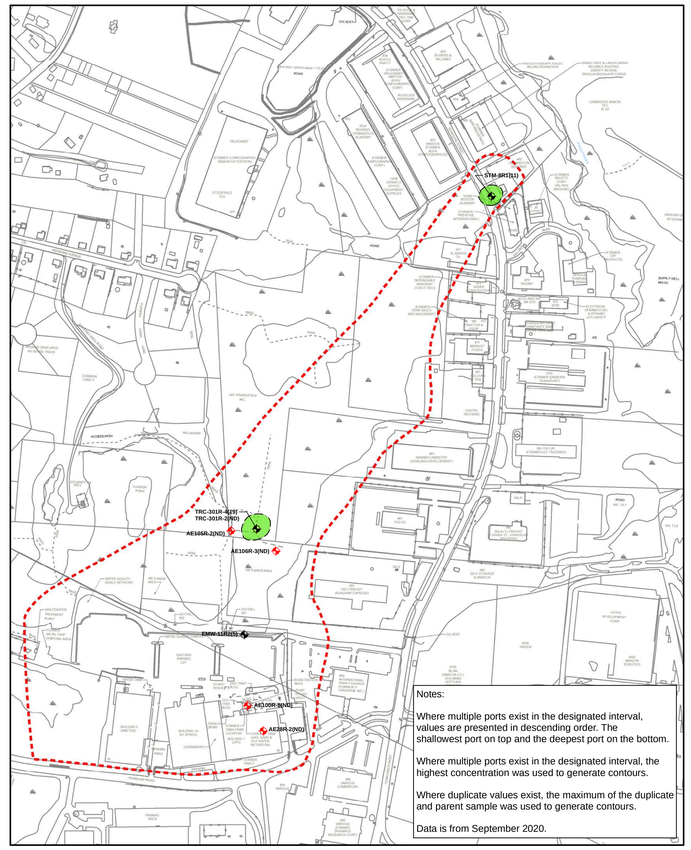
2017 Dissolved Arsenic in Groundwater
Middle Bedrock (61 - 120 ft bgs)



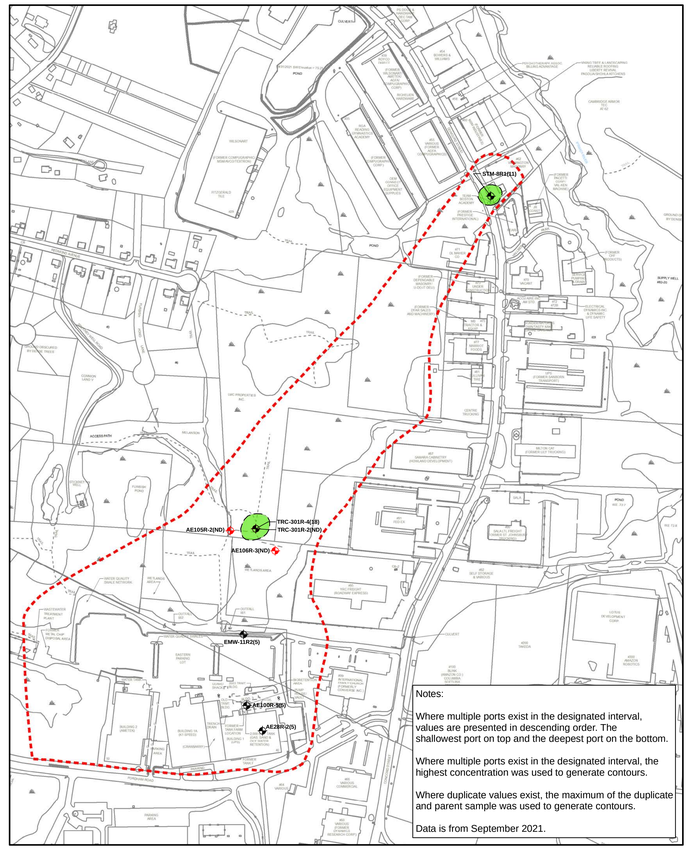
2018 Dissolved Arsenic in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2019 Dissolved Arsenic in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2020 Dissolved Arsenic in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2021 Dissolved Arsenic in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 10 µg/l

N

0 100 200 400 600 800 Feet

Dissolved Arsenic in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-3

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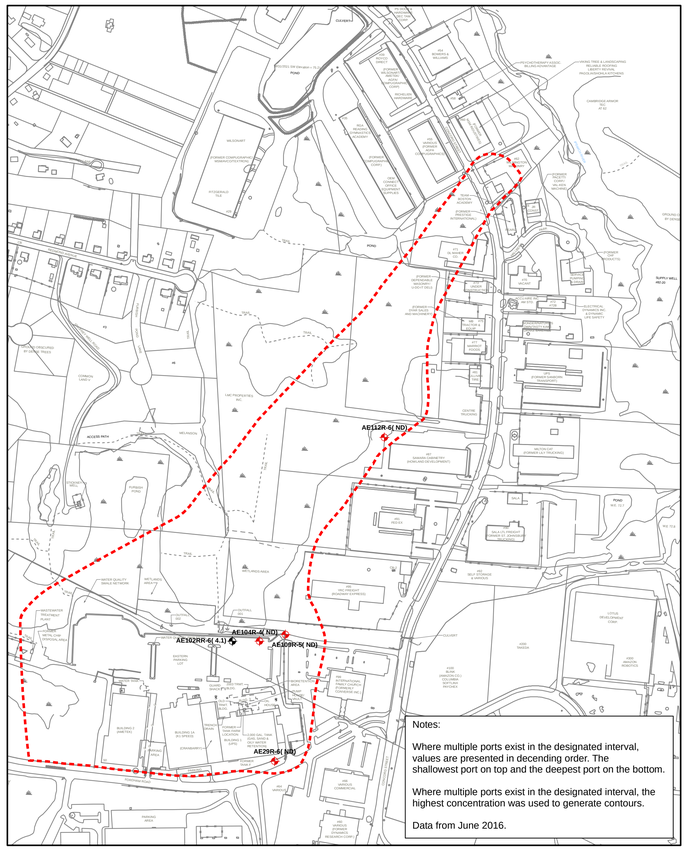
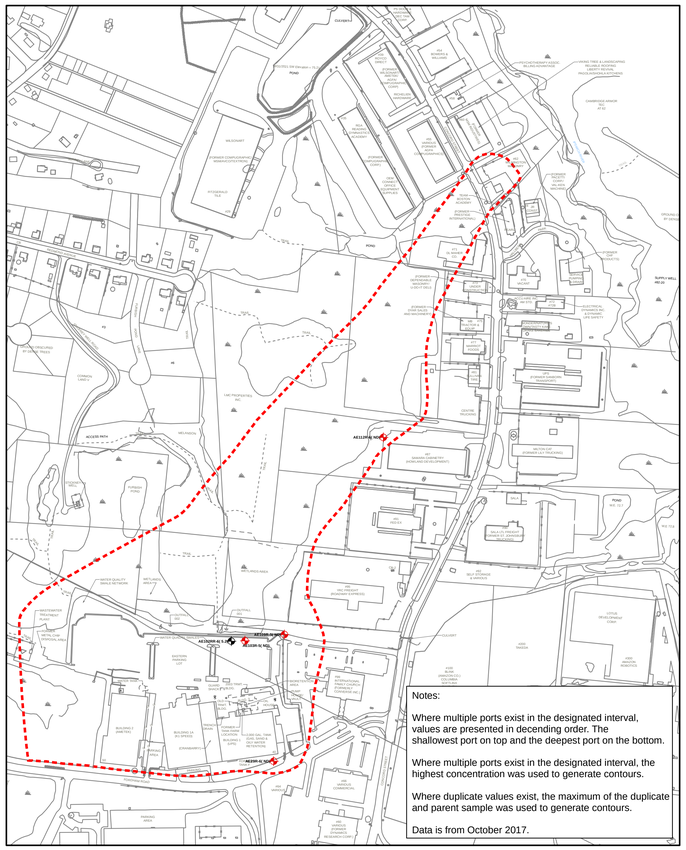
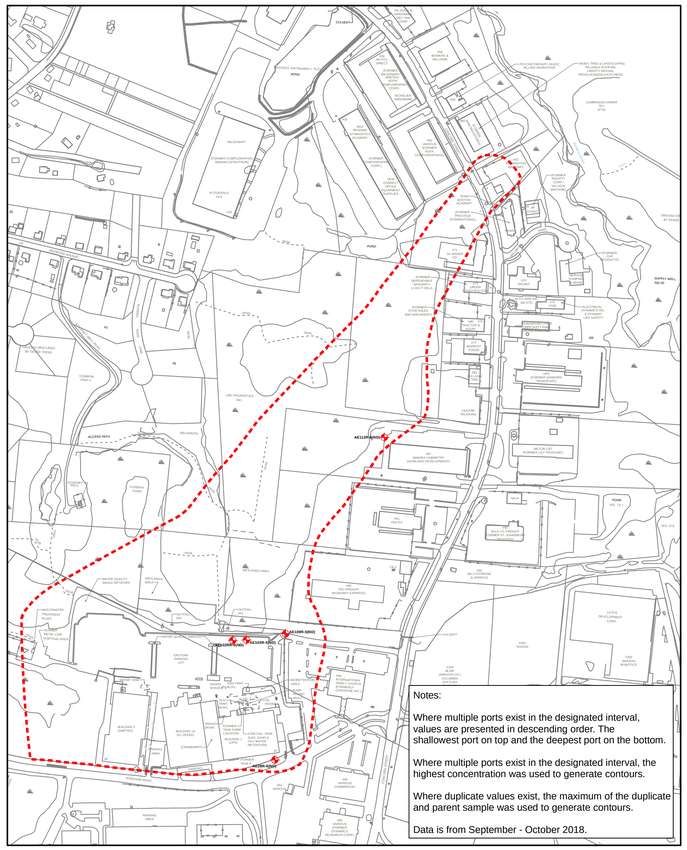


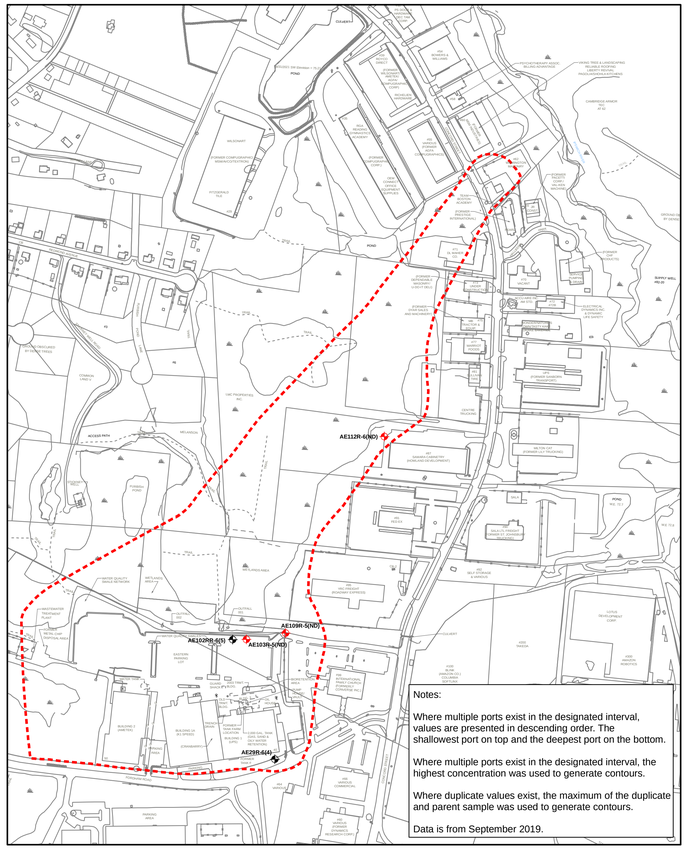
2016 Dissolved Arsenic in Groundwater
Lower Bedrock (121 - 232 ft bgs)



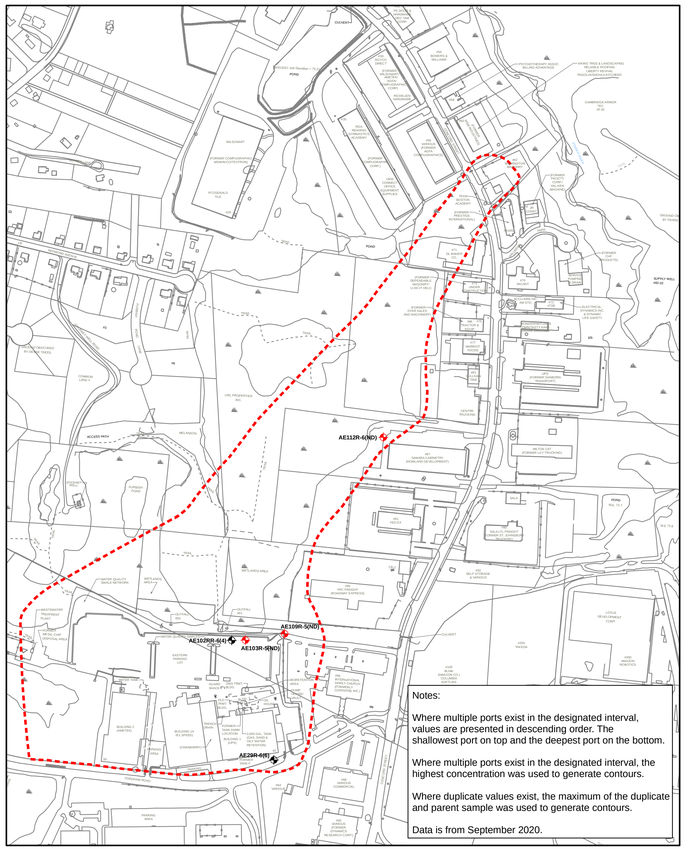
2017 Dissolved Arsenic in Groundwater
Lower Bedrock (121 - 232 ft bgs)



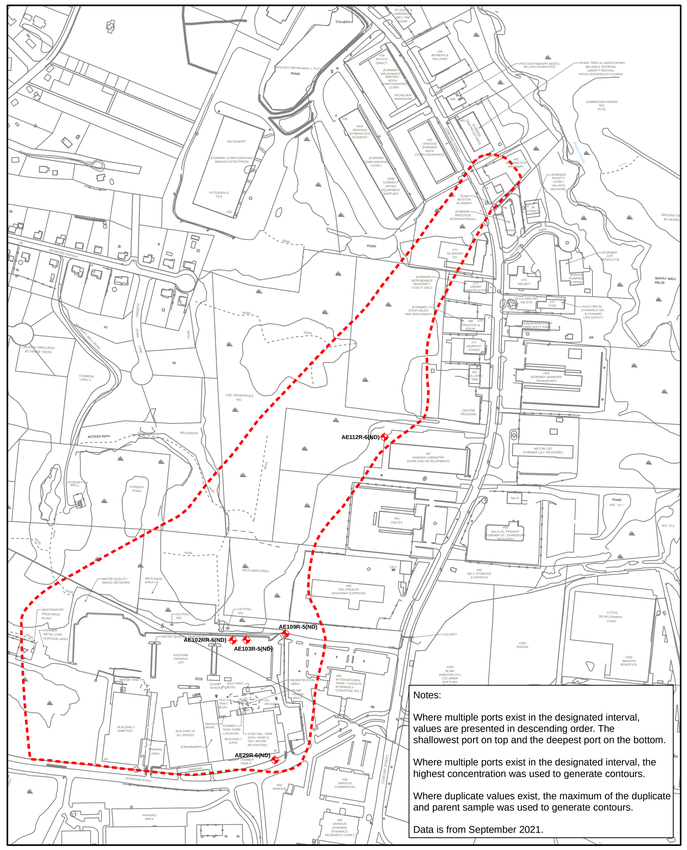
2018 Dissolved Arsenic in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2019 Dissolved Arsenic in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2020 Dissolved Arsenic in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2021 Dissolved Arsenic in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 10 µg/l

N

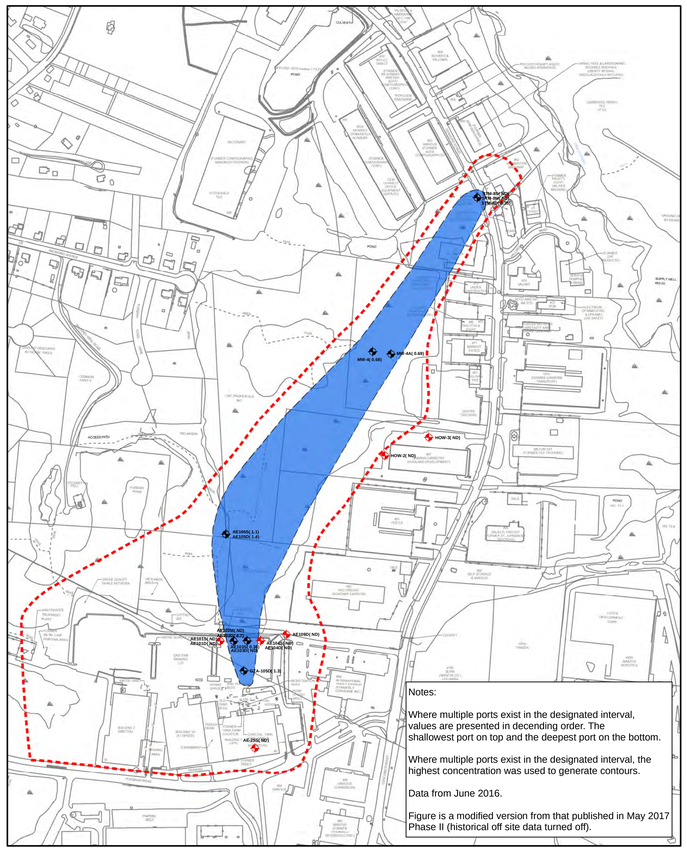
0 100 200 400 600 800 Feet

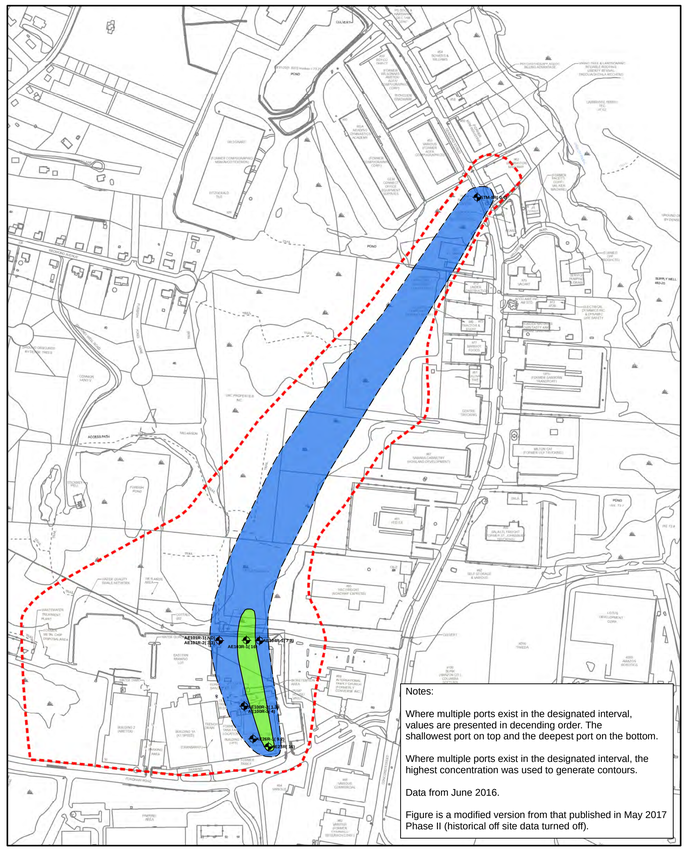
AECOM

Dissolved Arsenic in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-4

Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Engr\Project Files\Lockheed Martin\Wilmington 2017-2022\600-CAD-GIS\620 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_4_As_Lower_BR_2016_2021.mxd


STM-8(0.44)
MW-4(0.86)
MW-4(-0.60)
MW-4A(-8.80)
HOW-2E ND)
HOW-2E ND)
AE105D(1.1)
AE105D(-1.2)
AE105D(-ND)
AE103D(-ND)
AE191D(-ND)
AE191D(-ND)
AE191



Notes:

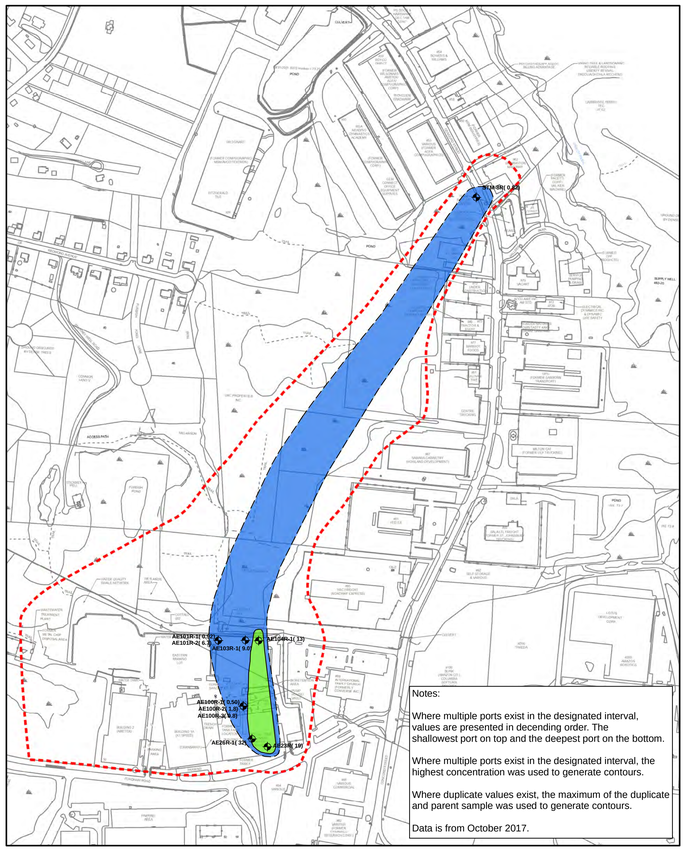
Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Data from June 2016.

Figure is a modified version from that published in May 2017 Phase II (historical off site data turned off).

2016 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



Notes:

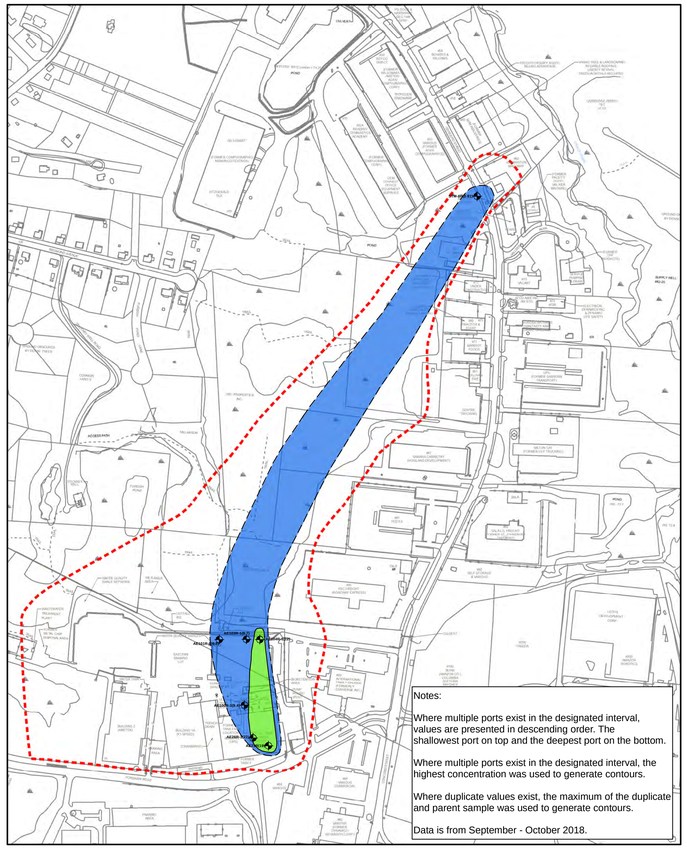
Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from October 2017.

2017 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



Notes:

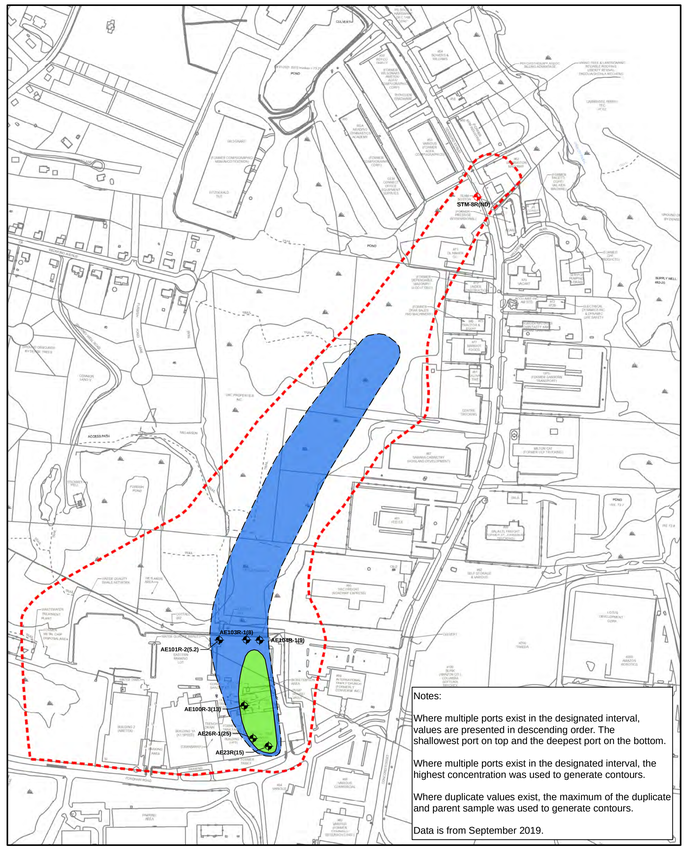
Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September - October 2018.

2018 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



Notes:

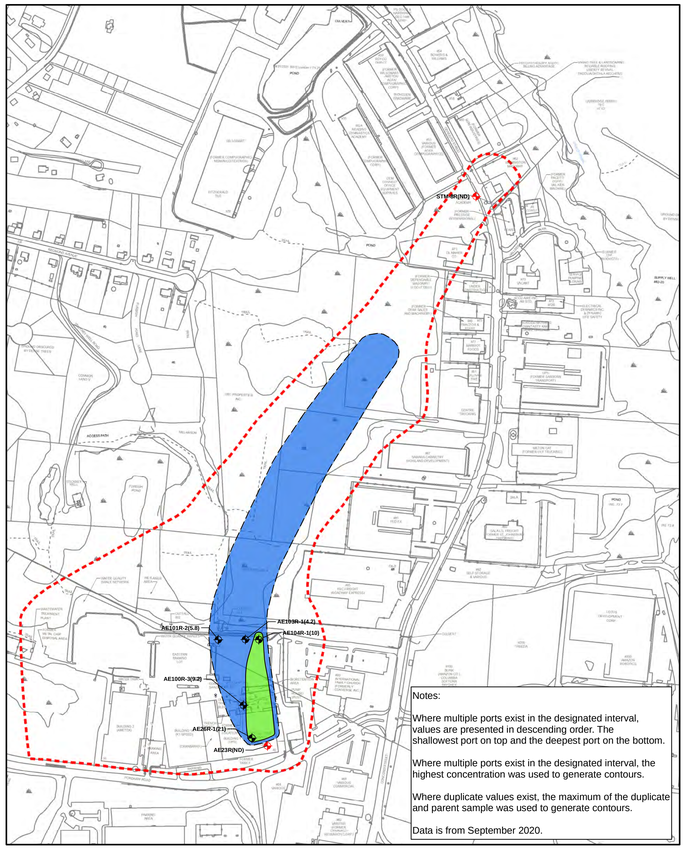
Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September 2019.

2019 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



Notes:

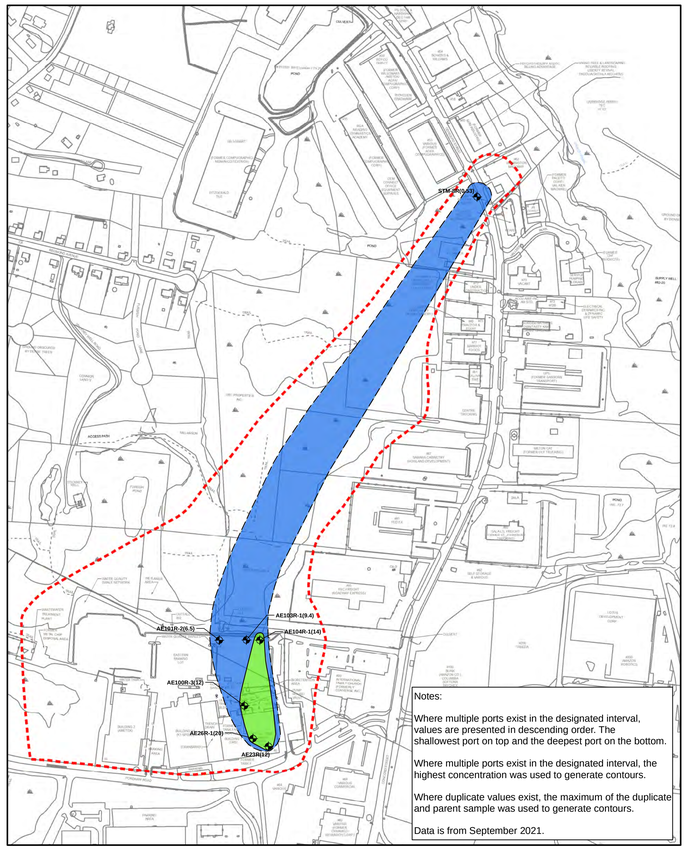
Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September 2020.

2020 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September 2021.

2021 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 0.3-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 0.3 µg/l

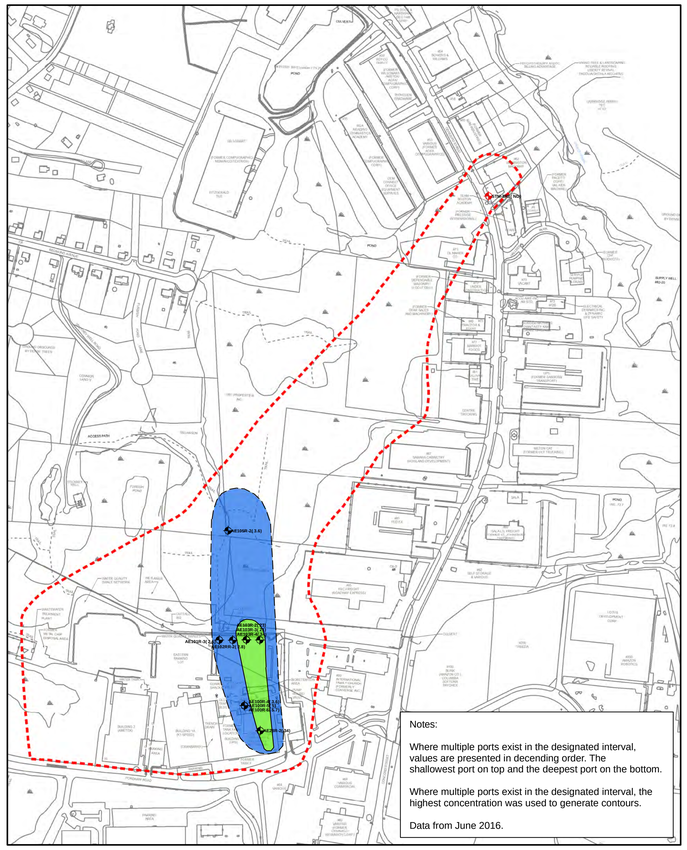
N

0 100 200 400 600 800 Feet

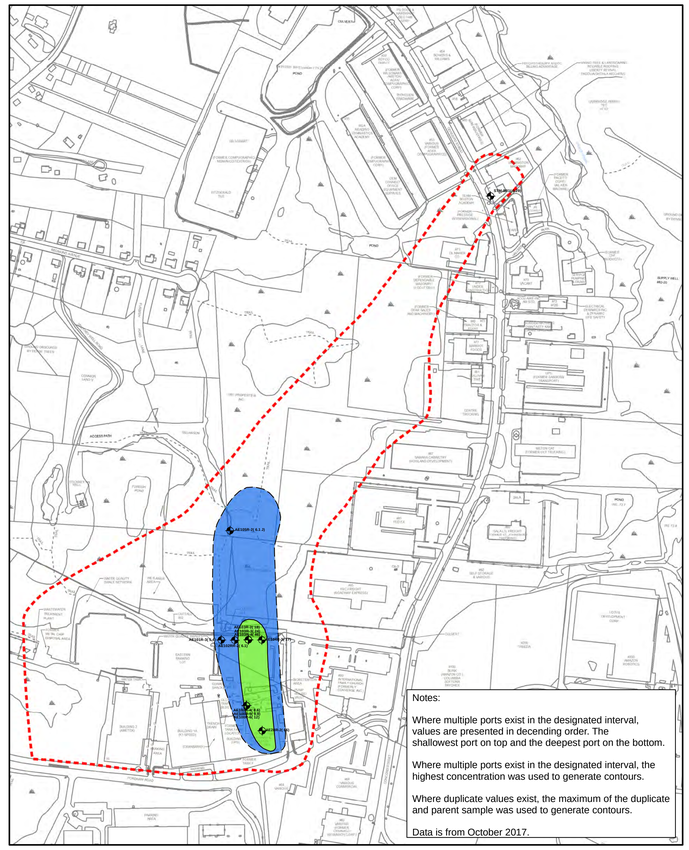
1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-6

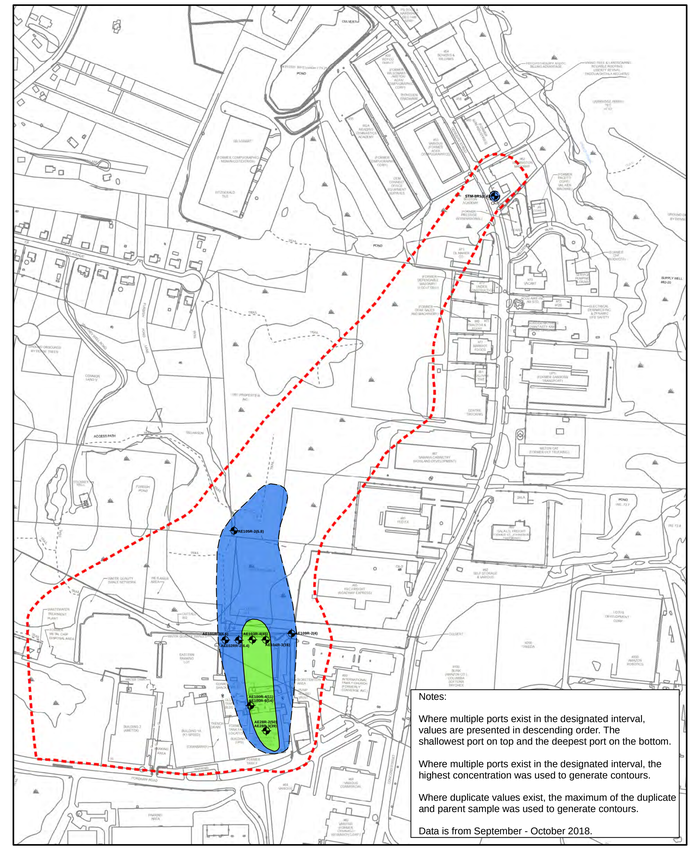
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_6_Diox_Upper_BR_2016_2021.mxd



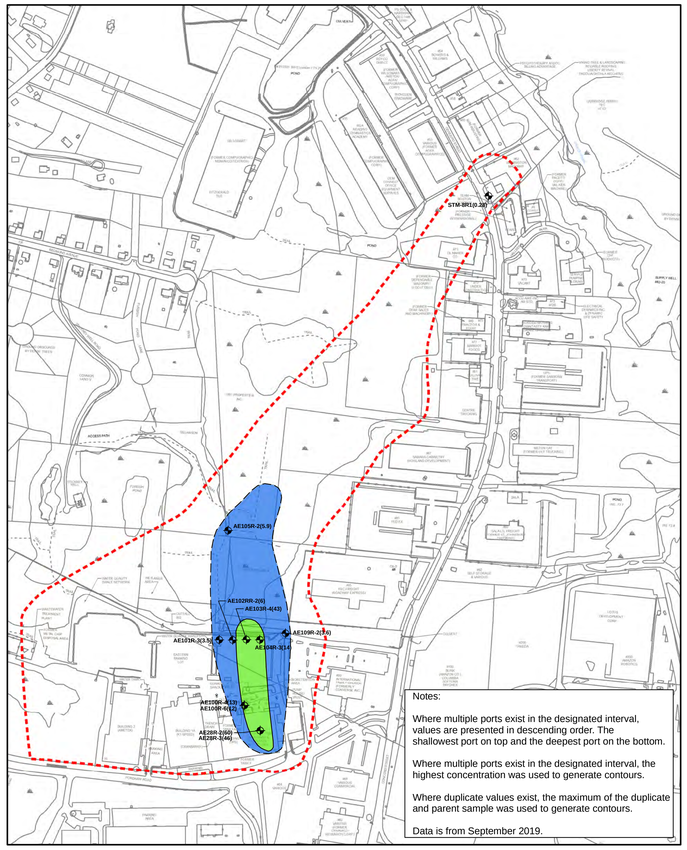
2016 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



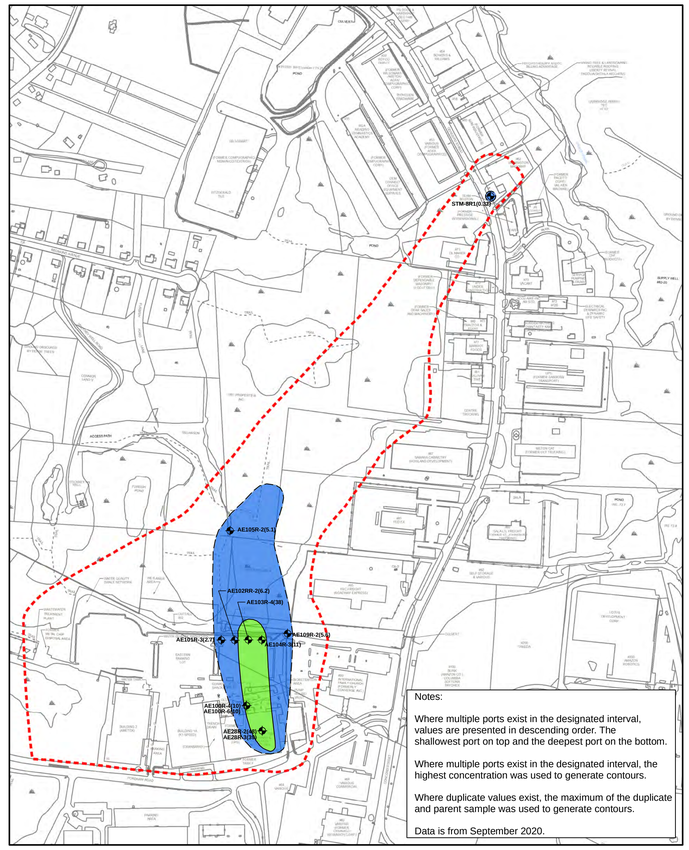
2017 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



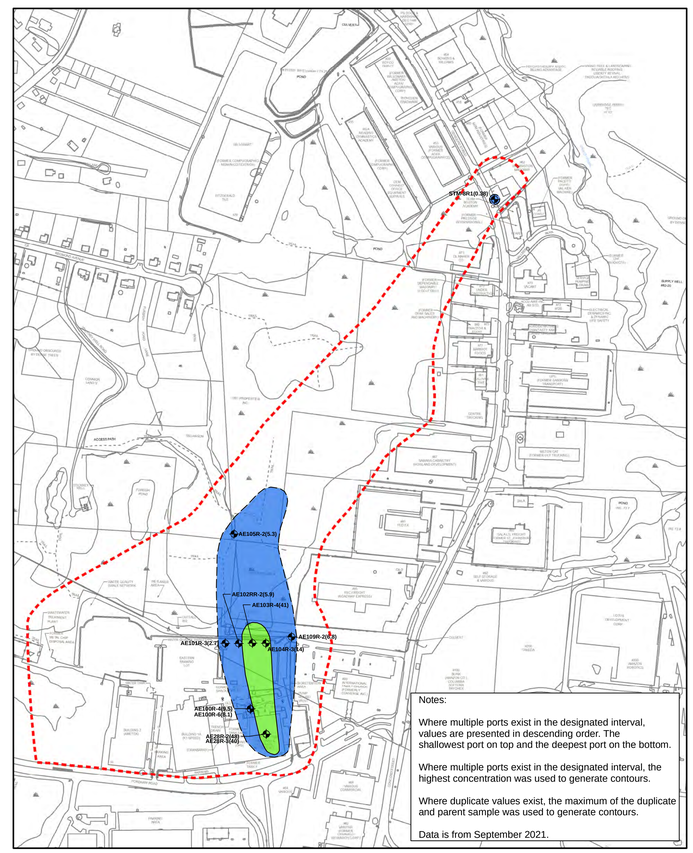
2018 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2019 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2020 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2021 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 0.3-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 0.3 µg/l

N

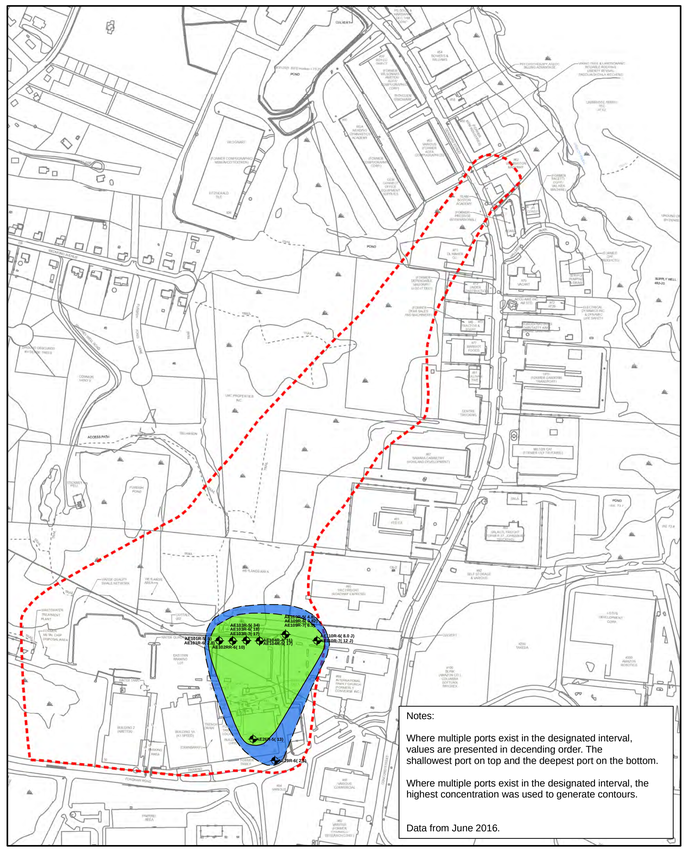
0 100 200 400 600 800 Feet

AECOM

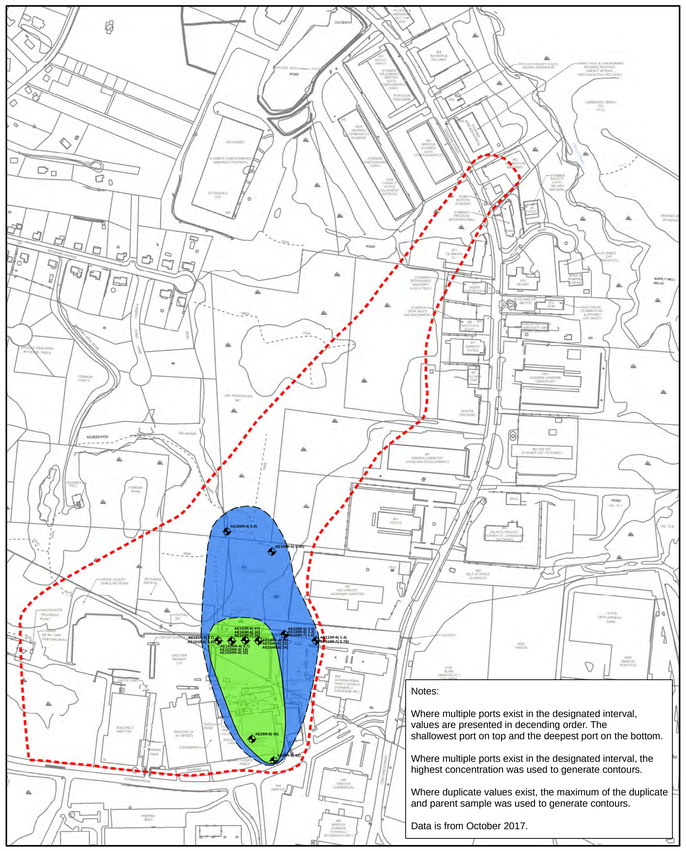
1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-7

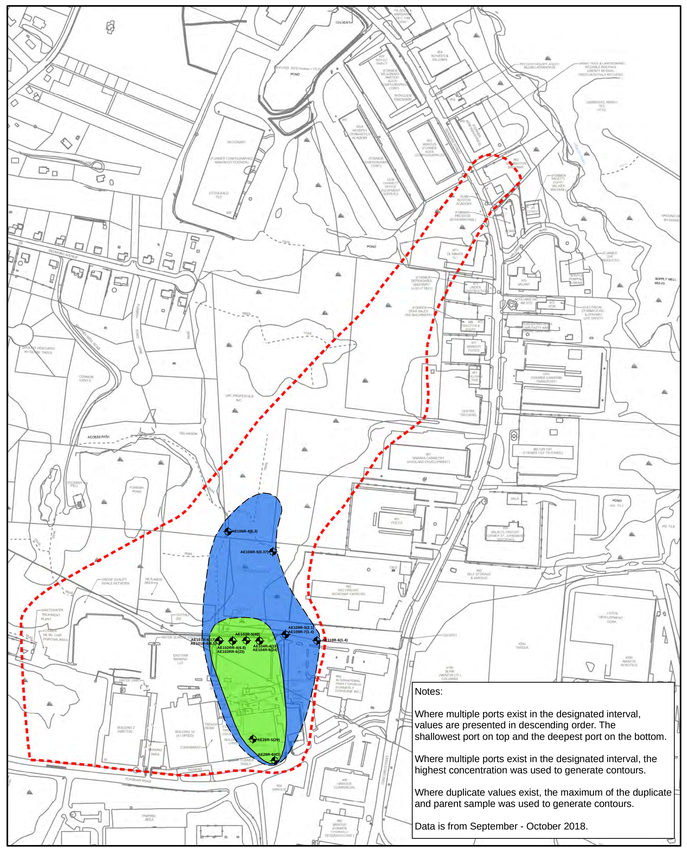
Path: C:\Work\Lockheed_Martin_Wilmington_2017_2022\2016-2021 Plume Maps\MXD\Fig_5_7_Diox_Middle_BR_2016_2021.mxd



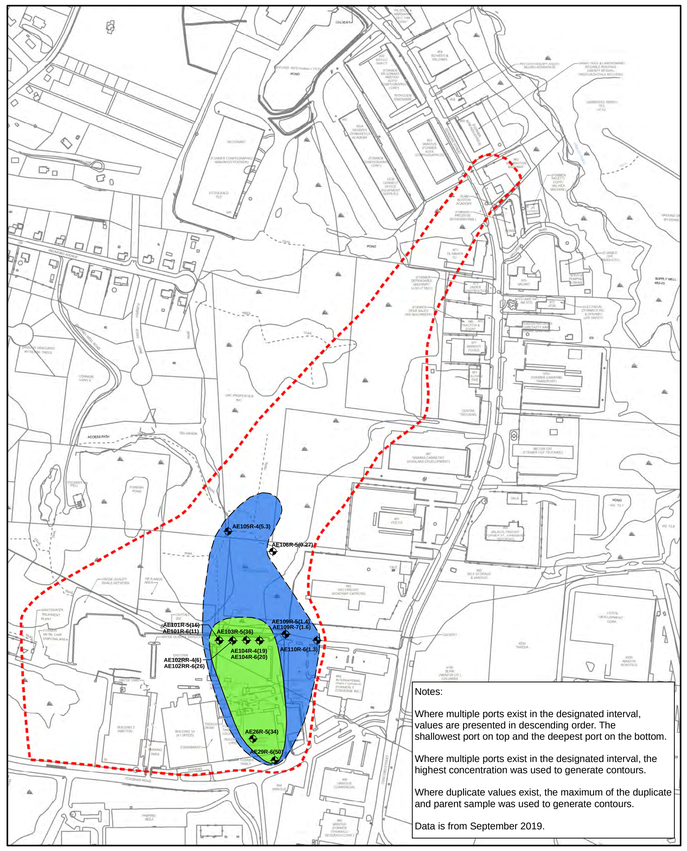
2016 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)



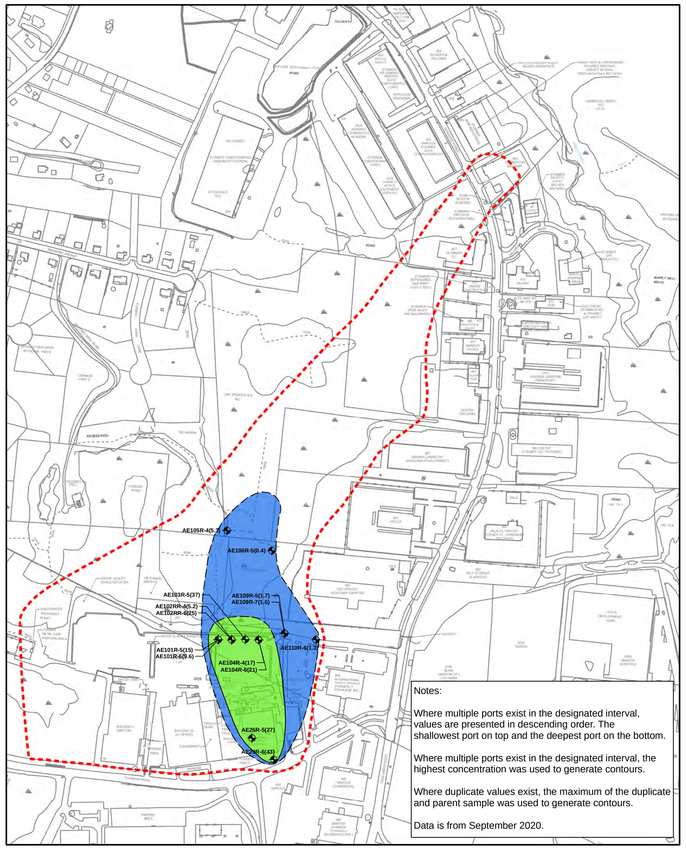
2017 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)



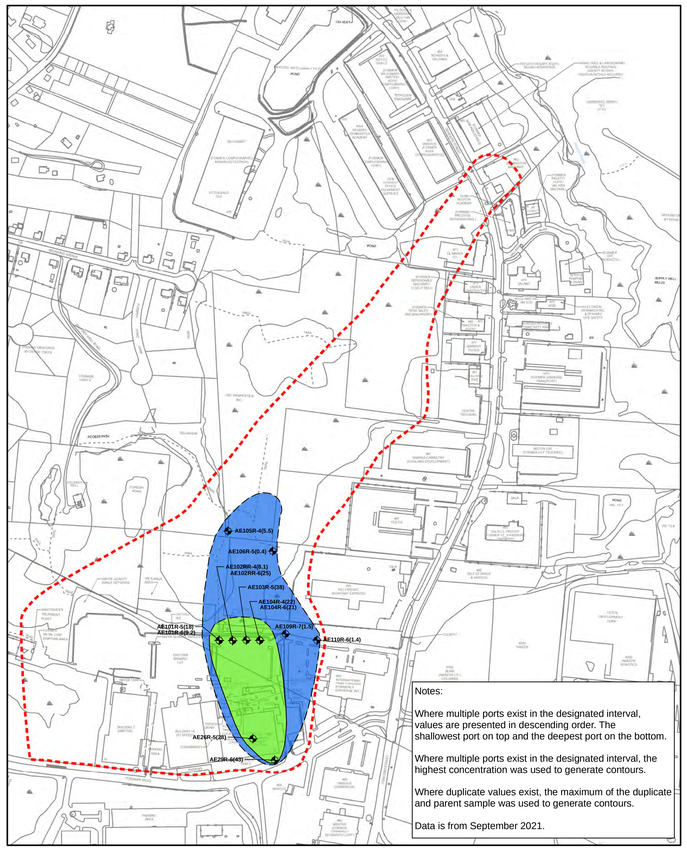
2018 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2019 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2020 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2021 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 0.3-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 0.3 µg/l

N

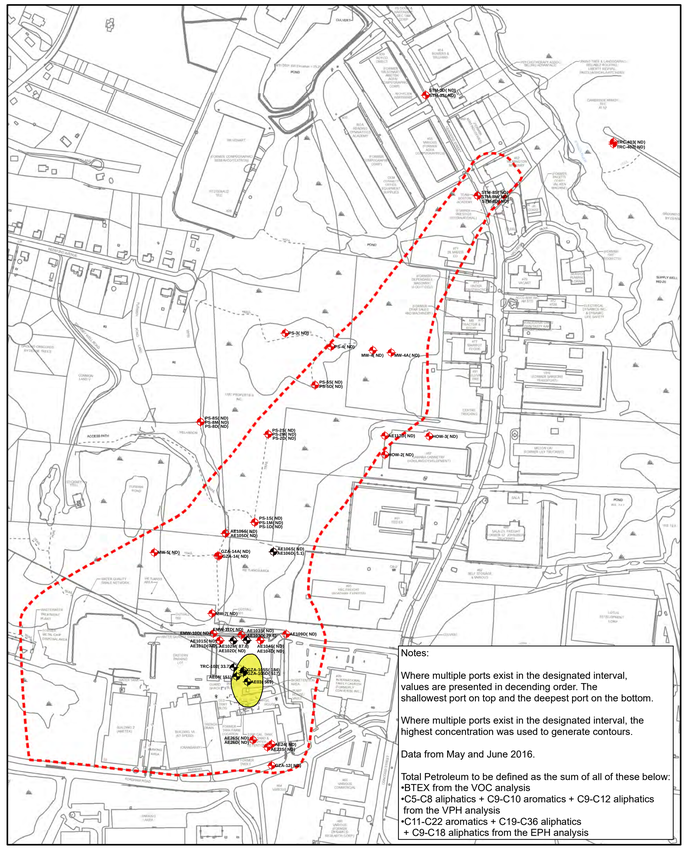
0 100 200 400 600 800 Feet

AECOM

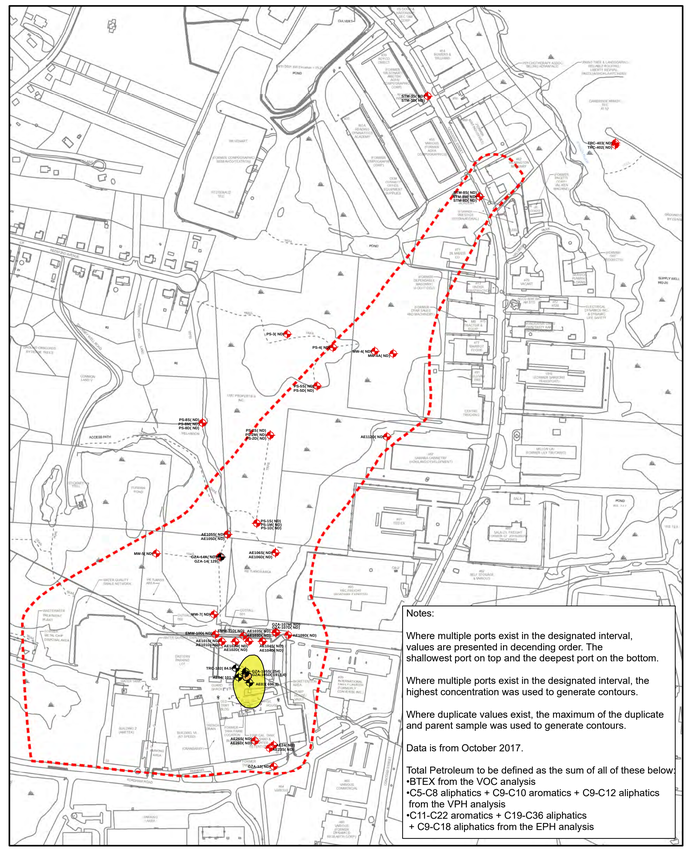
1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-8

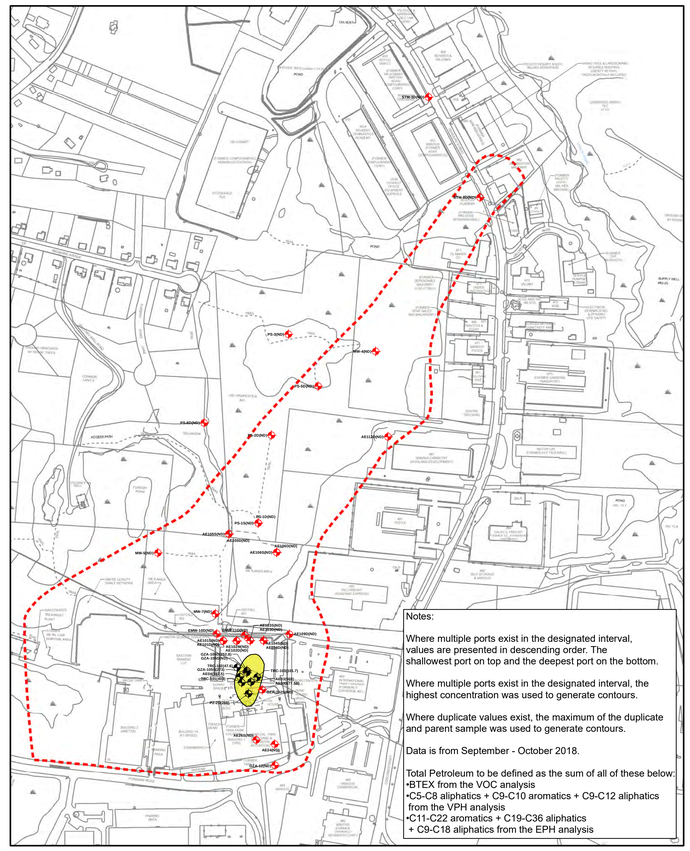
Path: C:\Work\Lockheed_Martin_Wilmington_2017_2022\2016-2021 Plume Maps\MXD\Fig_5_8_Diox_Lower_BR_2016_2021.mxd



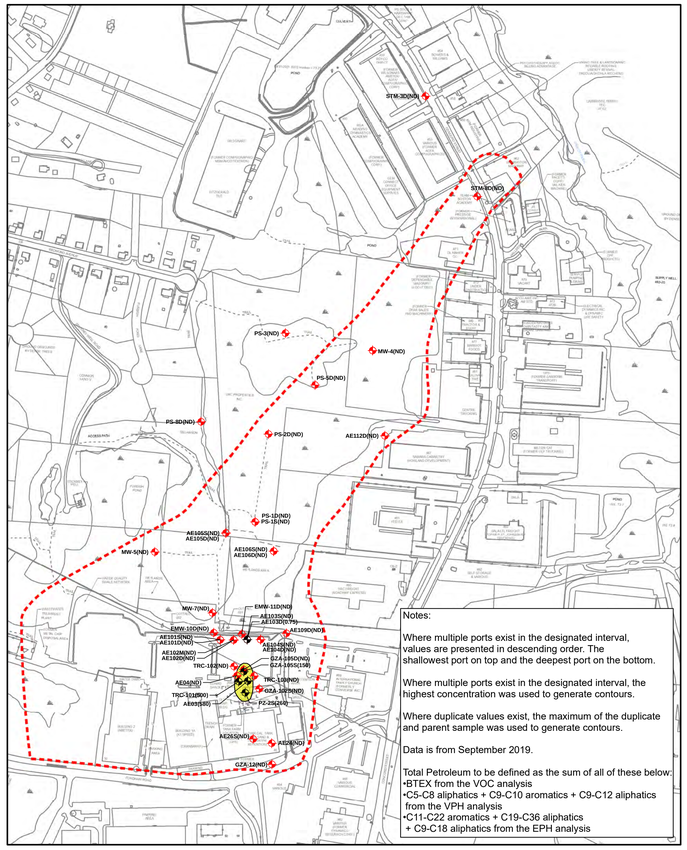
2016 Total Petroleum in Groundwater
Overburden (0 - 78 ft bgs)



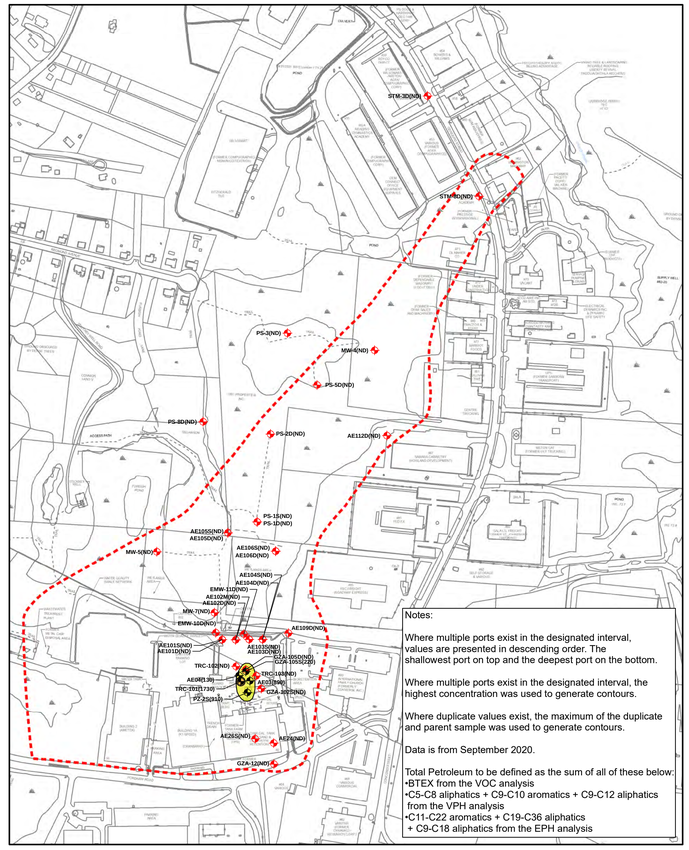
2017 Total Petroleum in Groundwater
Overburden (0 - 78 ft bgs)



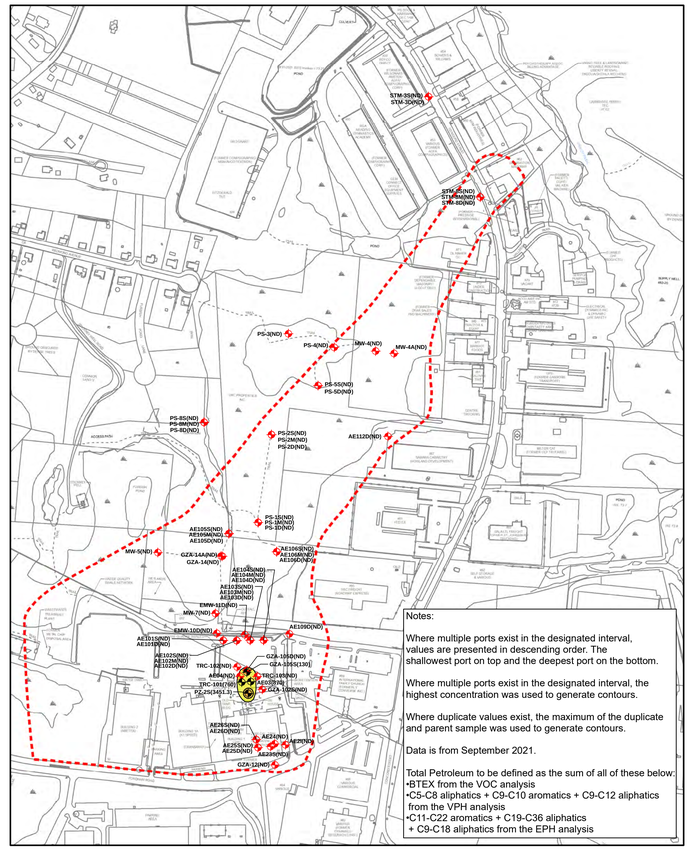
2018 Total Petroleum in Groundwater
Overburden (0 - 78 ft bgs)



2019 Total Petroleum in Groundwater
Overburden (0 - 78 ft bgs)



2020 Total Petroleum in Groundwater
Overburden (0 - 78 ft bgs)



2021 Total Petroleum in Groundwater
Overburden (0 - 78 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

N

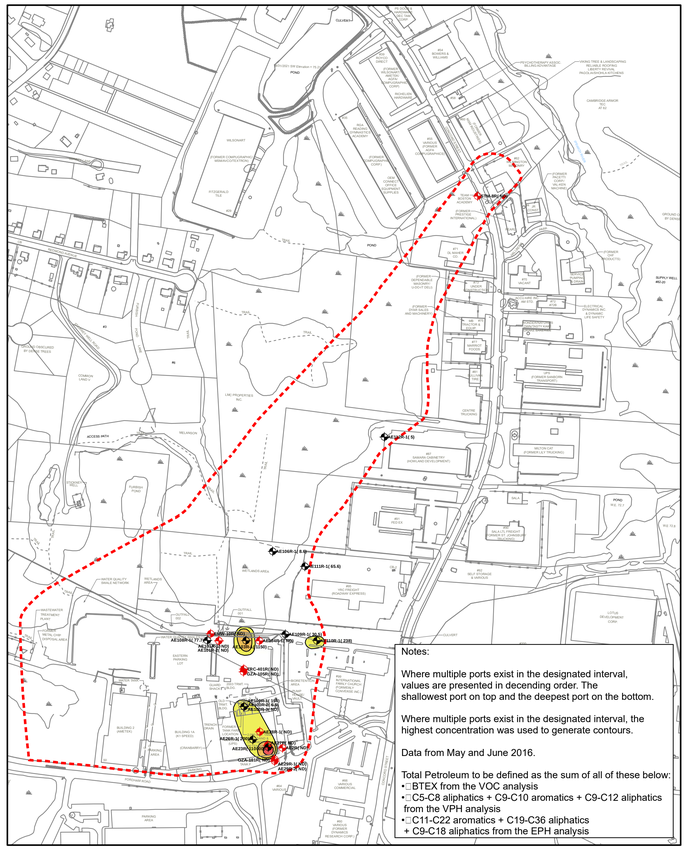
0 100 200 400 600 800 Feet

AECOM

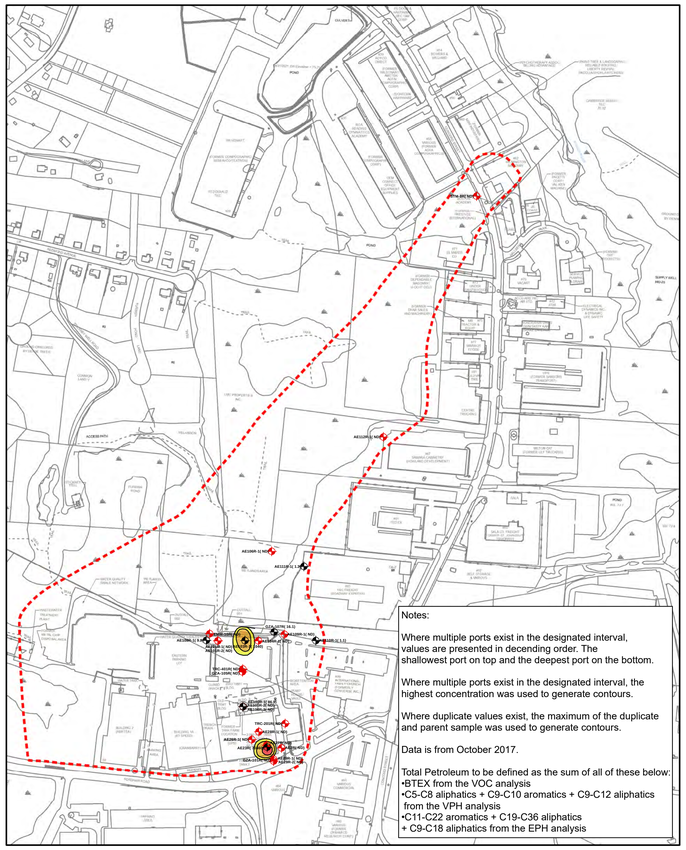
Total Petroleum in Groundwater
Overburden (0 - 78 ft bgs)

Figure 5-9

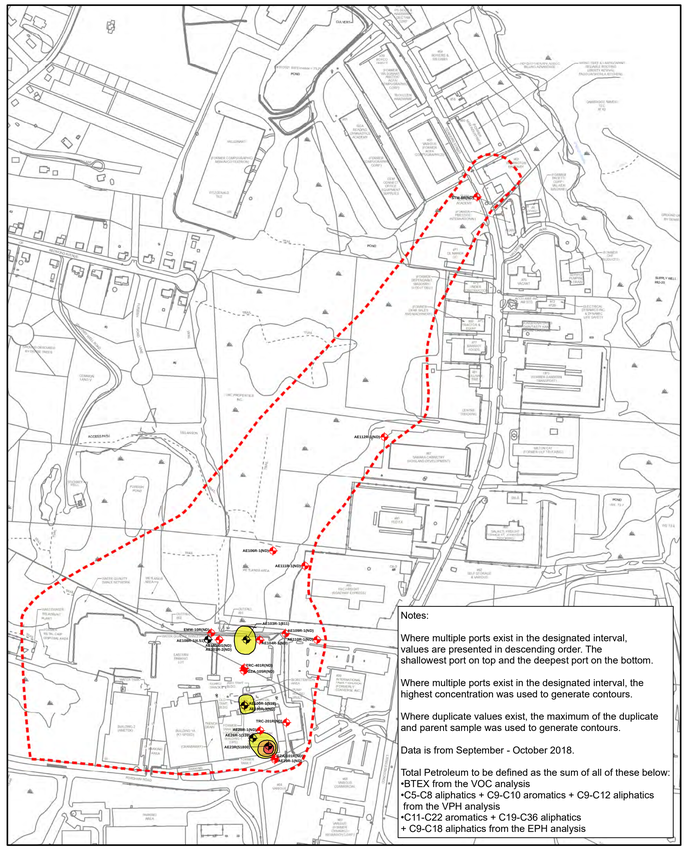
Path: C:\Work\Lockheed_Martin_Wilmington_2017_2022\2016-2021 Plume Maps\MXD\Fig_5_9_Petroleum_OB_2016_2021.mxd



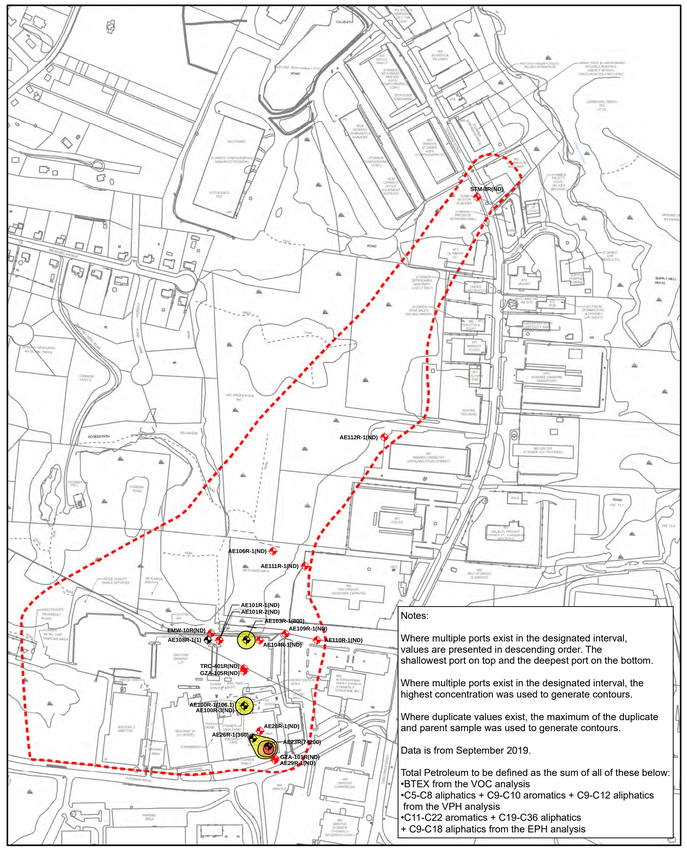
2016 Total Petroleum in Groundwater
Upper Bedrock (0 - 60 ft bgs)



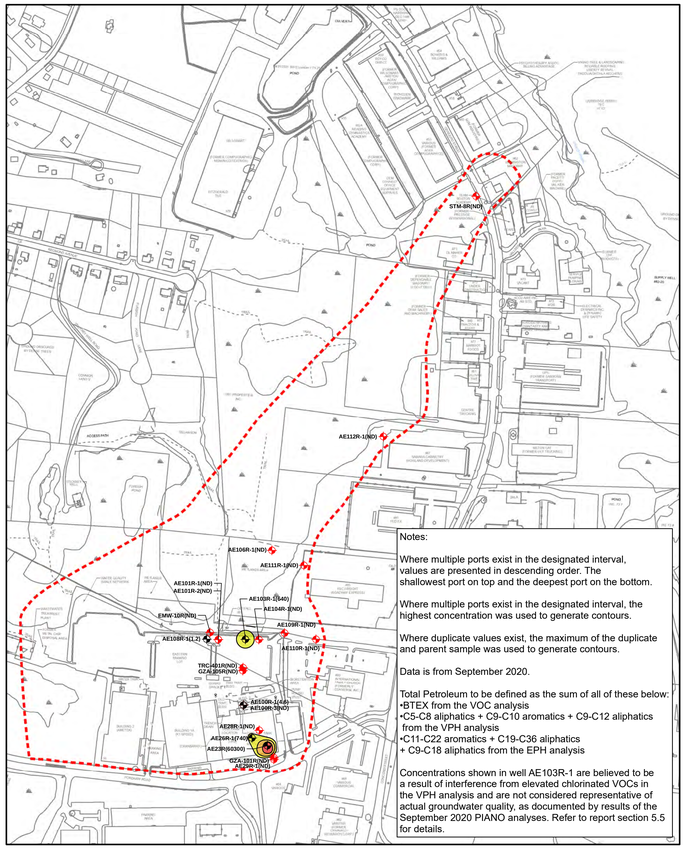
2017 Total Petroleum in Groundwater
Upper Bedrock (0 - 60 ft bgs)



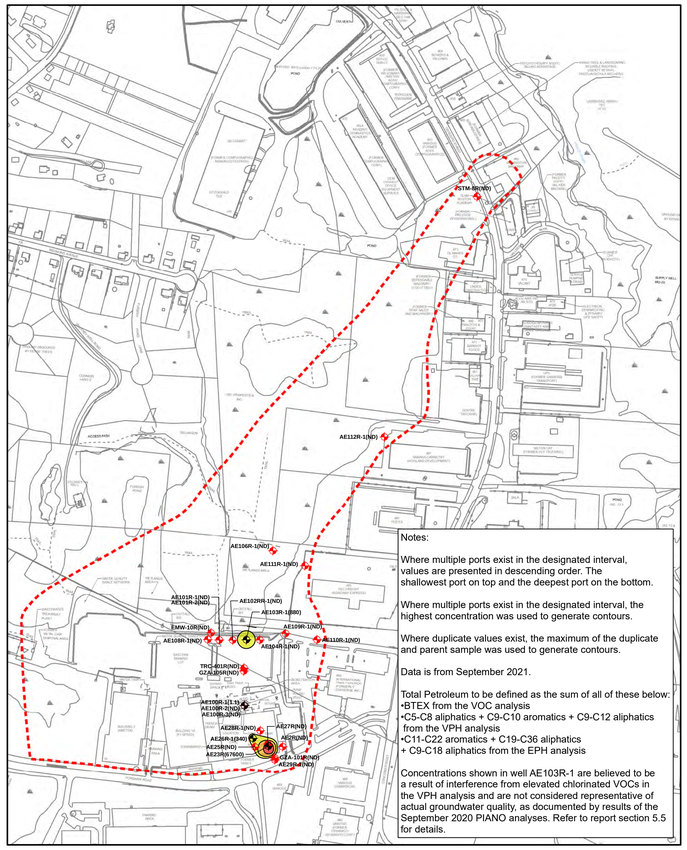
2018 Total Petroleum in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2019 Total Petroleum in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2020 Total Petroleum in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2021 Total Petroleum in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

N

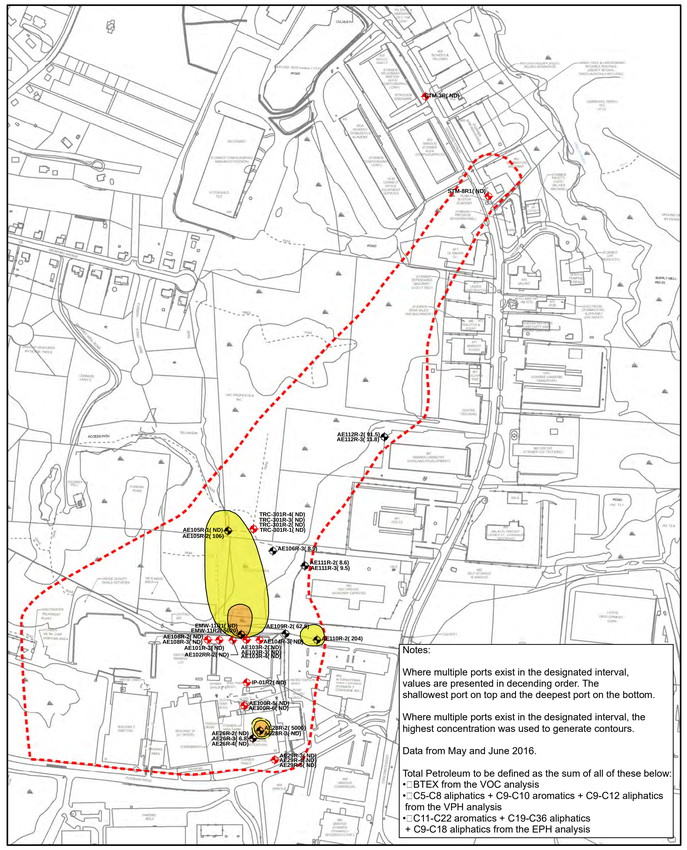
0 100 200 400 600 800 Feet

AECOM

Total Petroleum in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-10

Path: C:\Work\Lockheed_Martin_Wilmington_2017_2022\2016-2021 Plume Maps\MXD\Fig_5_10_Petroleum_UB_2016_2021.mxd



Notes:

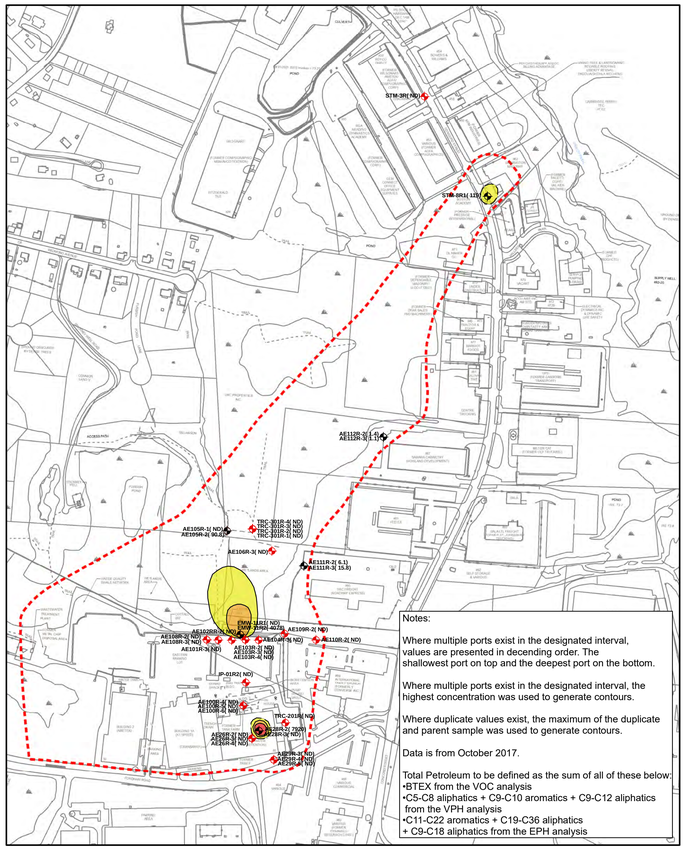
Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Data from May and June 2016.

Total Petroleum to be defined as the sum of all of these below:
- BTEX from the VOC analysis
- C5-C8 aliphatics + C9-C10 aromatics + C9-C12 aliphatics from the VPH analysis
- C11-C22 aromatics + C19-C36 aliphatics + C9-C18 aliphatics from the EPH analysis

2016 Total Petroleum in Groundwater
Middle Bedrock (61 - 120 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

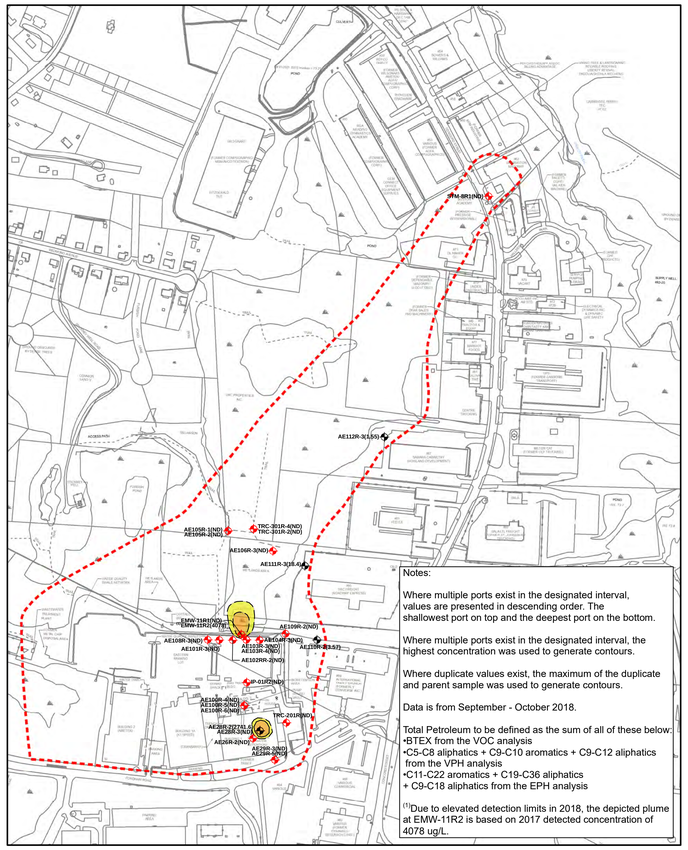
Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from October 2017.

Total Petroleum to be defined as the sum of all of these below:
- BTEX from the VOC analysis
- C5-C8 aliphatics + C9-C10 aromatics + C9-C12 aliphatics from the VPH analysis
- C11-C22 aromatics + C19-C36 aliphatics + C9-C18 aliphatics from the EPH analysis

2017 Total Petroleum in Groundwater
Middle Bedrock (61 - 120 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

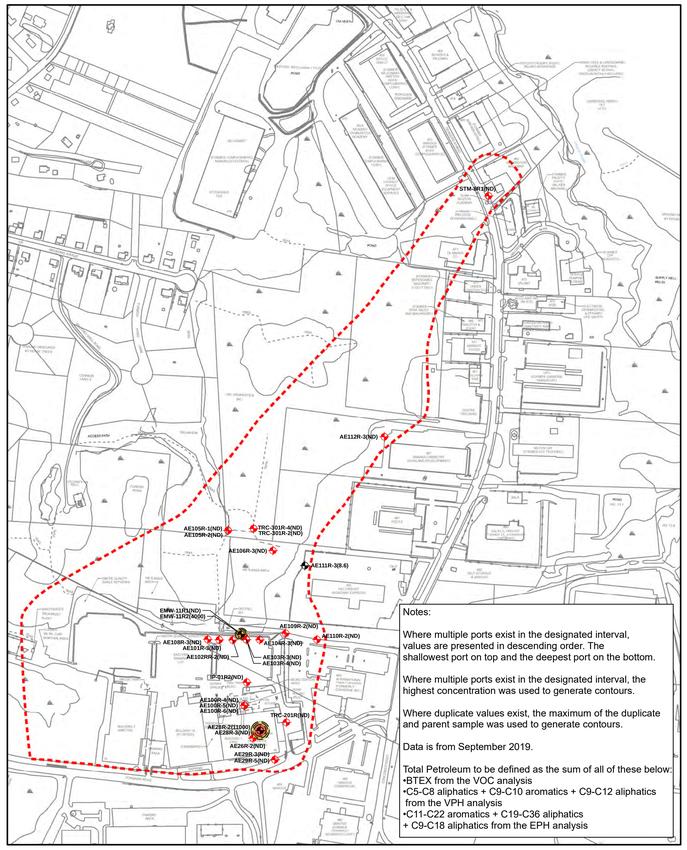
Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September - October 2018.

Total Petroleum to be defined as the sum of all of these below:
- BTEX from the VOC analysis
- C5-C8 aliphatics + C9-C10 aromatics + C9-C12 aliphatics from the VPH analysis
- C11-C22 aromatics + C19-C36 aliphatics + C9-C18 aliphatics from the EPH analysis

(1)Due to elevated detection limits in 2018, the depicted plume at EMW-11R2 is based on 2017 detected concentration of 4078 ug/L.

2018 Total Petroleum in Groundwater
Middle Bedrock (61 - 120 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

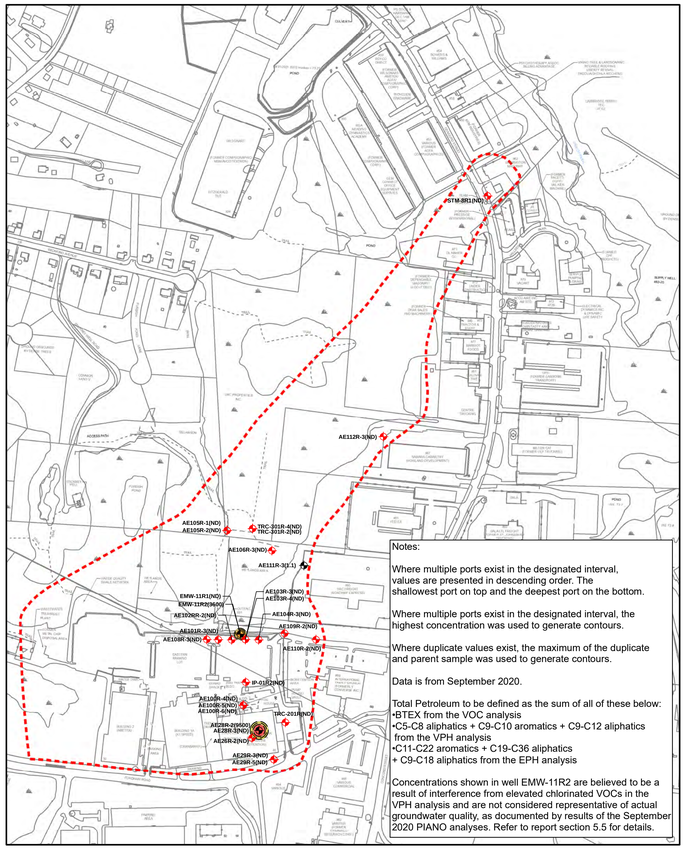
Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September 2019.

Total Petroleum to be defined as the sum of all of these below:
- BTEX from the VOC analysis
- C5-C8 aliphatics + C9-C10 aromatics + C9-C12 aliphatics from the VPH analysis
- C11-C22 aromatics + C19-C36 aliphatics + C9-C18 aliphatics from the EPH analysis

2019 Total Petroleum in Groundwater
Middle Bedrock (61 - 120 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

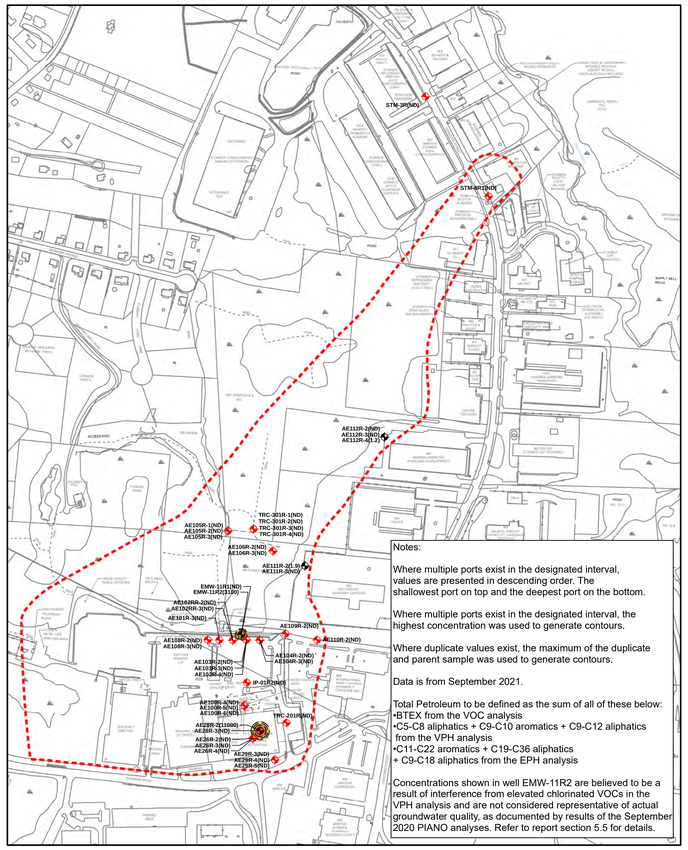
Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September 2020.

Total Petroleum to be defined as the sum of all of these below:
- BTEX from the VOC analysis
- C5-C8 aliphatics + C9-C10 aromatics + C9-C12 aliphatics from the VPH analysis
- C11-C22 aromatics + C19-C36 aliphatics + C9-C18 aliphatics from the EPH analysis

Concentrations shown in well EMW-11R2 are believed to be a result of interference from elevated chlorinated VOCs in the VPH analysis and are not considered representative of actual groundwater quality, as documented by results of the September 2020 PIANO analyses. Refer to report section 5.5 for details.

2020 Total Petroleum in Groundwater
Middle Bedrock (61 - 120 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September 2021.

Total Petroleum to be defined as the sum of all of these below:
- BTEX from the VOC analysis
- C5-C8 aliphatics + C9-C10 aromatics + C9-C12 aliphatics from the VPH analysis
- C11-C22 aromatics + C19-C36 aliphatics + C9-C18 aliphatics from the EPH analysis

Concentrations shown in well EMW-11R2 are believed to be a result of interference from elevated chlorinated VOCs in the VPH analysis and are not considered representative of actual groundwater quality, as documented by results of the September 2020 PIANO analyses. Refer to report section 5.5 for details.

2021 Total Petroleum in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

N

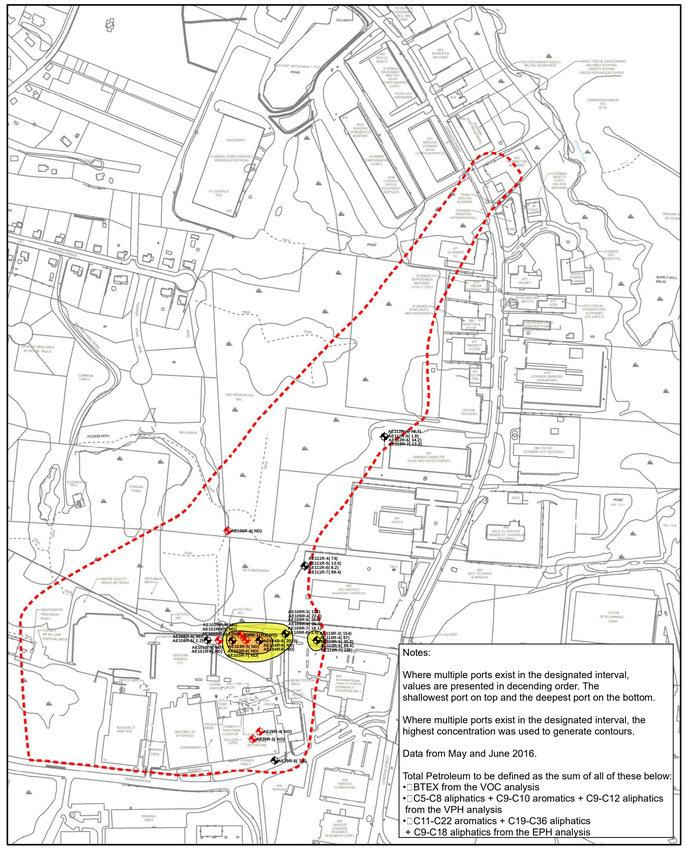
0 100 200 400 600 800 Feet

Total Petroleum in Groundwater
Middle Bedrock (61 - 120 ft bgs)

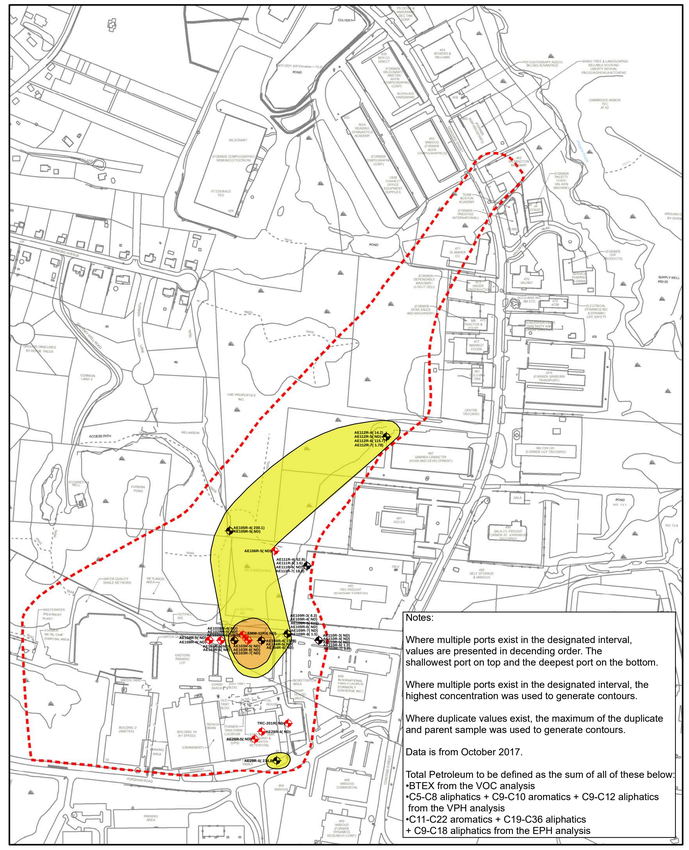
Figure 5-11

AECOM

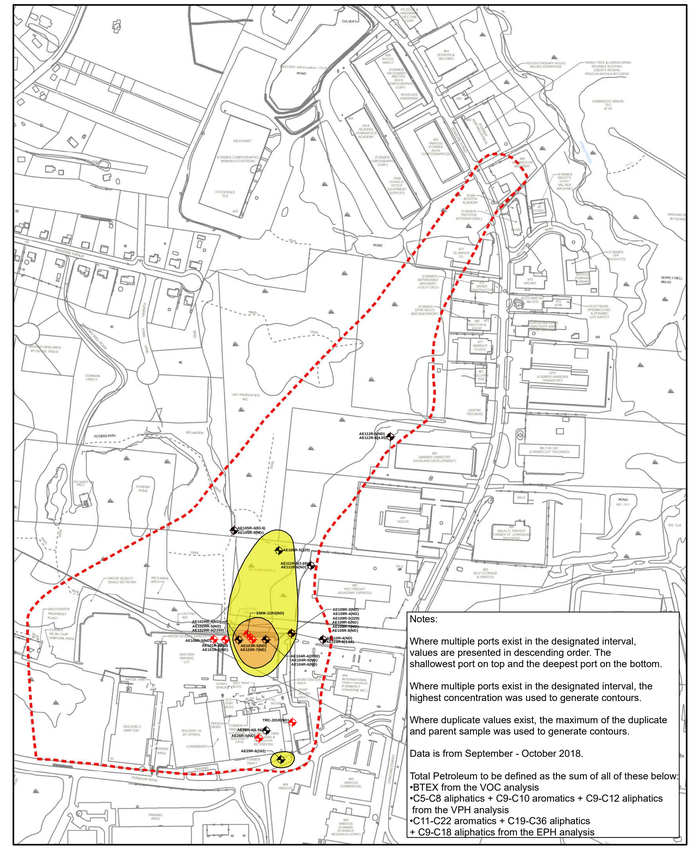
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_11_Petroleum_MB_2016_2021.mxd



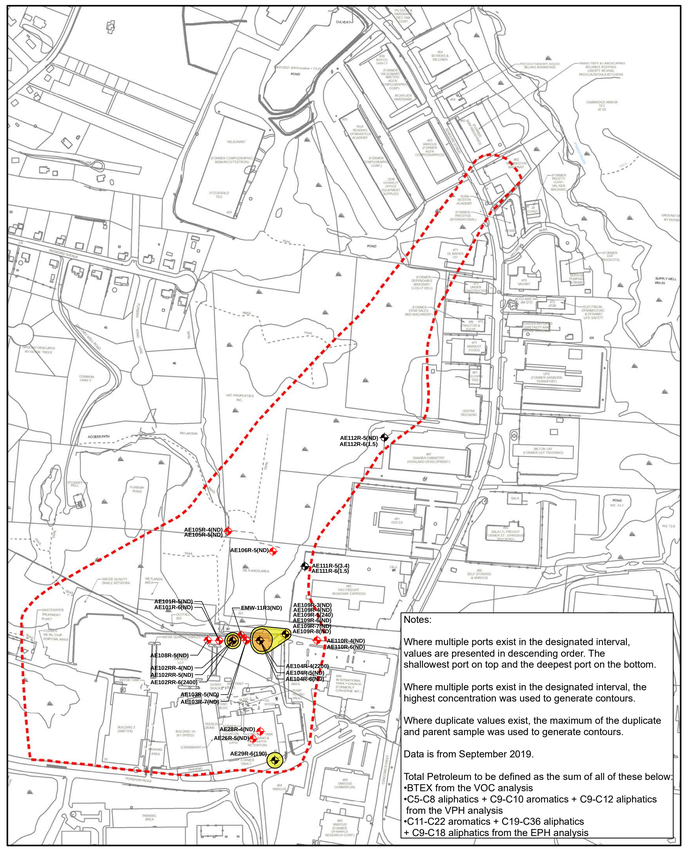
2016 Total Petroleum in Groundwater
Lower Bedrock (121 - 232 ft bgs)



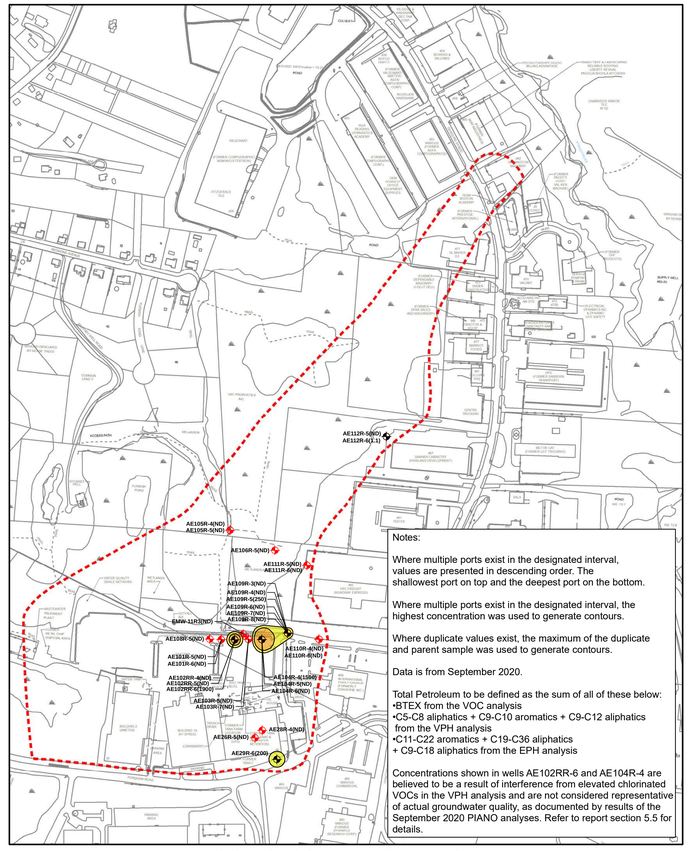
2017 Total Petroleum in Groundwater
Lower Bedrock (121 - 232 ft bgs)



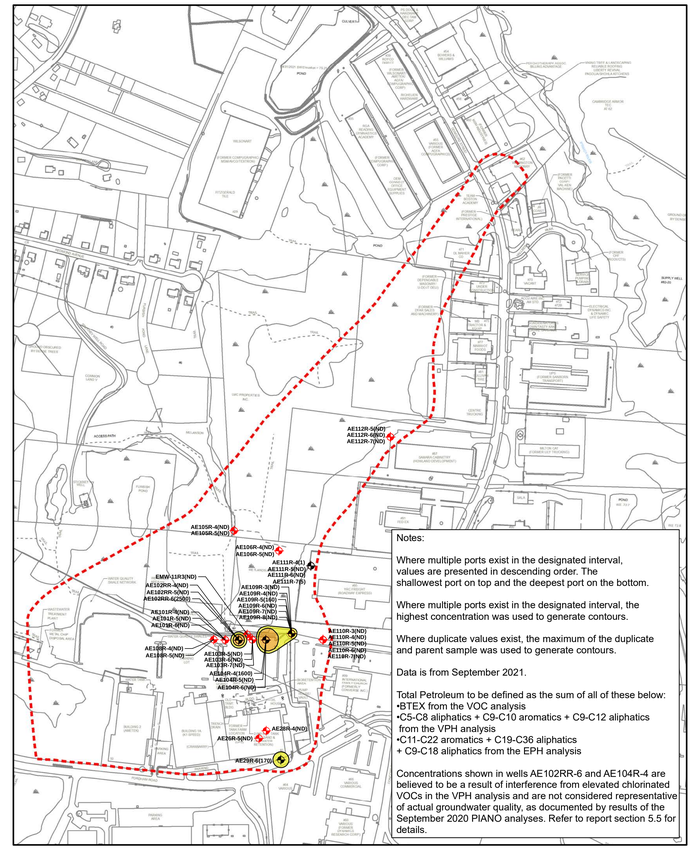
2018 Total Petroleum in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2019 Total Petroleum in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2020 Total Petroleum in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2021 Total Petroleum in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

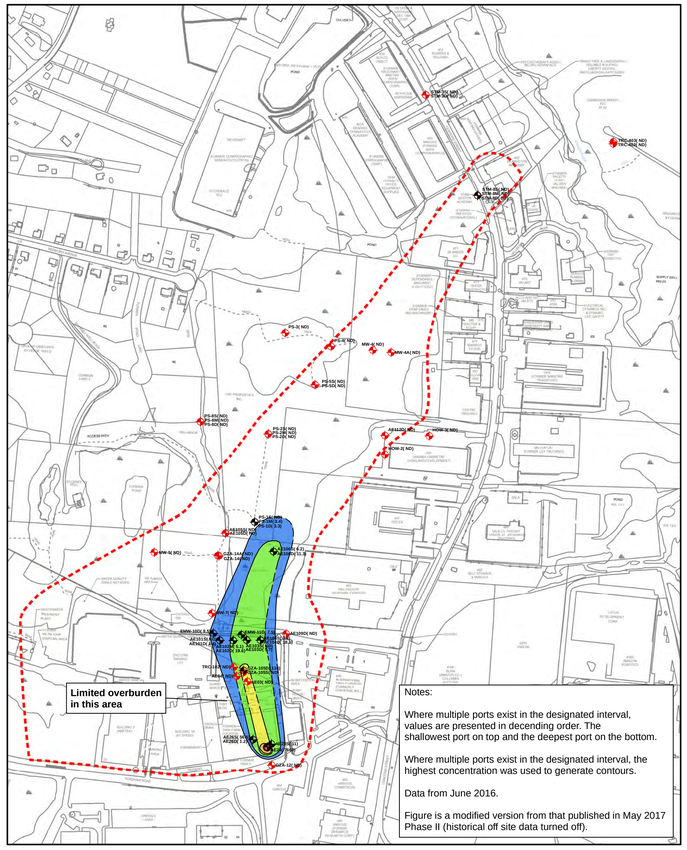
N

0 100 200 400 600 800 Feet

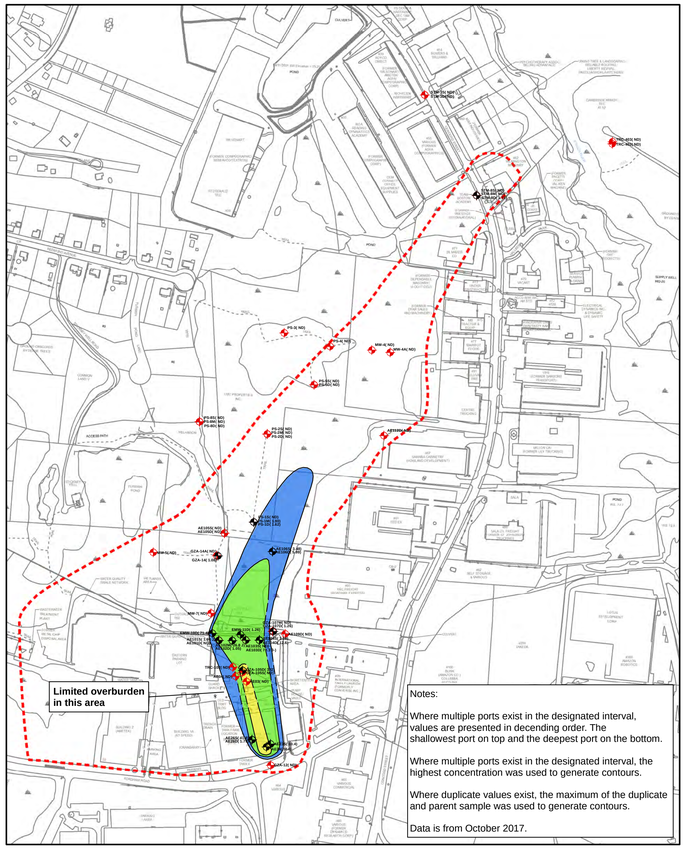
Total Petroleum in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-12

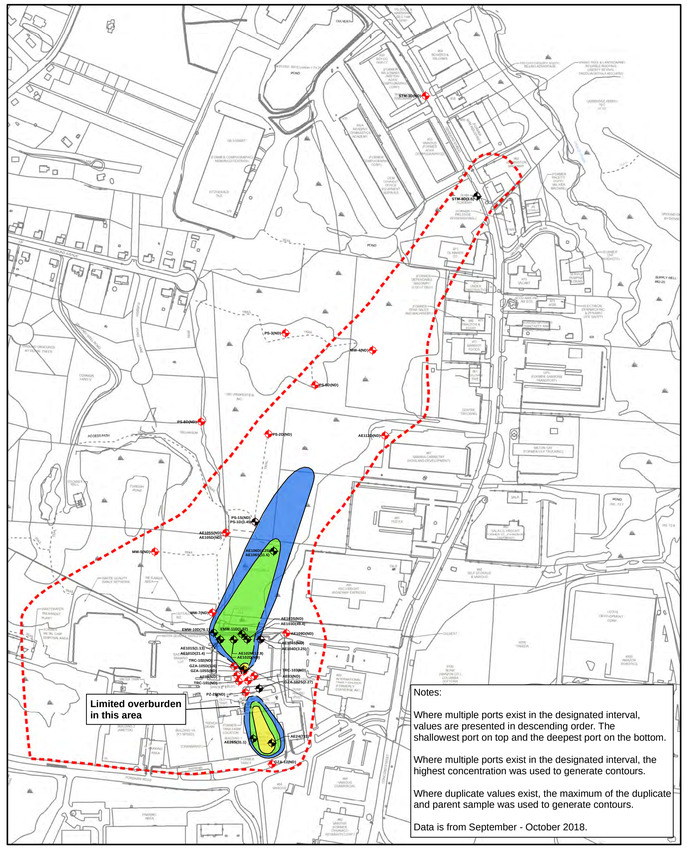
Path: C:\Work\Lockheed_Martin_Wilmington_2017_2022\2016-2021 Plume Maps\MXD\Fig_5_12_Petroleum_LB_2016_2021.mxd



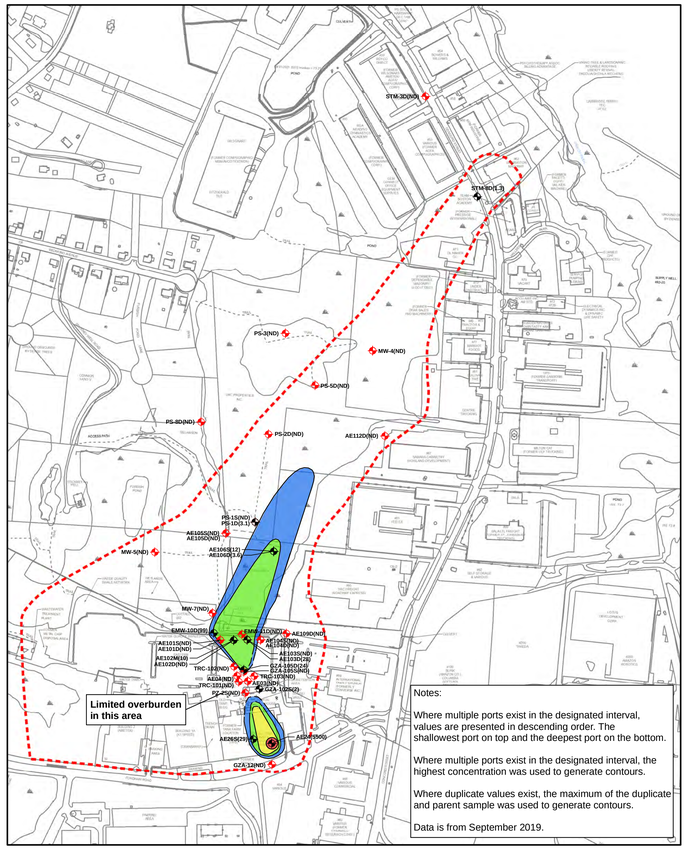
2016 PCE in Groundwater
Overburden (0 - 78 ft bgs)



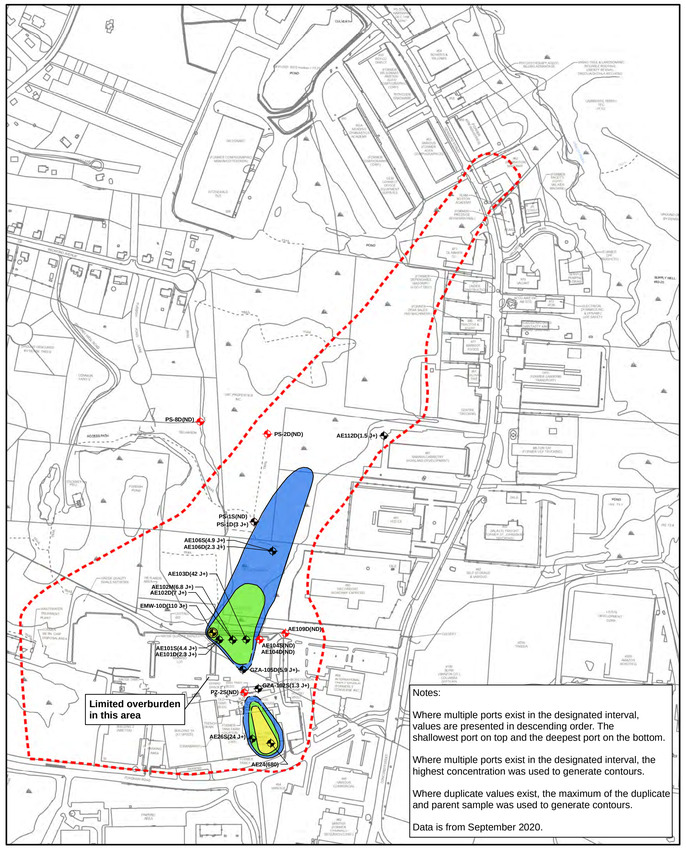
2017 PCE in Groundwater
Overburden (0 - 78 ft bgs)



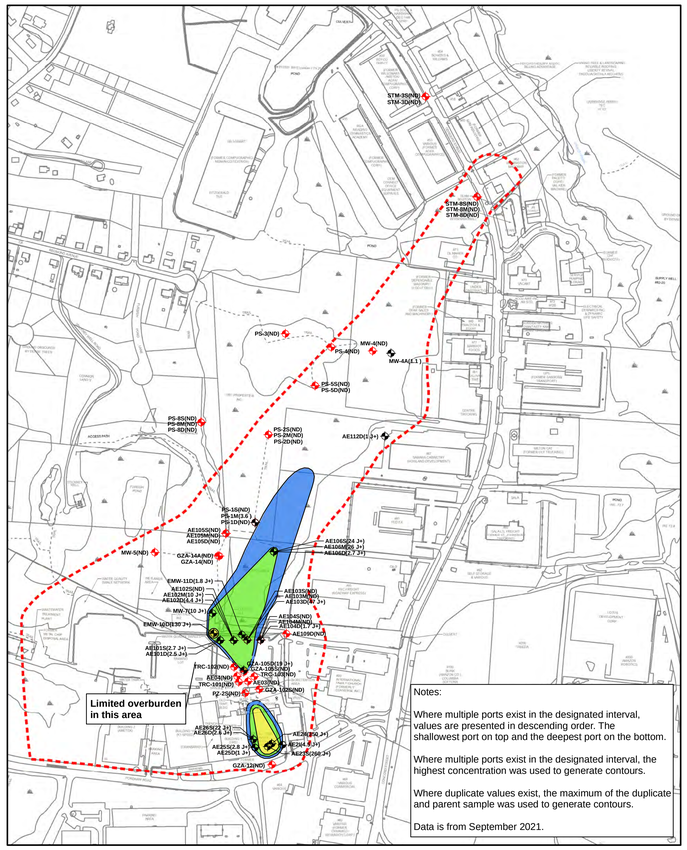
2018 PCE in Groundwater
Overburden (0 - 78 ft bgs)



2019 PCE in Groundwater
Overburden (0 - 78 ft bgs)



2020 PCE in Groundwater
Overburden (0 - 78 ft bgs)



2021 PCE in Groundwater
Overburden (0 - 78 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

N

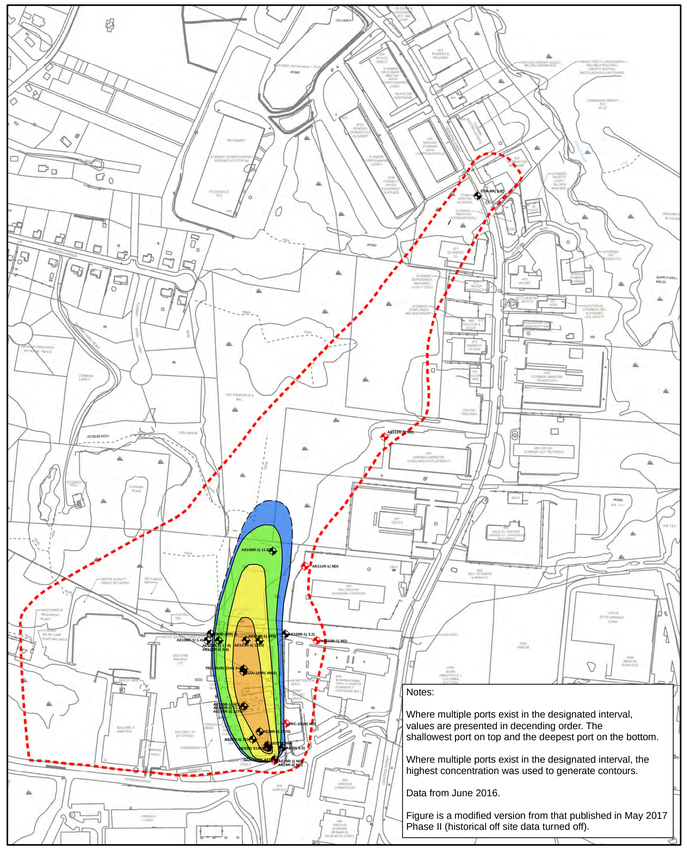
0 100 200 400 600 800 Feet

AECOM

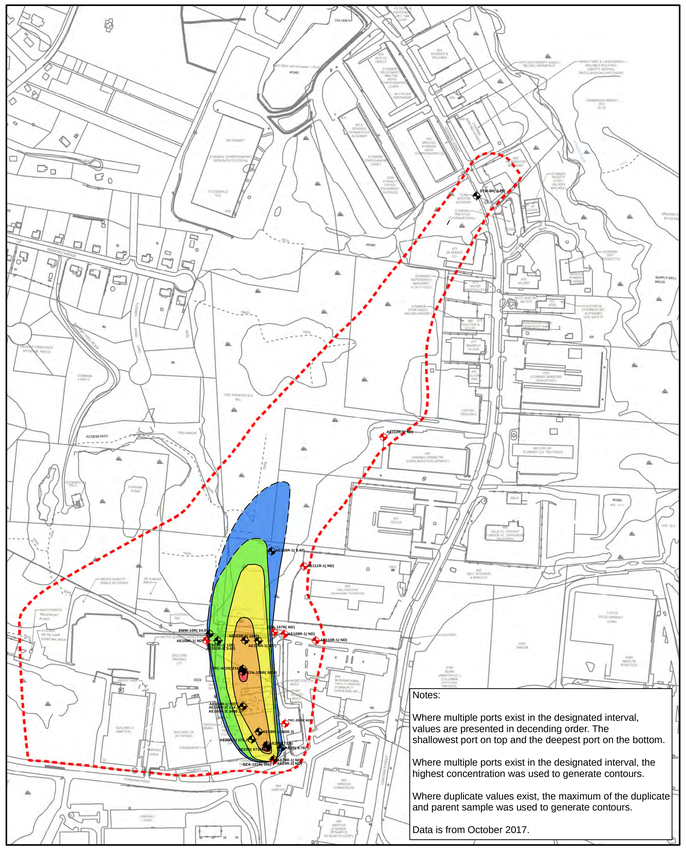
PCE in Groundwater
Overburden (0 - 78 ft bgs)

Figure 5-13

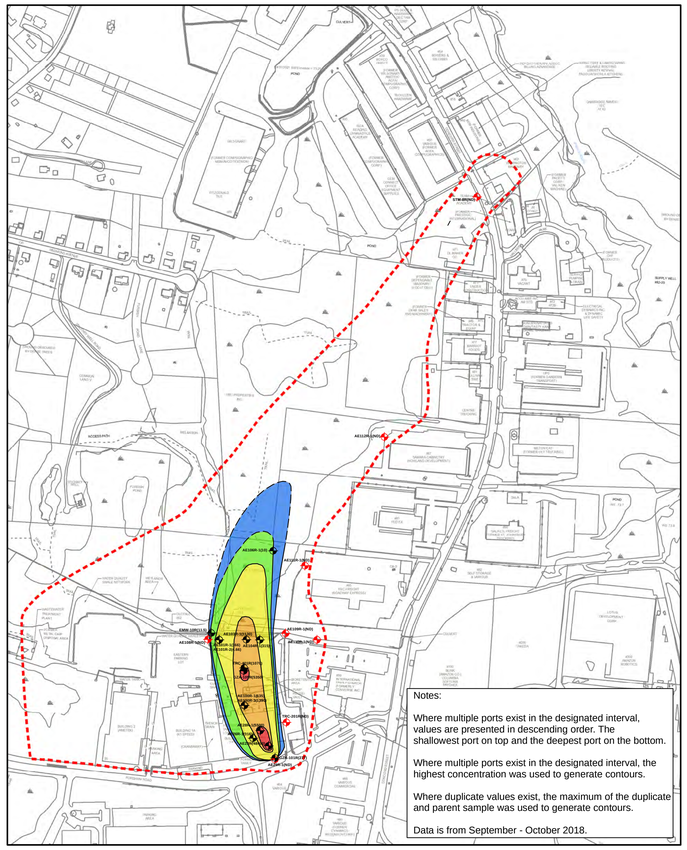
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_13_PCE_OB_2016_2021.mxd



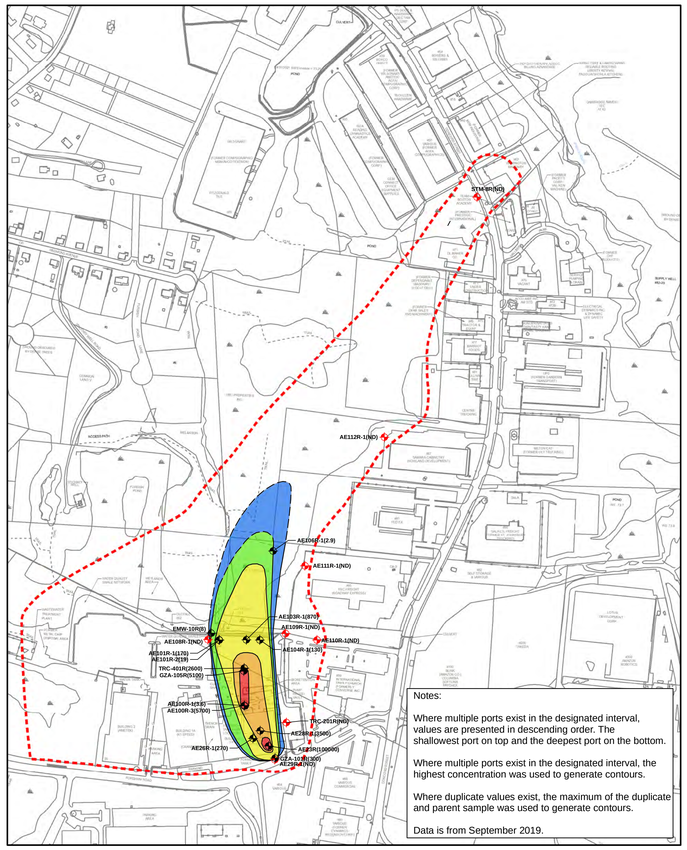
2016 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



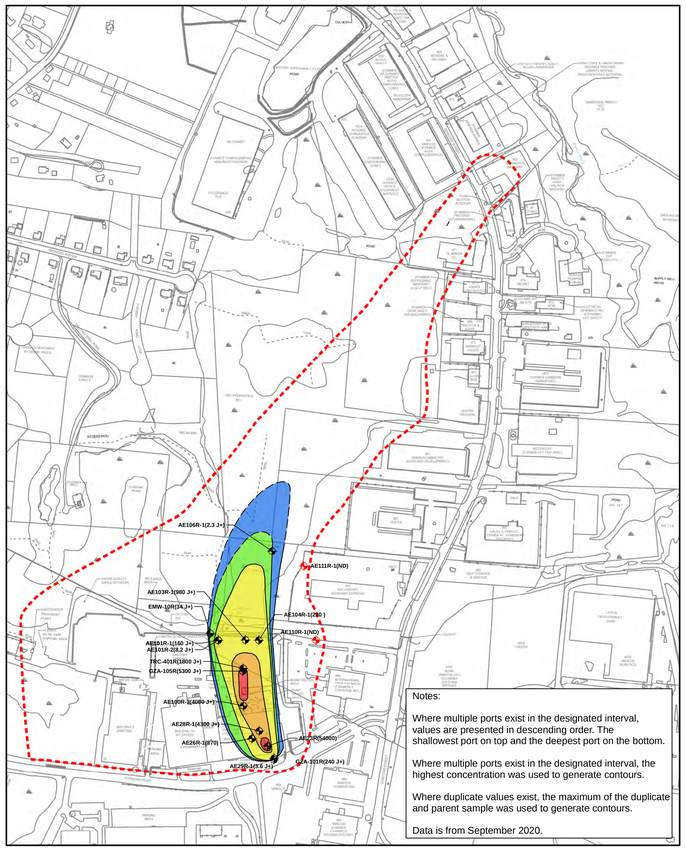
2017 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



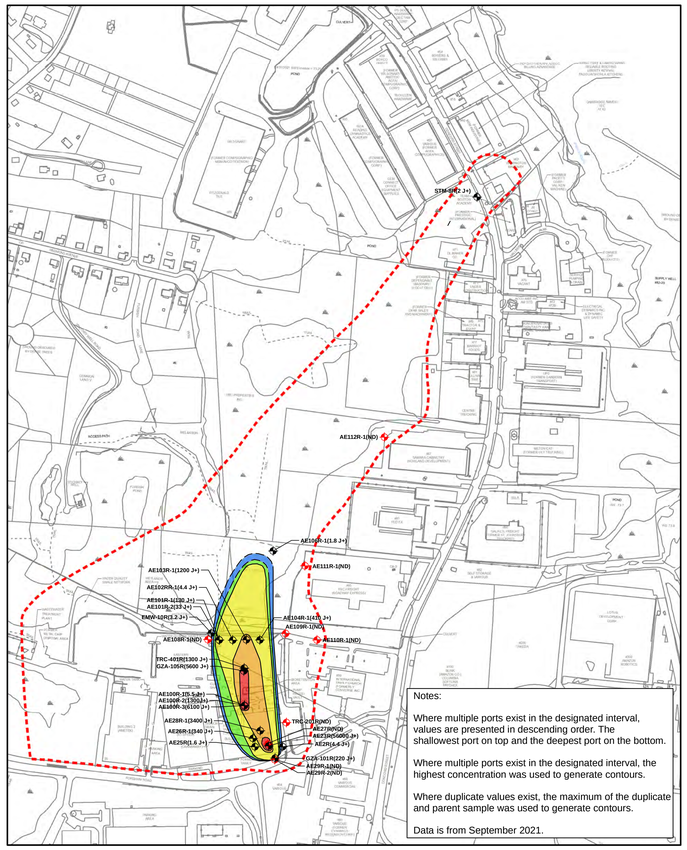
2018 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2019 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2020 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2021 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 5 µg/l

N

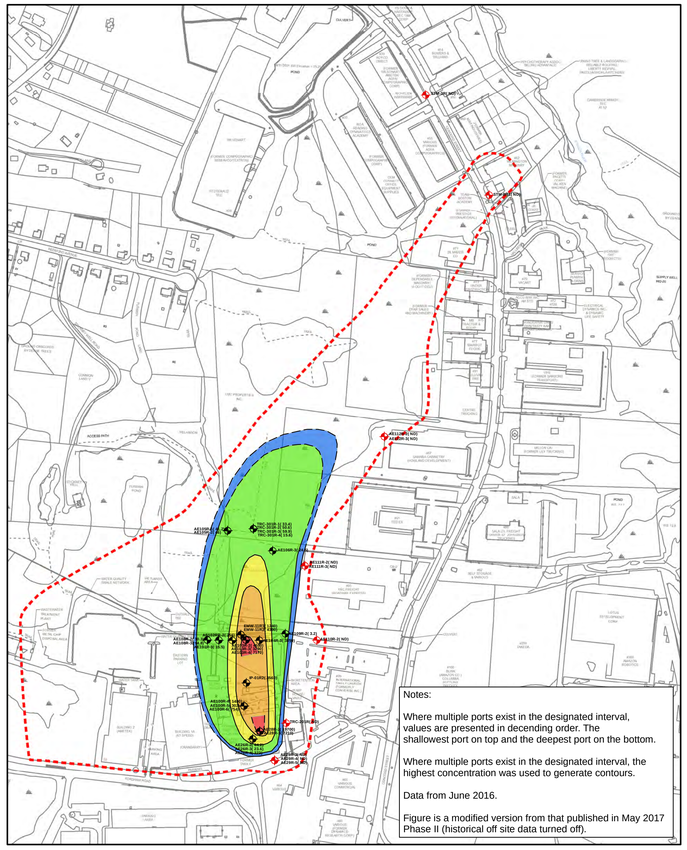
0 100 200 400 600 800 Feet

AECOM

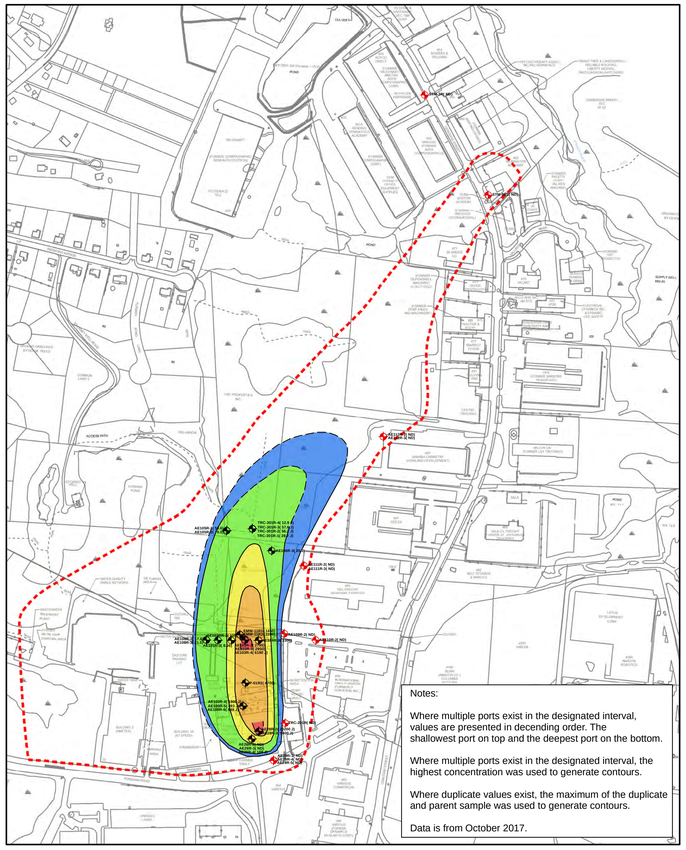
PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-14

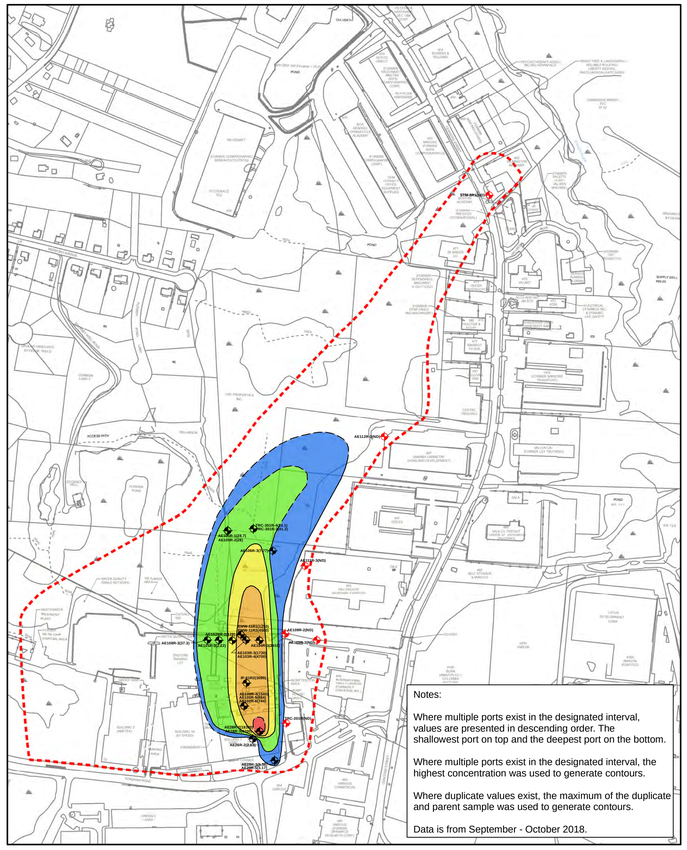
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_14_PCE_Upper_BR_2016_2021.mxd



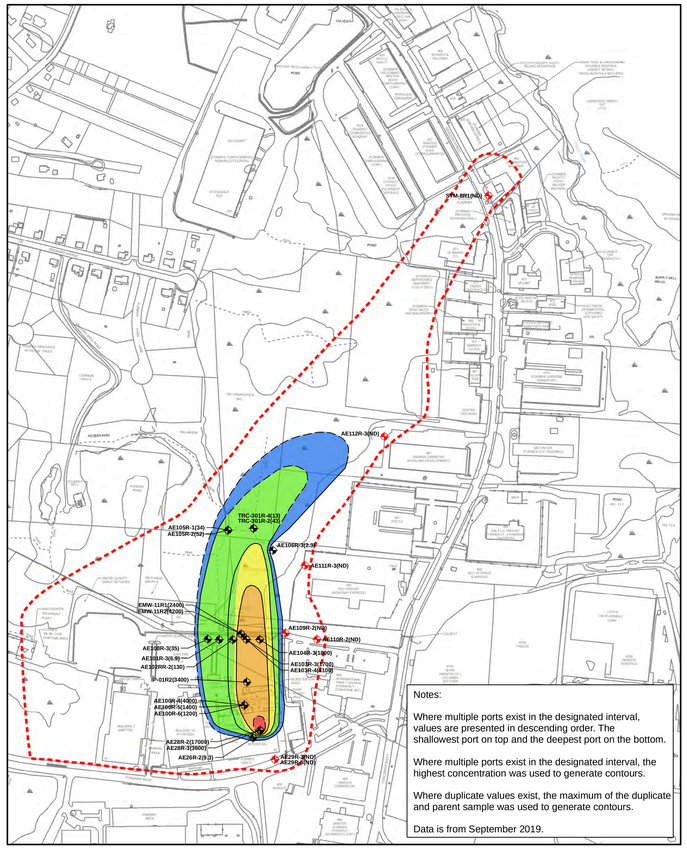
2016 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



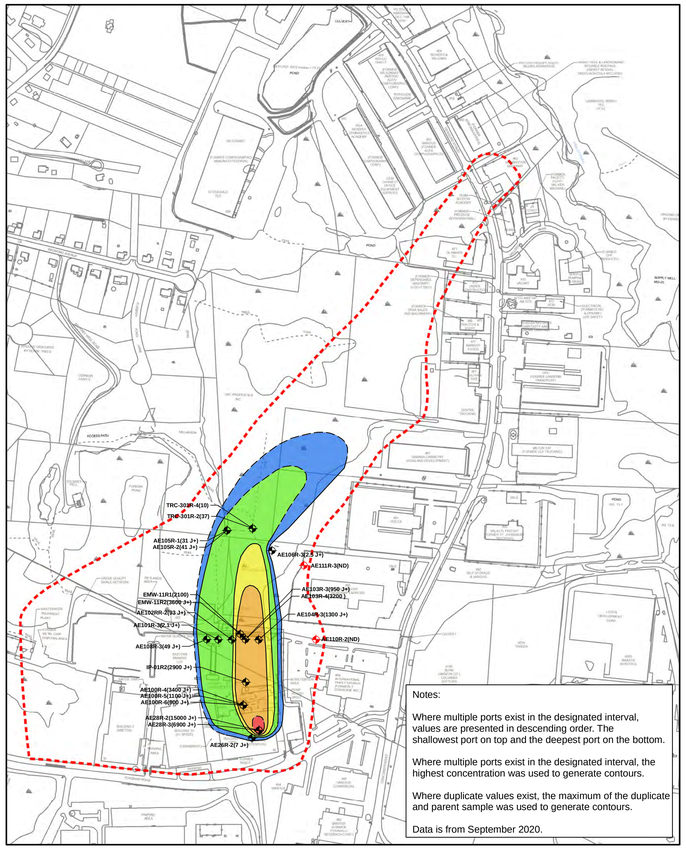
2017 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



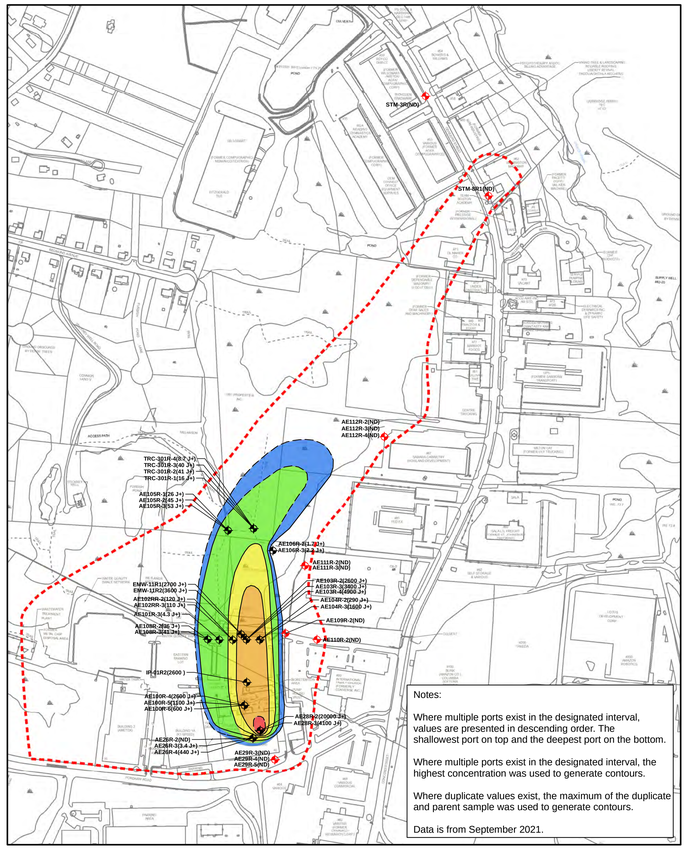
2018 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2019 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2020 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2021 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

N

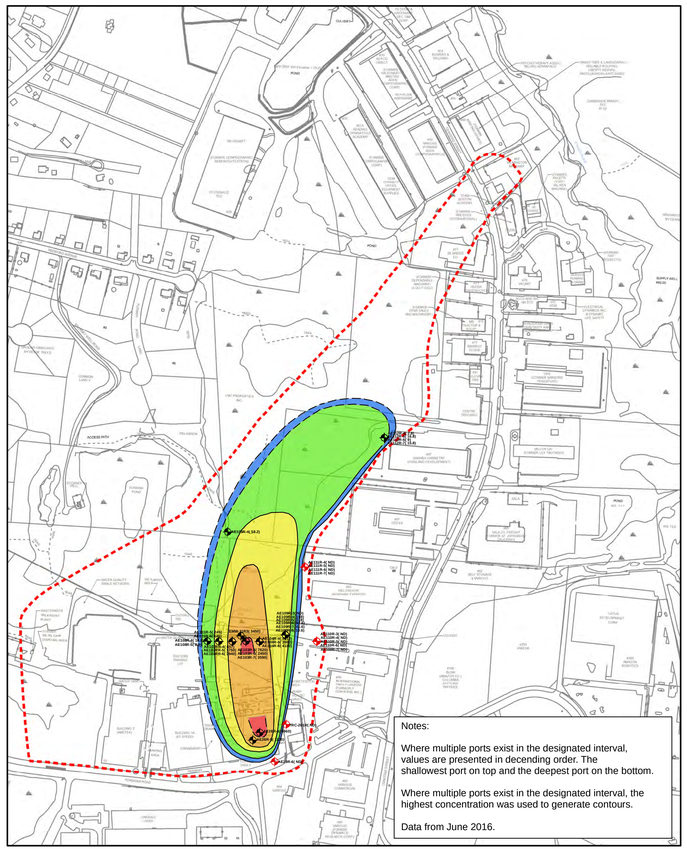
0 100 200 400 600 800 Feet

AECOM

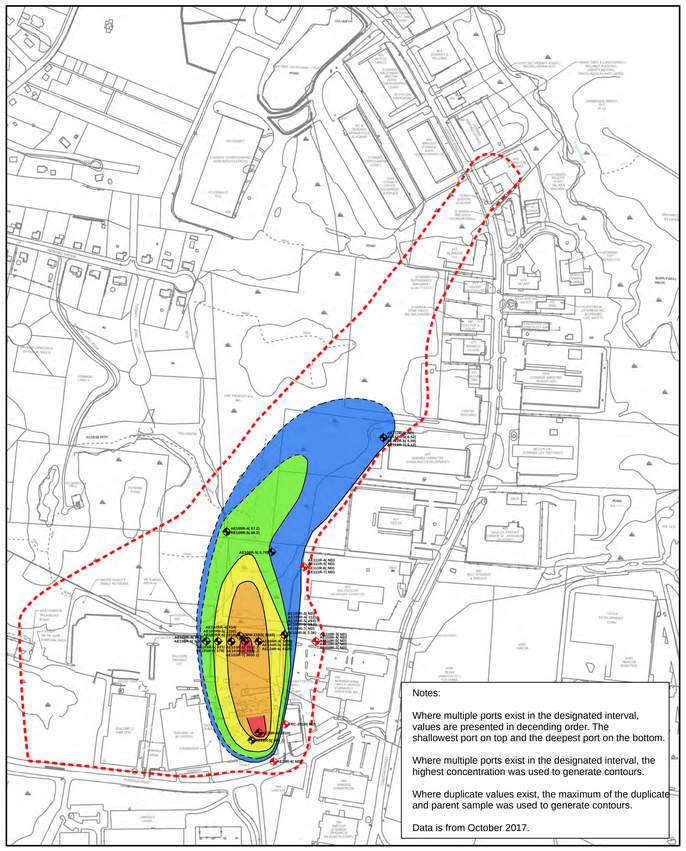
PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-15

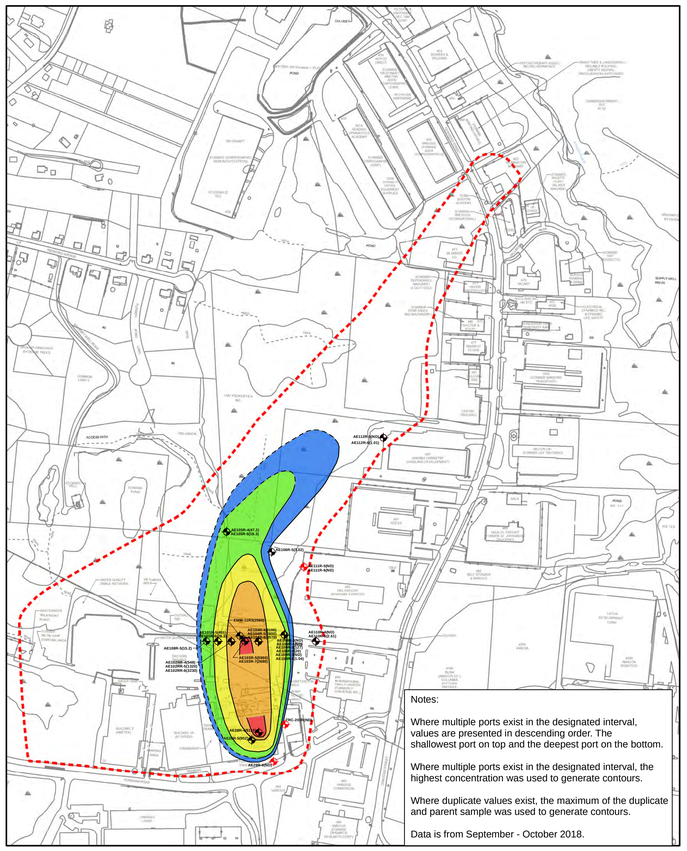
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_15_PCE_Middle_BR_2016_2021.mxd



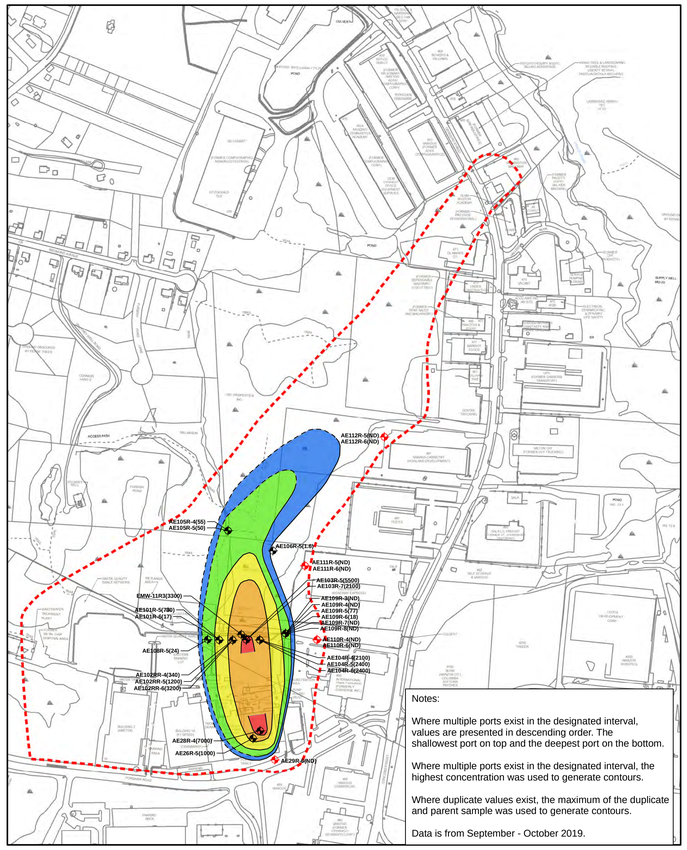
2016 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



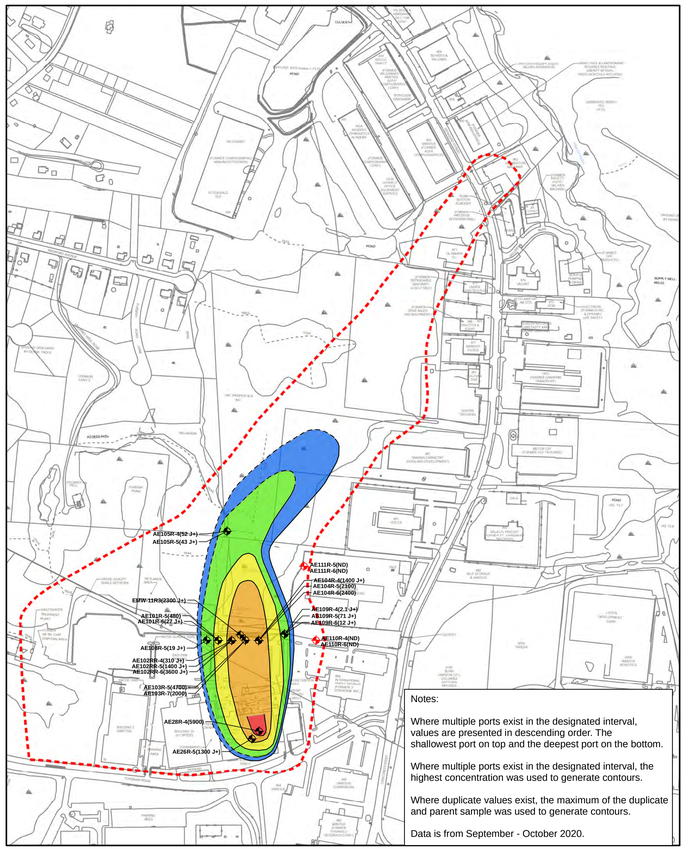
2017 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



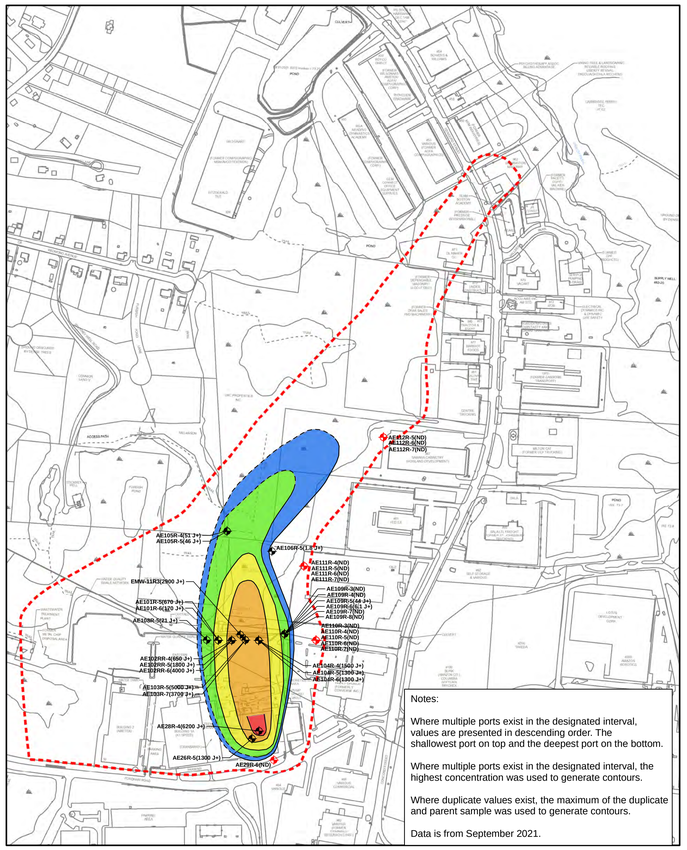
2018 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2019 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2020 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2021 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

N

0 100 200 400 600 800 Feet

AECOM

PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-16

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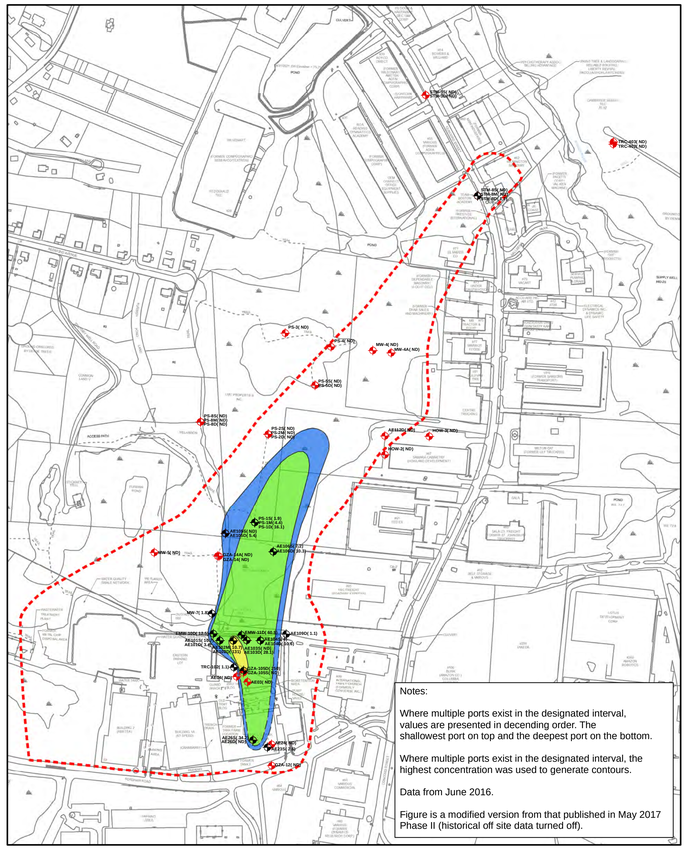
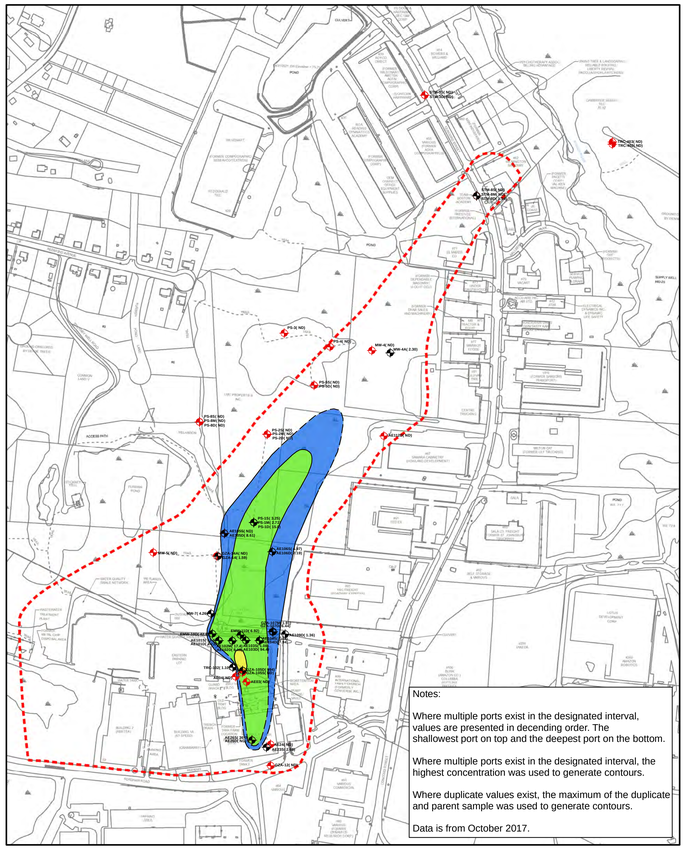
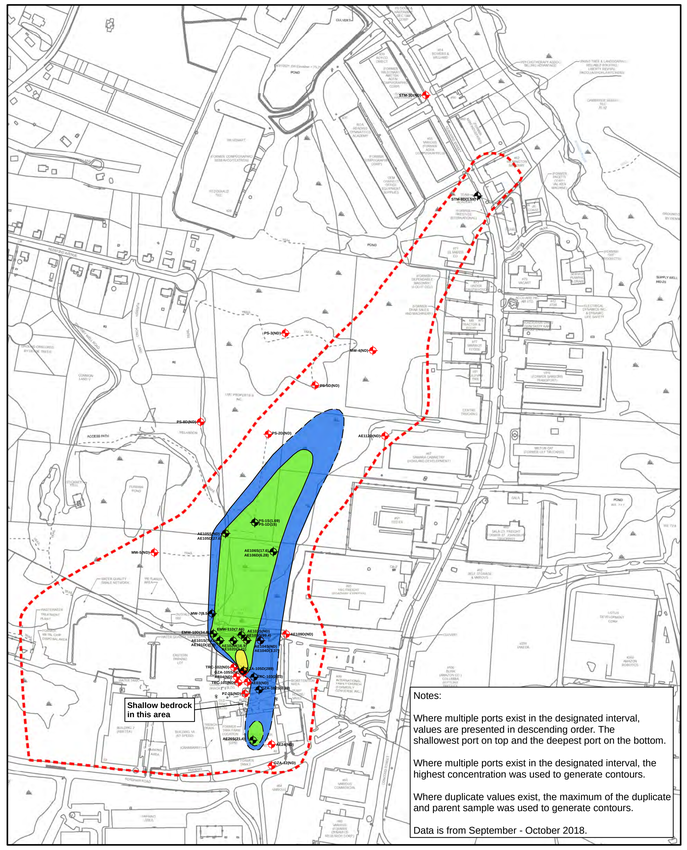


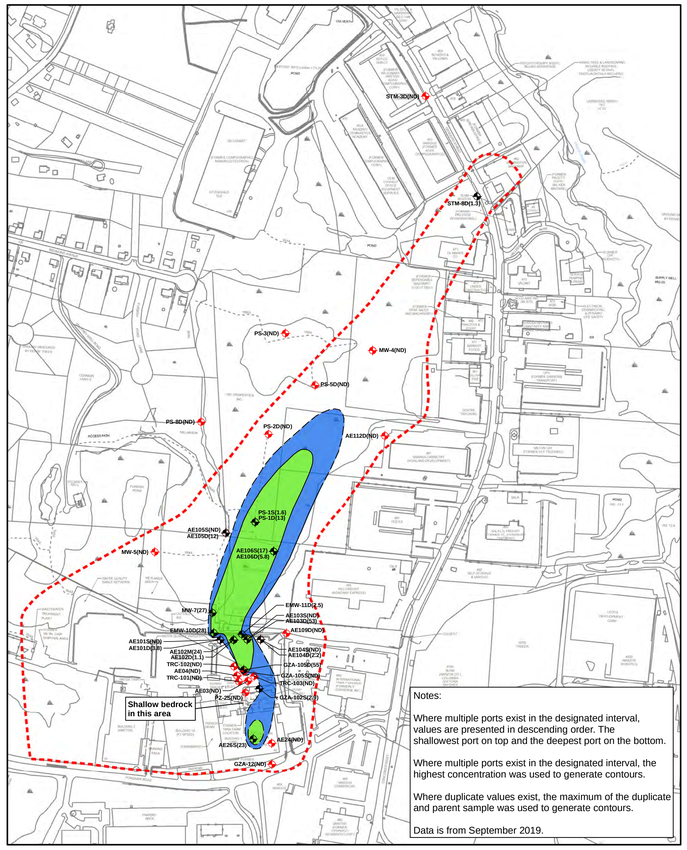
2016 TCE in Groundwater
Overburden (0 - 78 ft bgs)



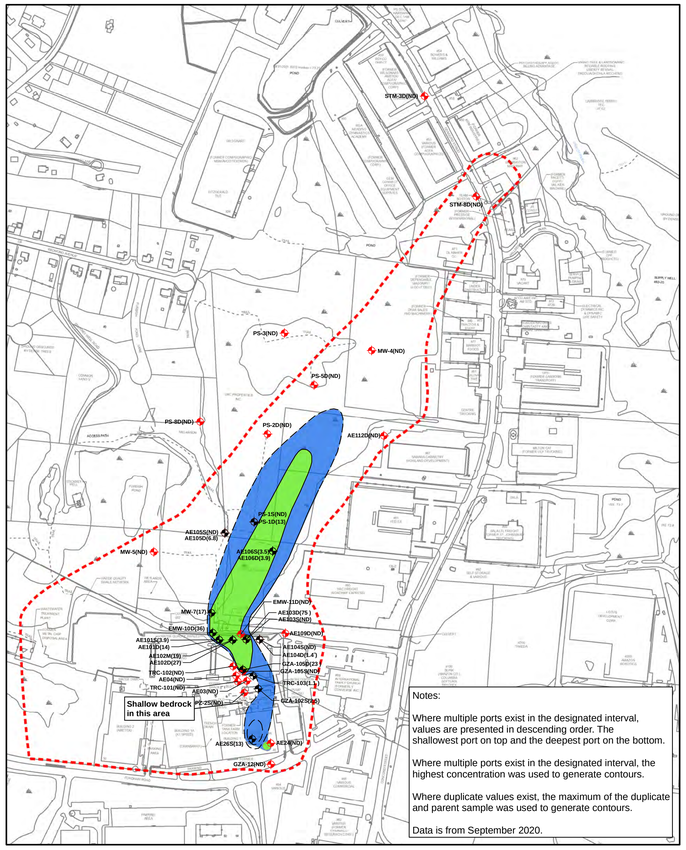
2017 TCE in Groundwater
Overburden (0 - 78 ft bgs)



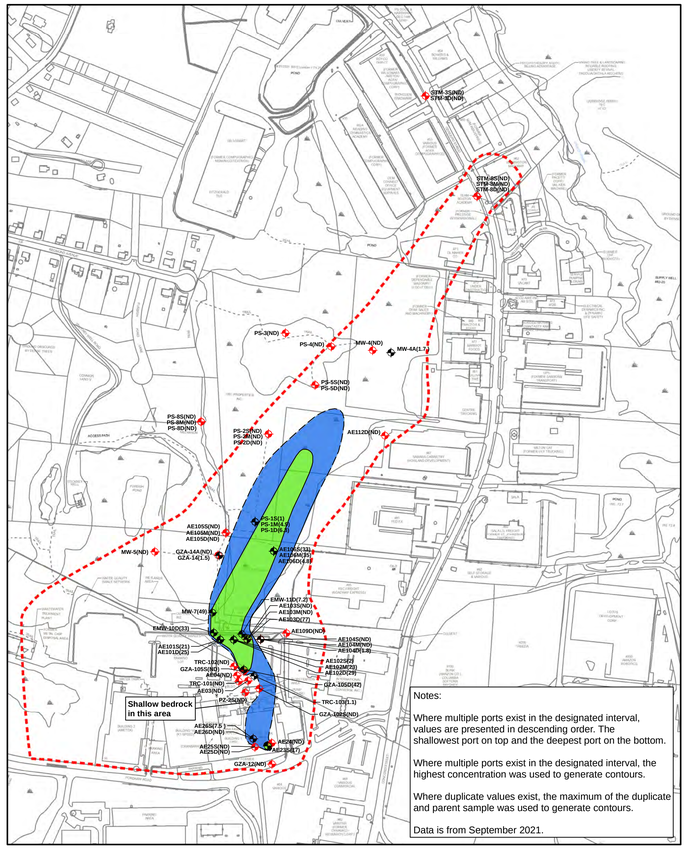
2018 TCE in Groundwater
Overburden (0 - 78 ft bgs)



2019 TCE in Groundwater
Overburden (0 - 78 ft bgs)



2020 TCE in Groundwater
Overburden (0 - 78 ft bgs)



2021 TCE in Groundwater
Overburden (0 - 78 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

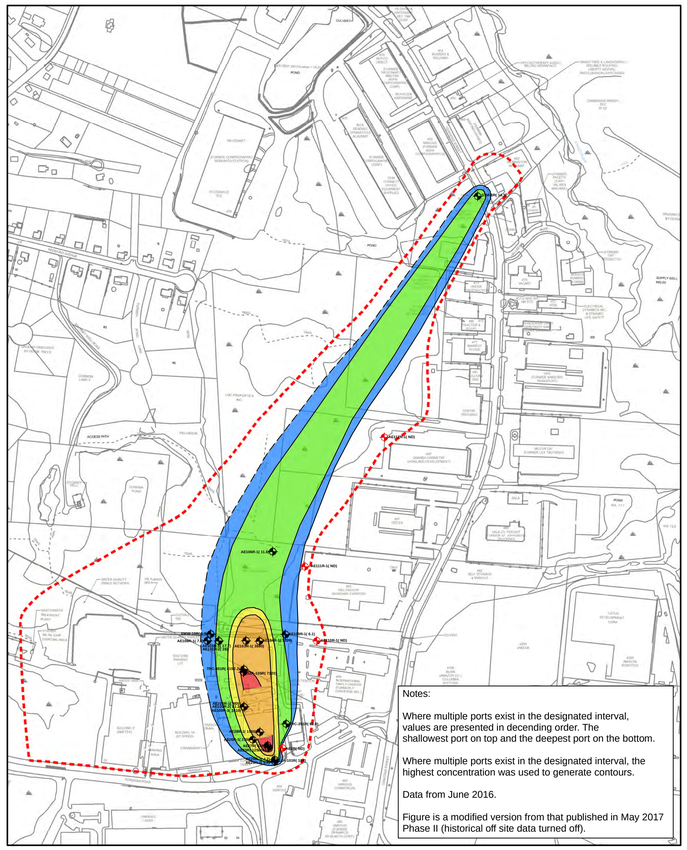
0 100 200 400 600 800 Feet

AECOM

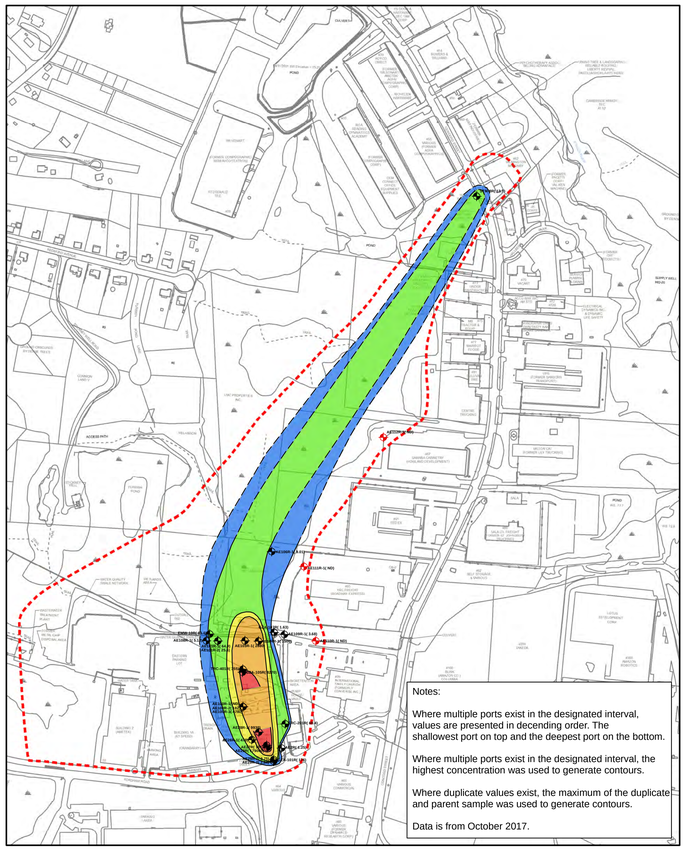
TCE in Groundwater
Overburden (0 - 78 ft bgs)

Figure 5-17

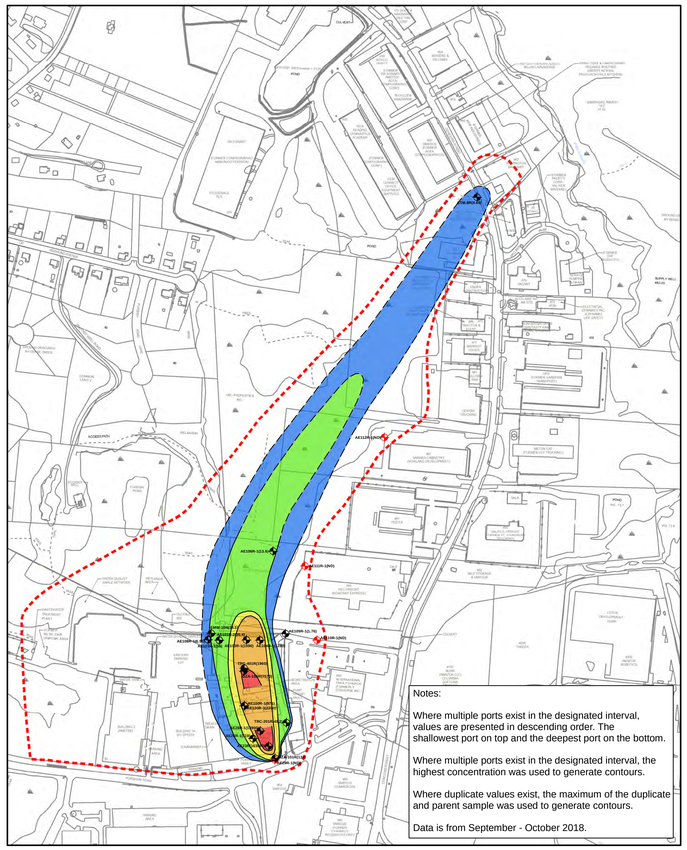
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_17_TCE_OB_2016_2021.mxd



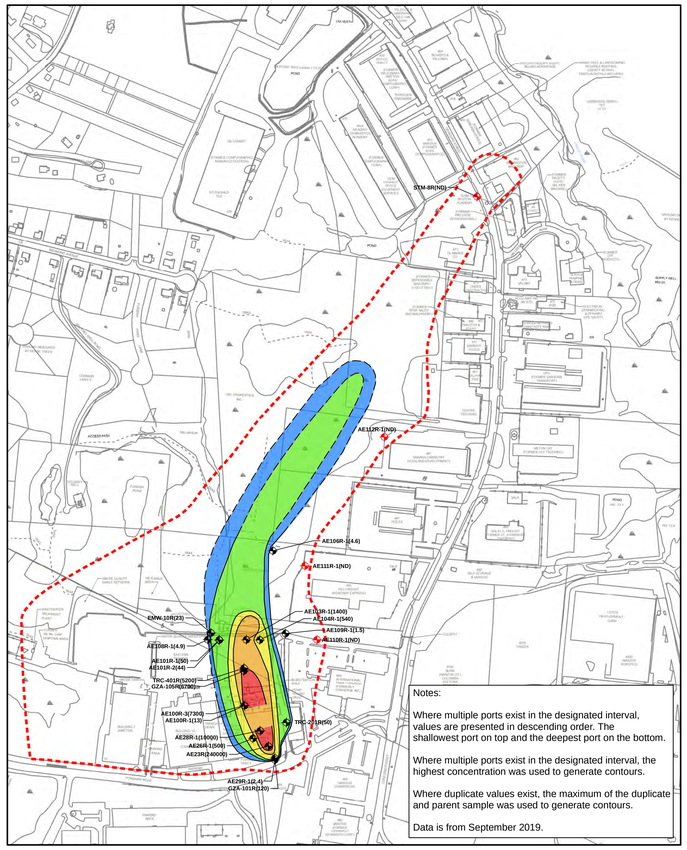
2016 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



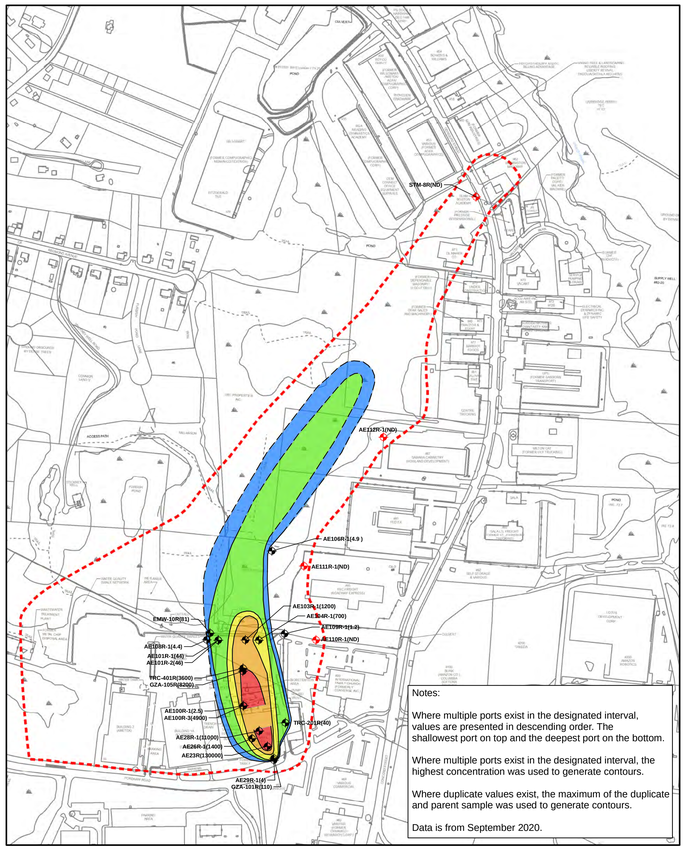
2017 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



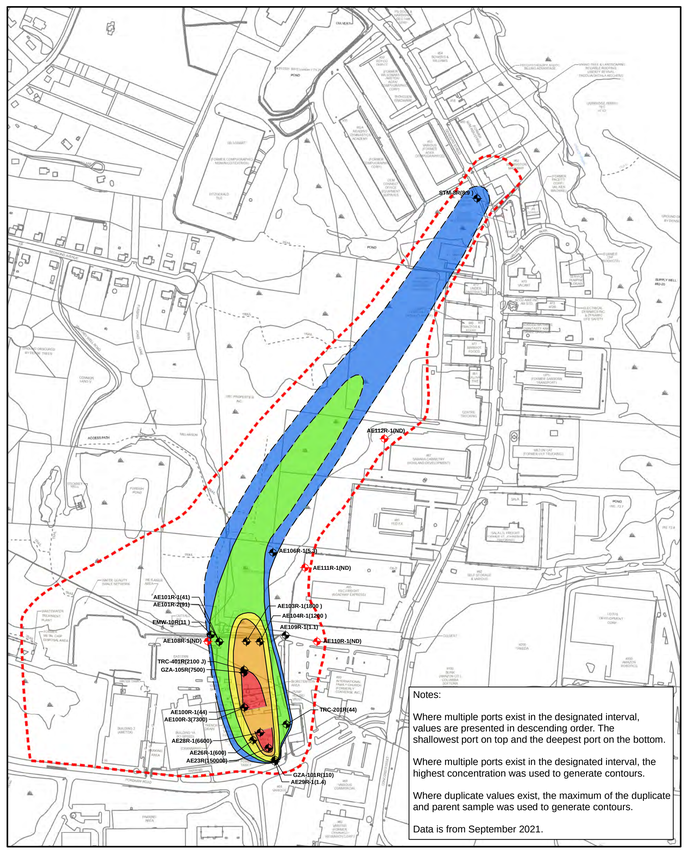
2018 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2019 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2020 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2021 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

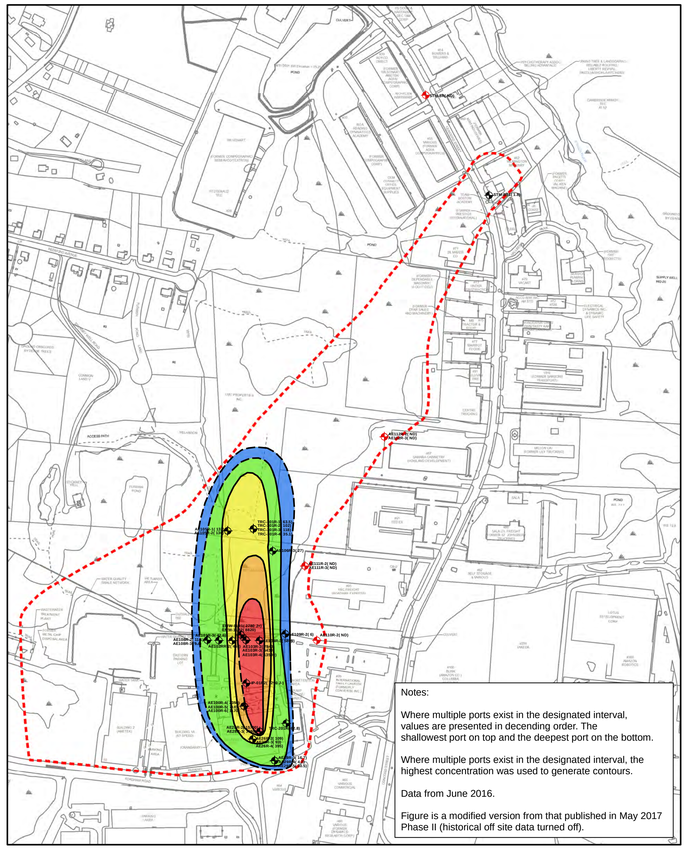
N

0 100 200 400 600 800 Feet

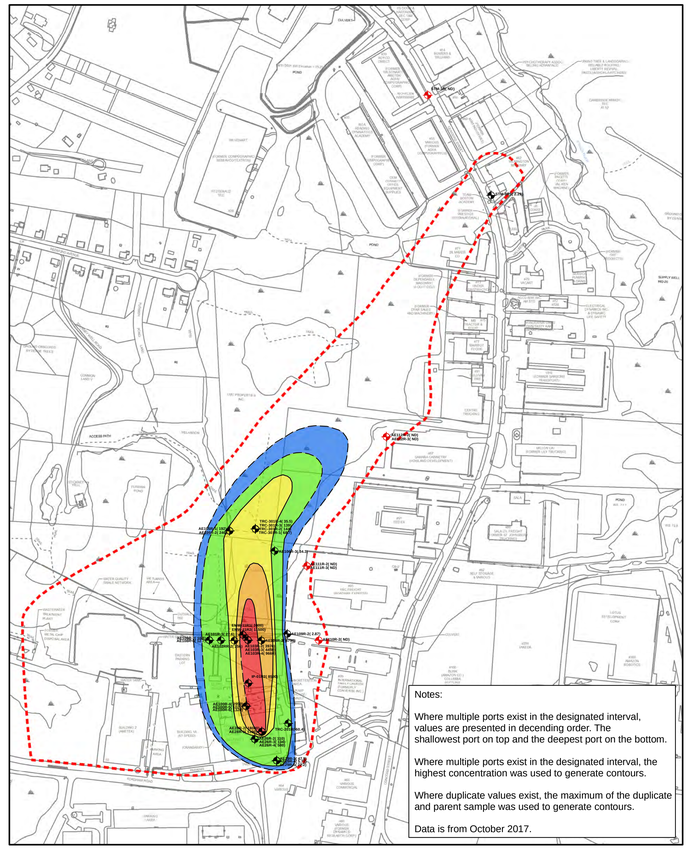
TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-18

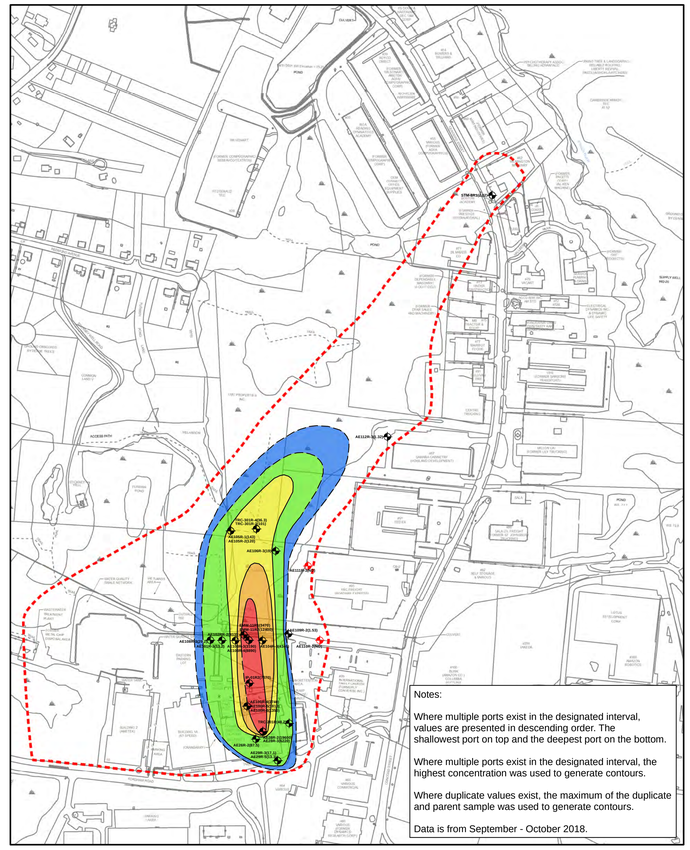
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_18_TCE_Upper_BR_2016_2021.mxd



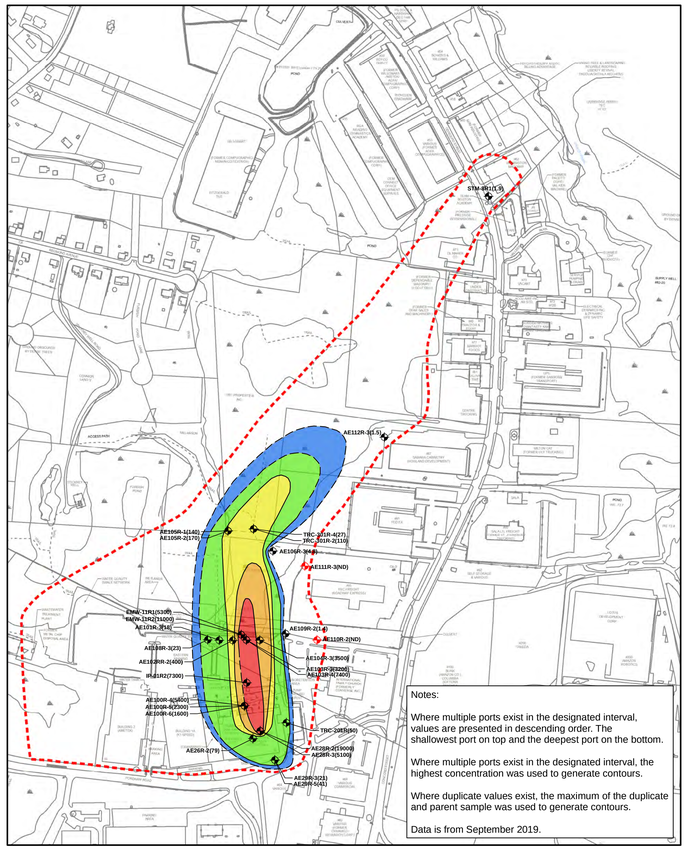
2016 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



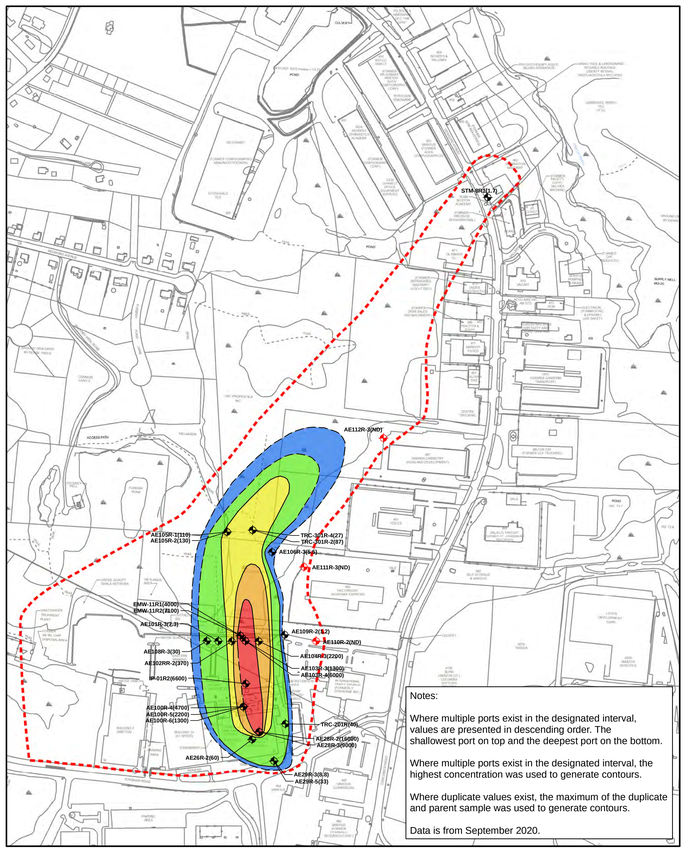
2017 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



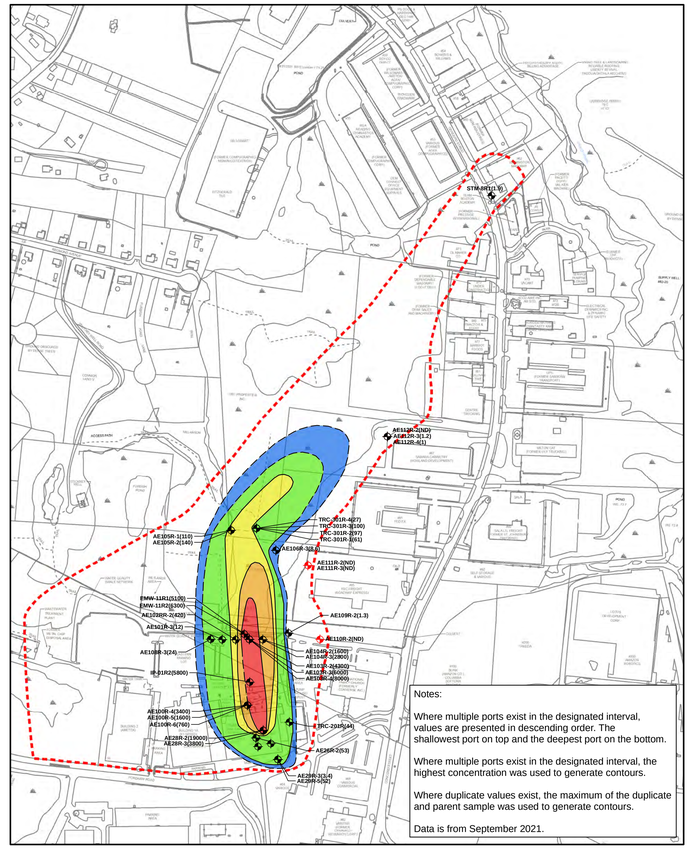
2018 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2019 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2020 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2021 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

N

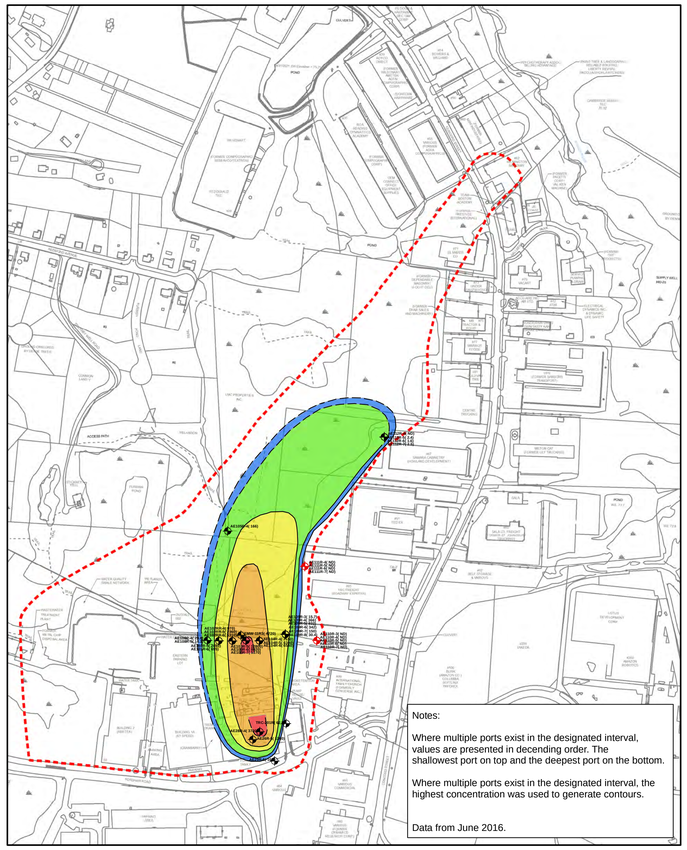
0 100 200 400 600 800 Feet

AECOM

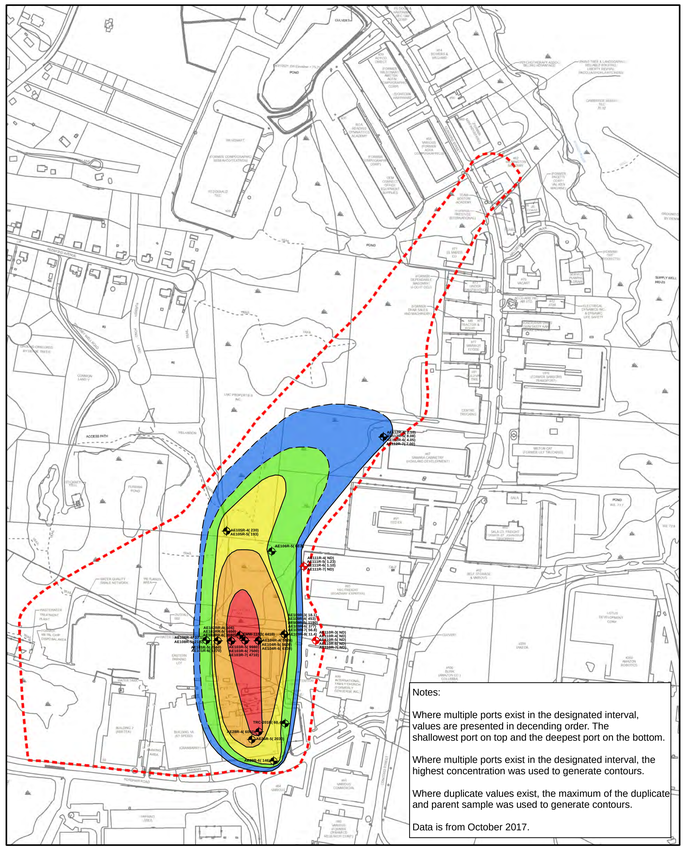
TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-19

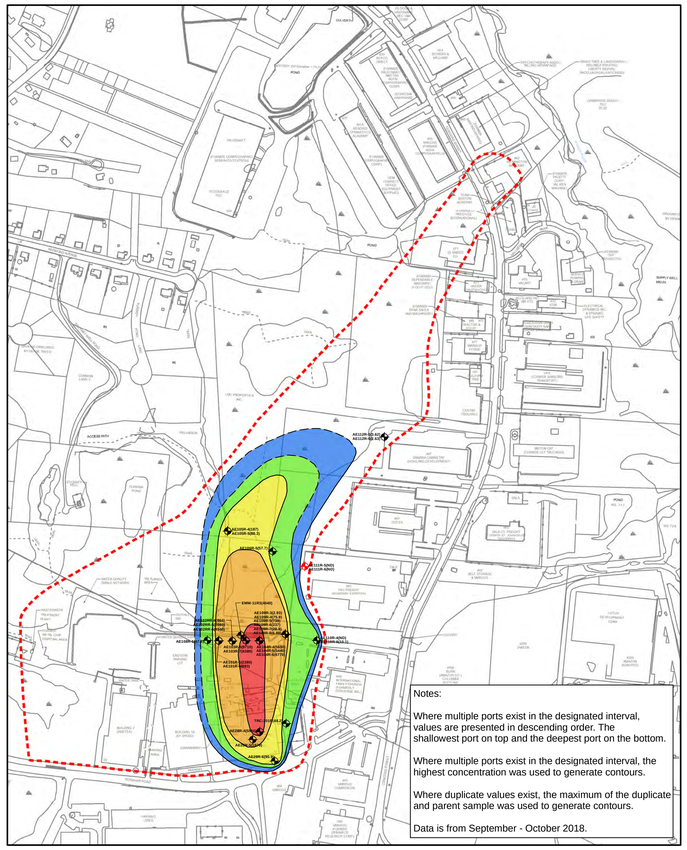
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_19_TCE_Middle_BR_2016_2021.mxd



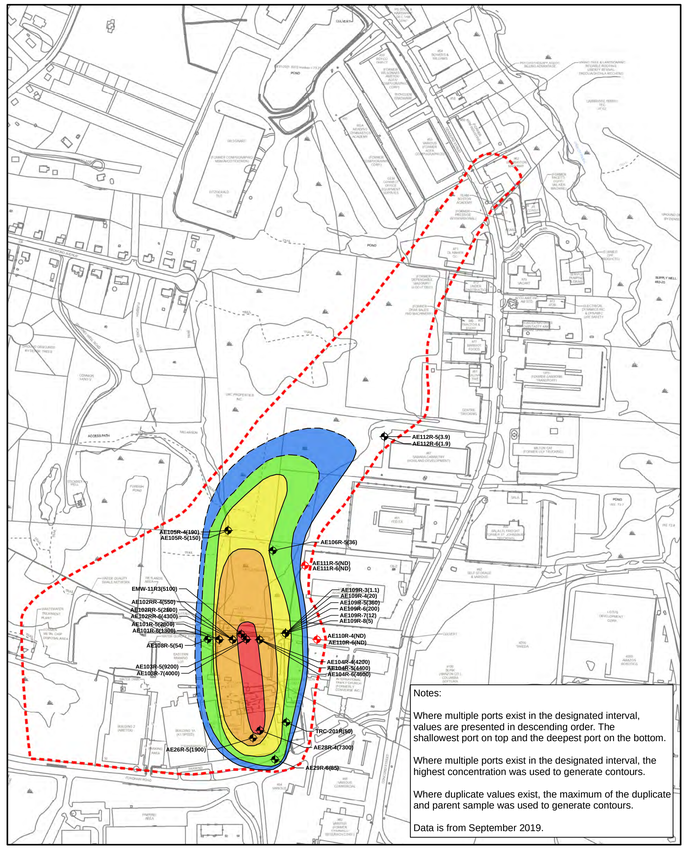
2016 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



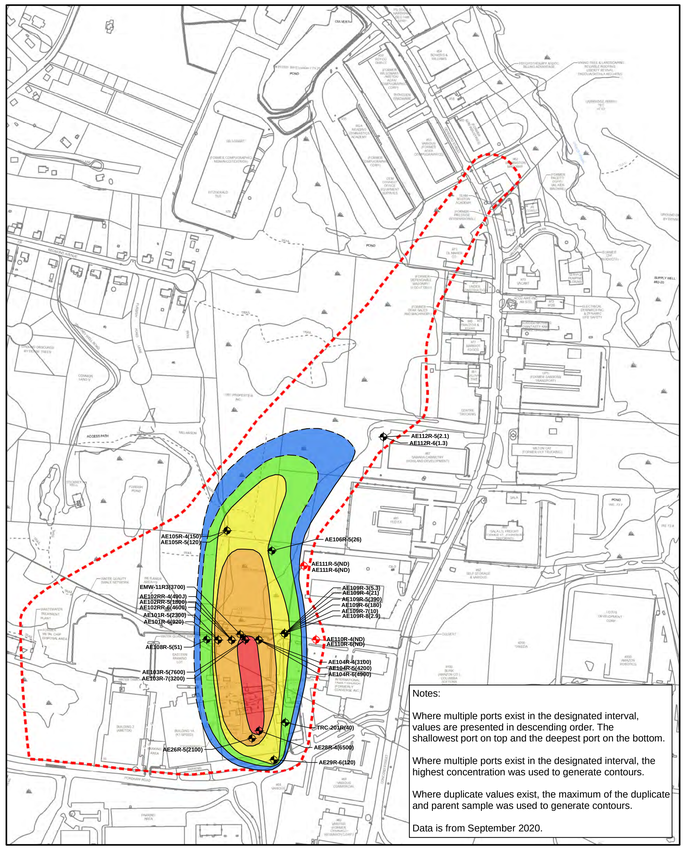
2017 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



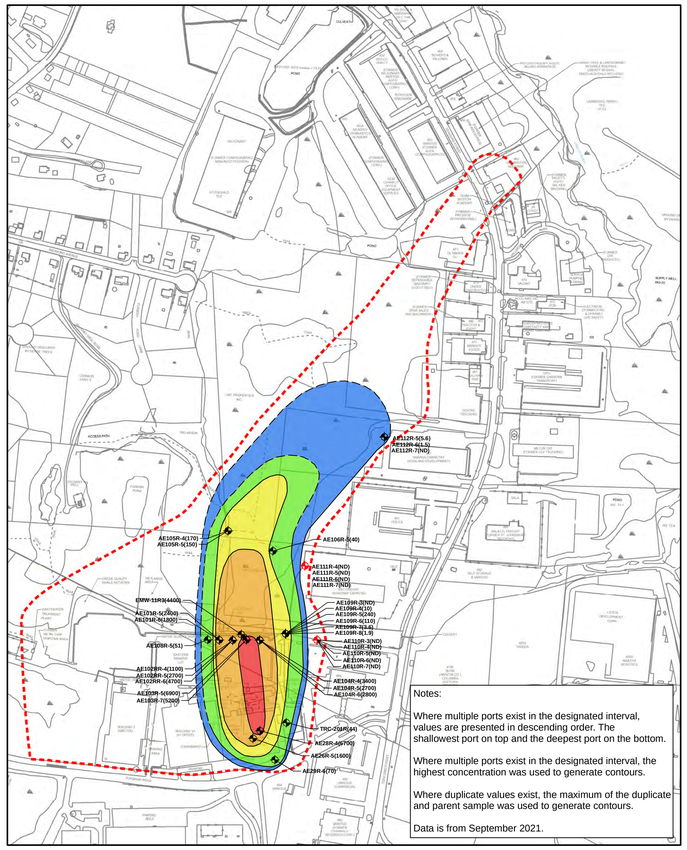
2018 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2019 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2020 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2021 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Legend

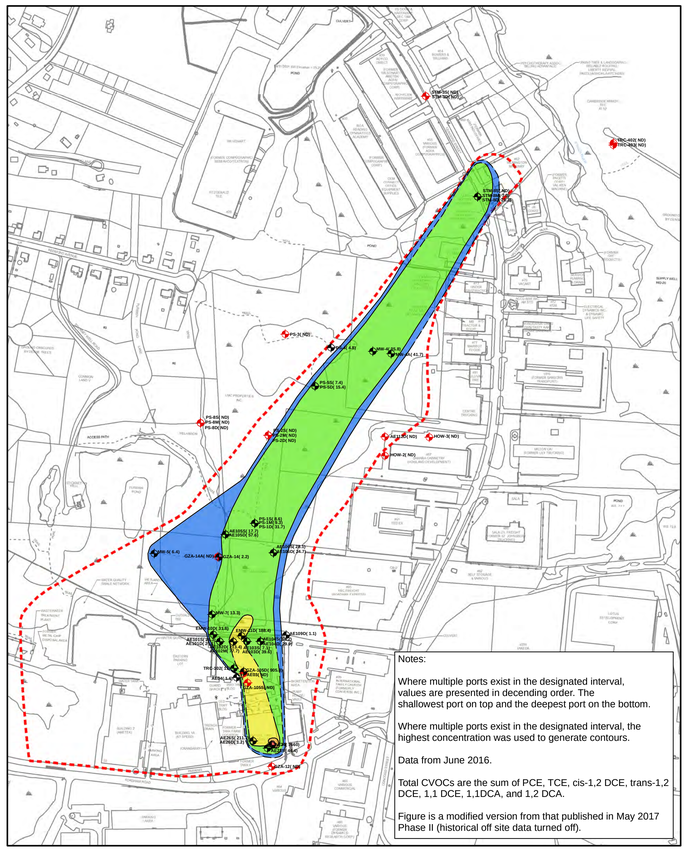
- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

0 100 200 400 600 800 Feet

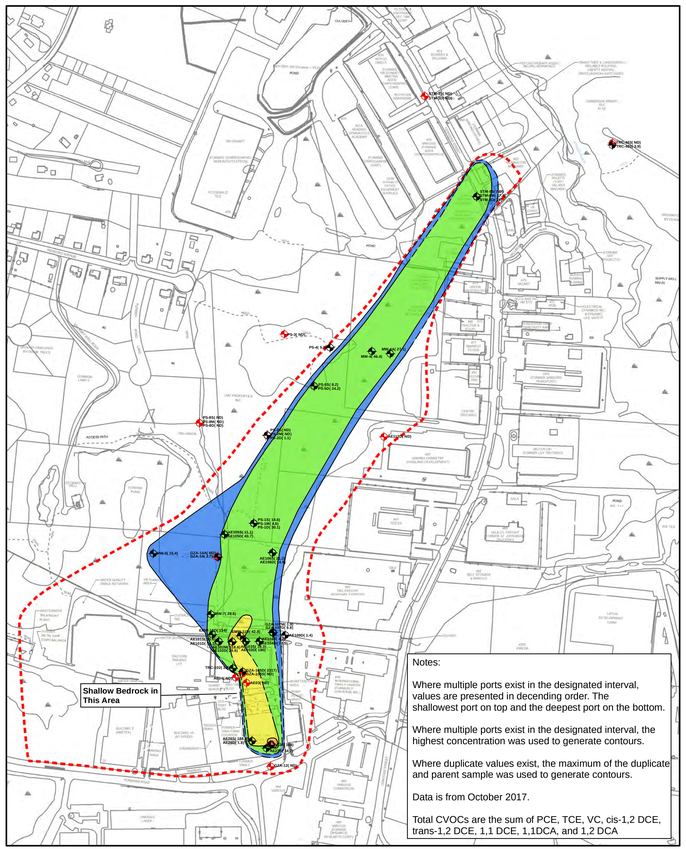
TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-20

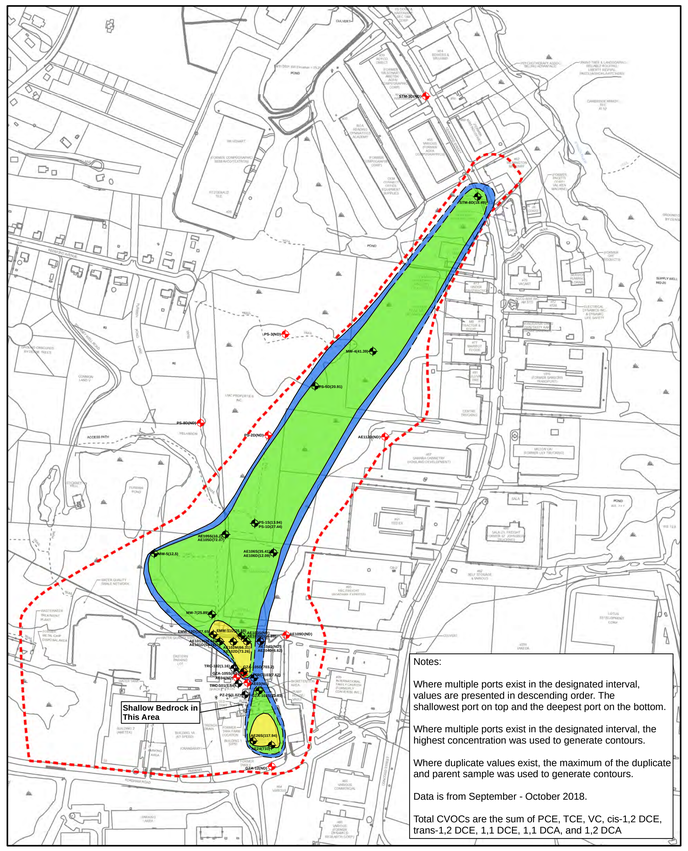
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_20_TCE_Lower_BR_2016_2021.mxd



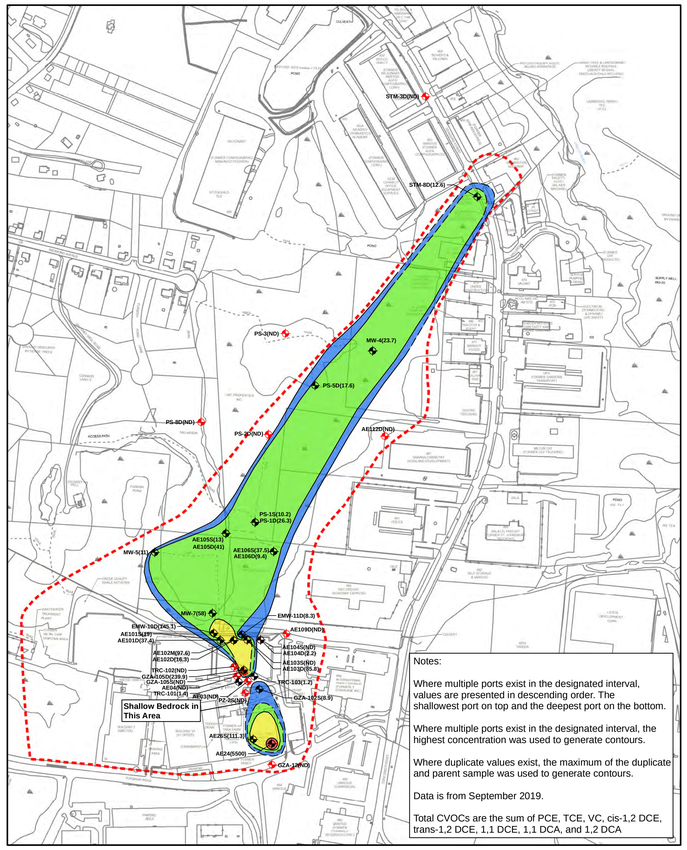
2016 Total CVOCs in Groundwater
Overburden (0 - 78 ft bgs)



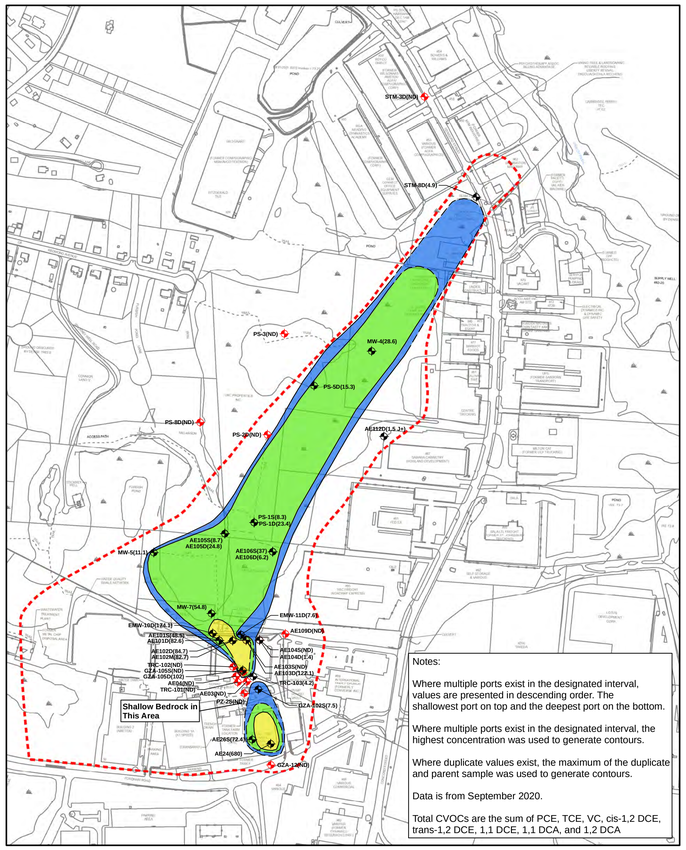
2017 Total CVOCs in Groundwater
Overburden (0 - 78 ft bgs)



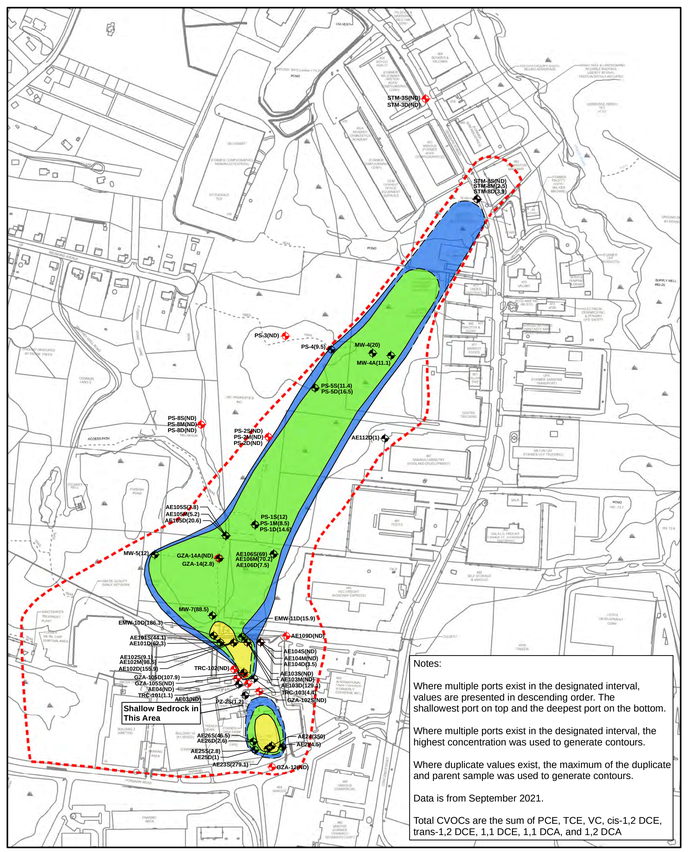
2018 Total CVOCs in Groundwater
Overburden (0 - 78 ft bgs)



2019 Total CVOCs in Groundwater
Overburden (0 - 78 ft bgs)



2020 Total CVOCs in Groundwater
Overburden (0 - 78 ft bgs)



2021 Total CVOCs in Groundwater
Overburden (0 - 78 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

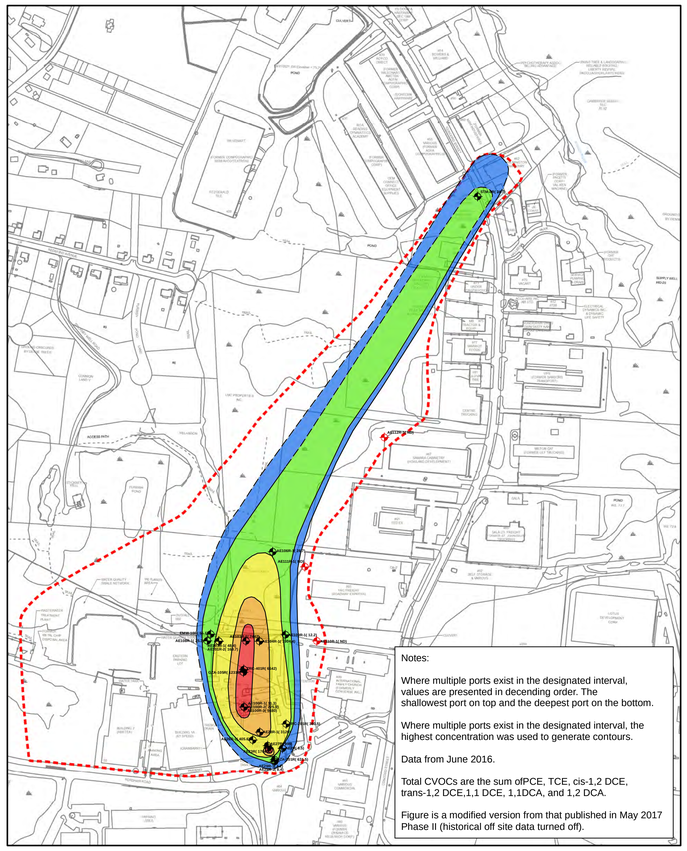
N

0 100 200 400 600 800 Feet

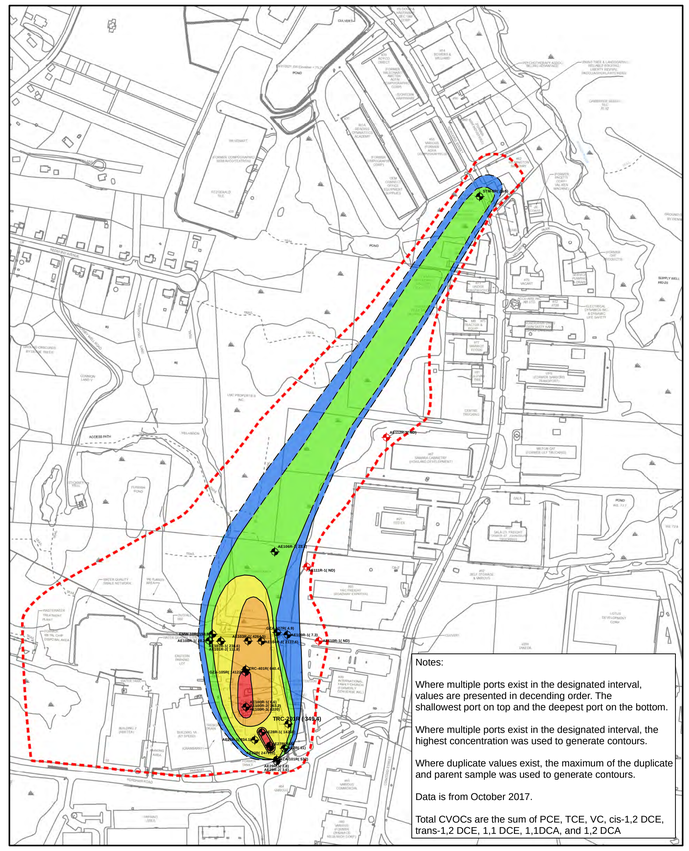
Total CVOCs in Groundwater
Overburden (0 - 78 ft bgs)

Figure 5-21

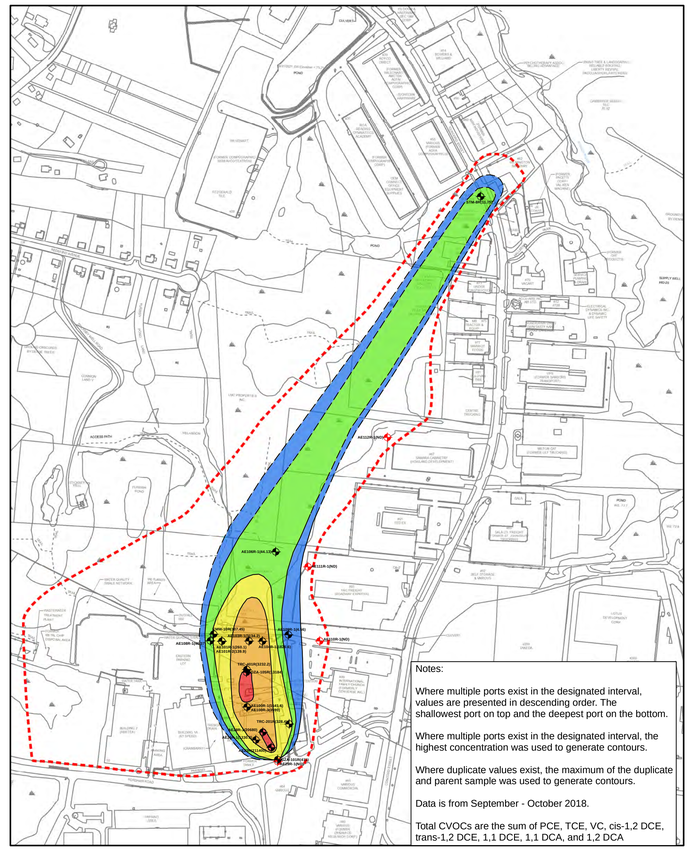
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Engr\Project Files\Lockheed Martin\Wilmington 2017-2022\600-CAD-GIS\620 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_21_TCVOCS_OB_2016_2021.mxd



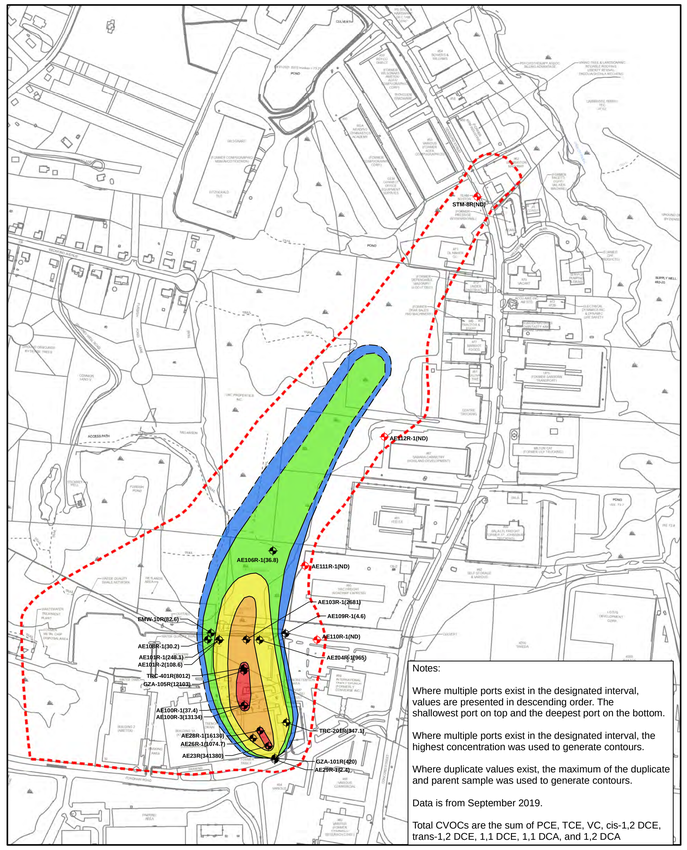
2016 Total CVOCs in Groundwater
Upper Bedrock (0 - 60 ft bgs)



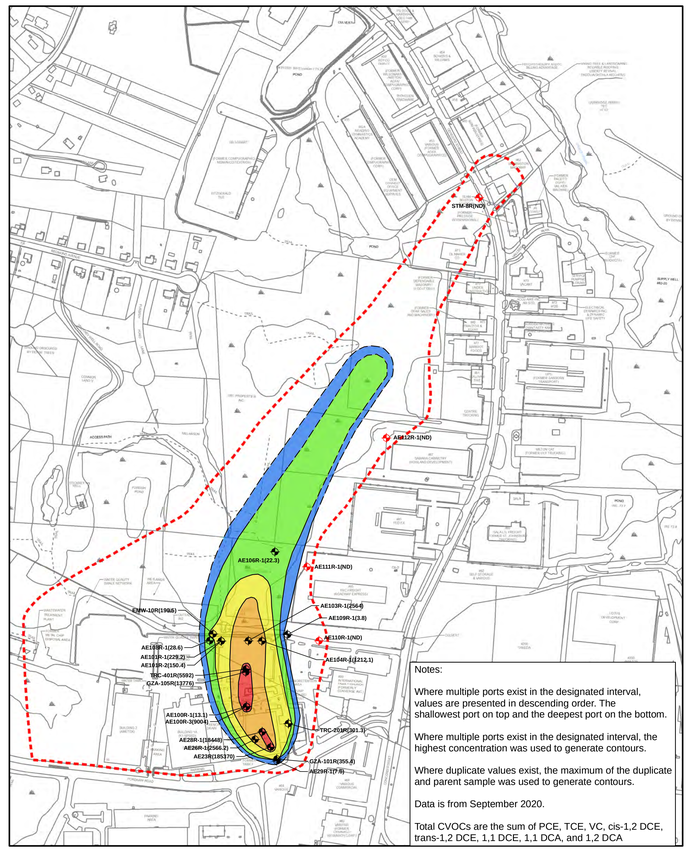
2017 Total CVOCs in Groundwater
Upper Bedrock (0 - 60 ft bgs)



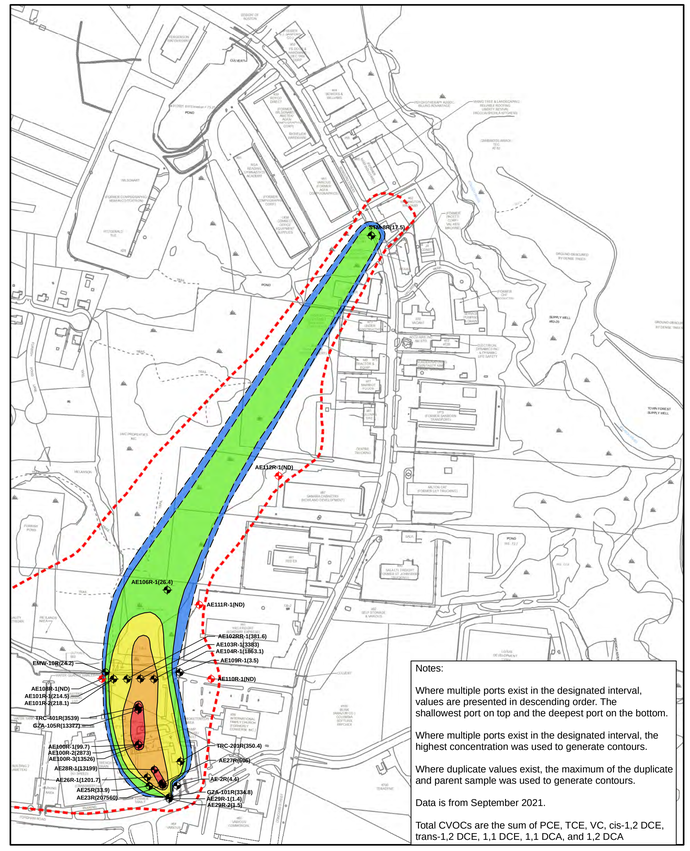
2018 Total CVOCs in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2019 Total CVOCs in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2020 Total CVOCs in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2021 Total CVOCs in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

N

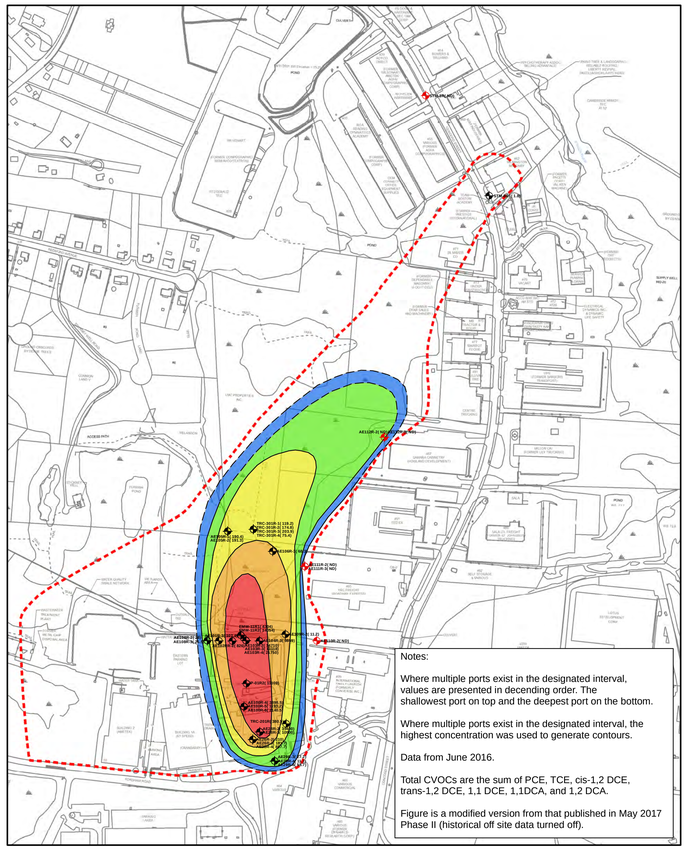
0 100 200 400 600 800 Feet

AECOM

Total CVOCs in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-22

Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_22_TCVOCS_Upper_BR_2016_2021.mxd



Notes:

Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

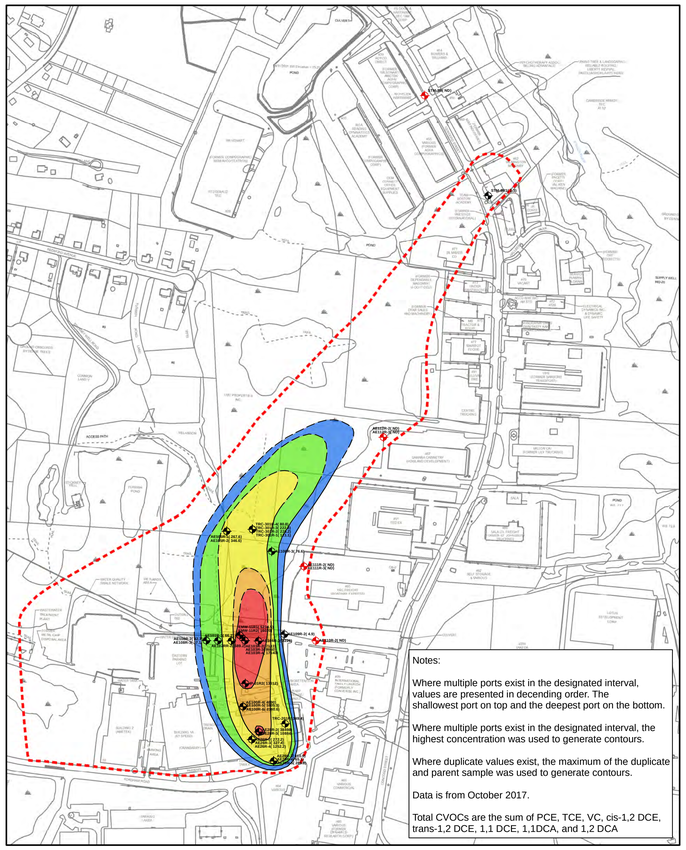
Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Data from June 2016.

Total CVOCs are the sum of PCE, TCE, cis-1,2 DCE, trans-1,2 DCE, 1,1 DCE, 1,1DCA, and 1,2 DCA.

Figure is a modified version from that published in May 2017 Phase II (historical off site data turned off).

2016 Total CVOCs in Groundwater
Middle Bedrock (61 - 120 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

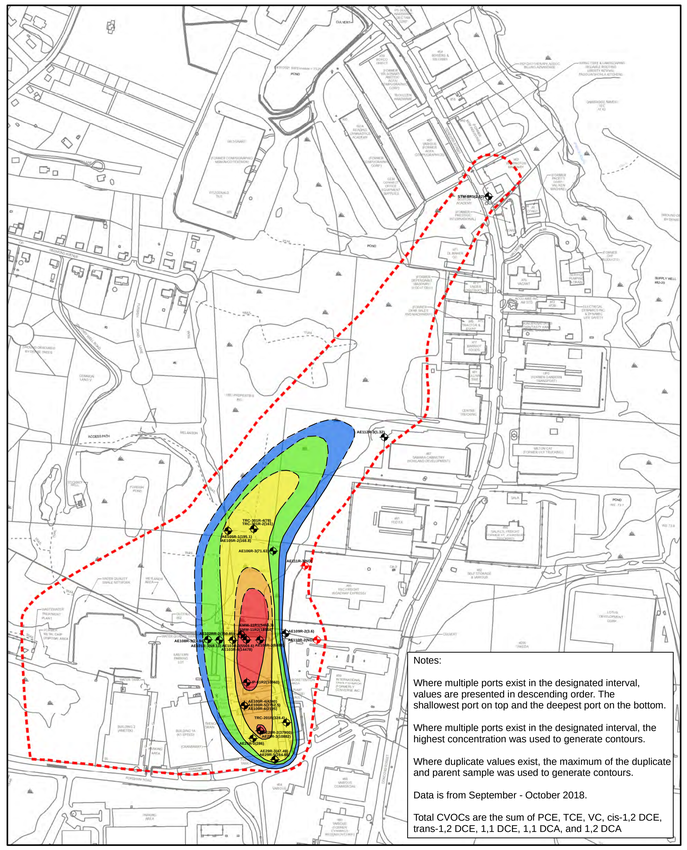
Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from October 2017.

Total CVOCs are the sum of PCE, TCE, VC, cis-1,2 DCE, trans-1,2 DCE, 1,1 DCE, 1,1DCA, and 1,2 DCA

2017 Total CVOCs in Groundwater
Middle Bedrock (61 - 120 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

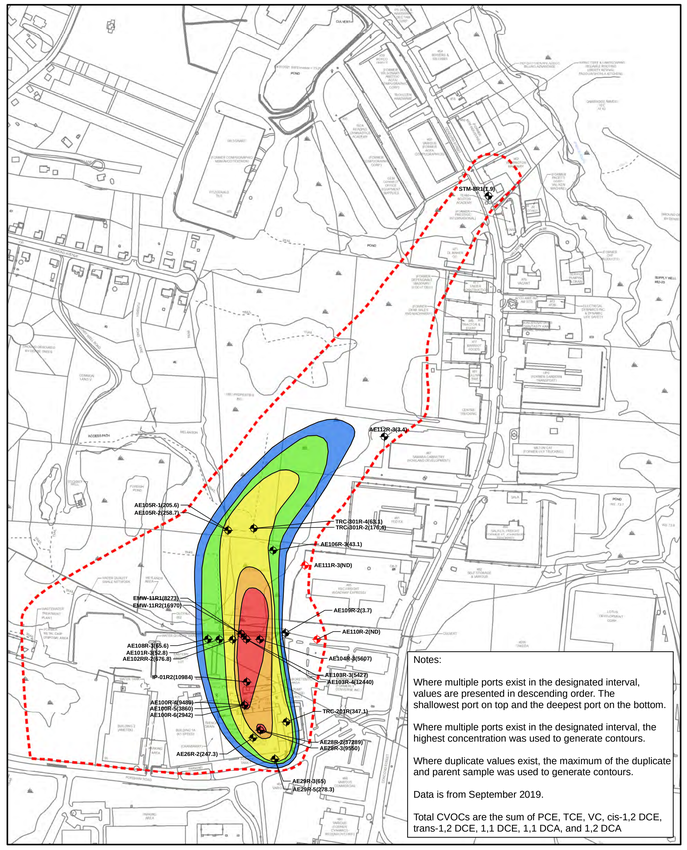
Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September - October 2018.

Total CVOCs are the sum of PCE, TCE, VC, cis-1,2 DCE, trans-1,2 DCE, 1,1 DCE, 1,1 DCA, and 1,2 DCA

2018 Total CVOCs in Groundwater
Middle Bedrock (61 - 120 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

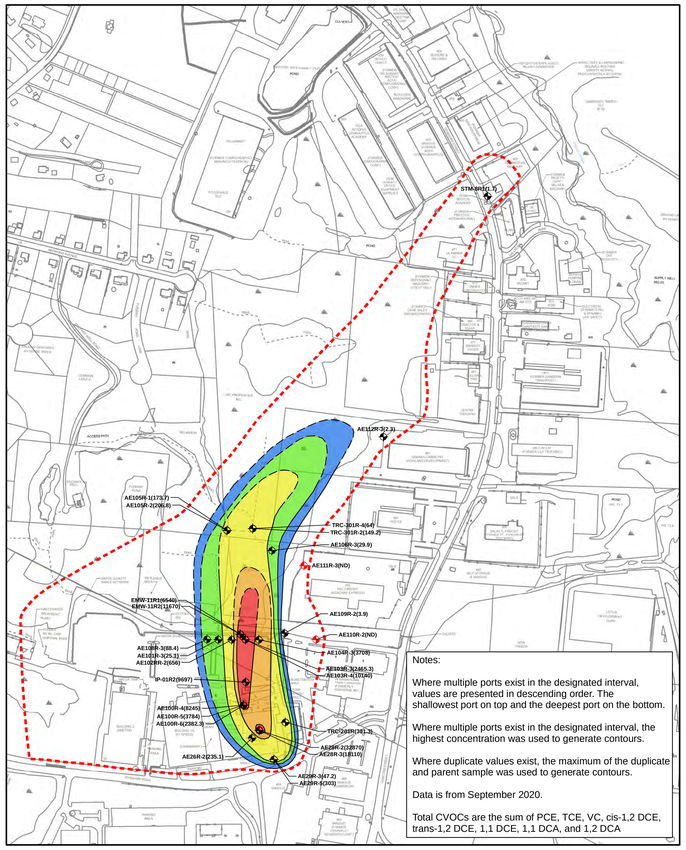
Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September 2019.

Total CVOCs are the sum of PCE, TCE, VC, cis-1,2 DCE, trans-1,2 DCE, 1,1 DCE, 1,1 DCA, and 1,2 DCA

2019 Total CVOCs in Groundwater
Middle Bedrock (61 - 120 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

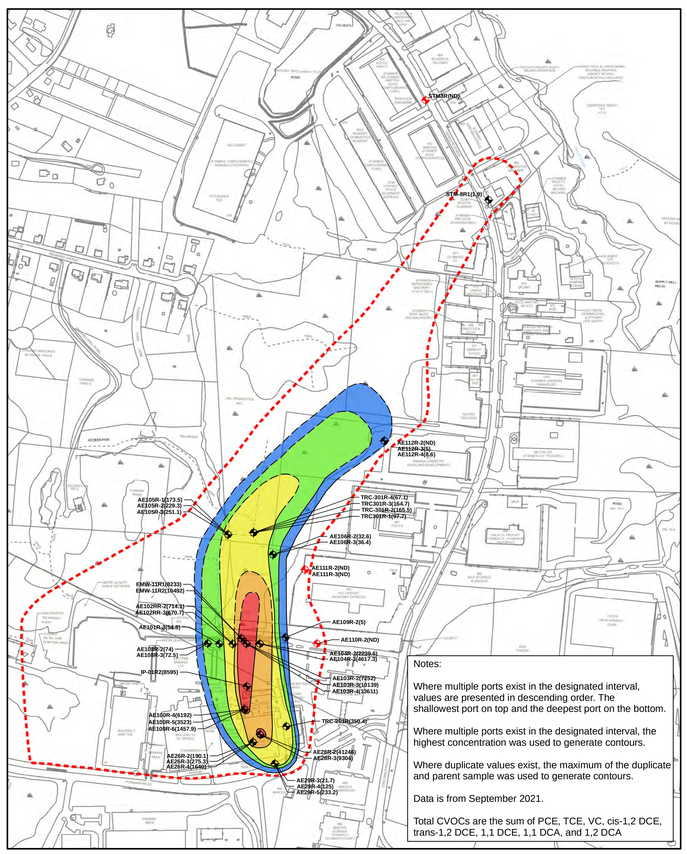
Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September 2020.

Total CVOCs are the sum of PCE, TCE, VC, cis-1,2 DCE, trans-1,2 DCE, 1,1 DCE, 1,1 DCA, and 1,2 DCA

2020 Total CVOCs in Groundwater
Middle Bedrock (61 - 120 ft bgs)



Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September - October 2021.

Total CVOCs are the sum of PCE, TCE, VC, cis-1,2 DCE, trans-1,2 DCE, 1,1 DCE, 1,1 DCA, and 1,2 DCA

2021 Total CVOCs in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

N

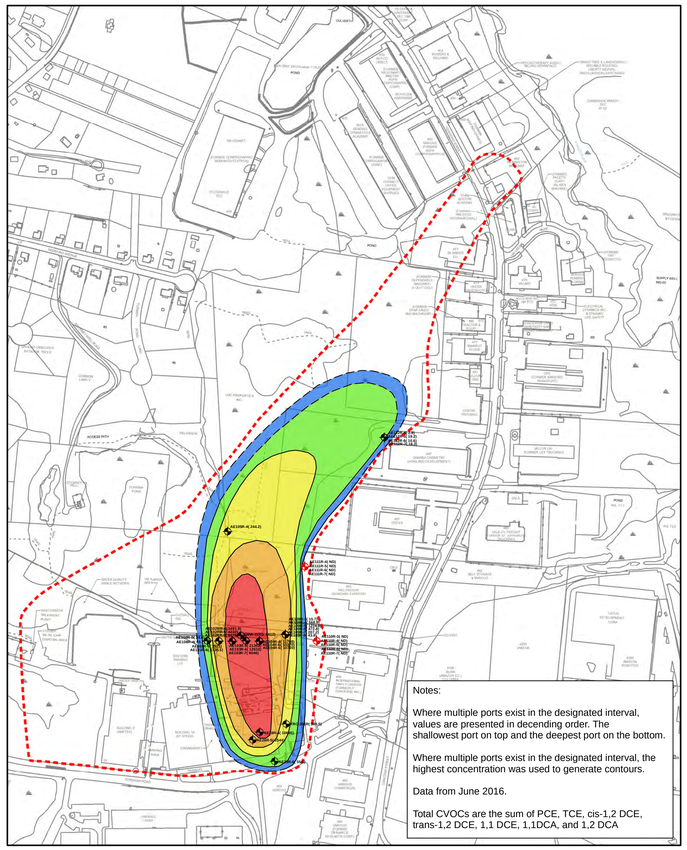
0 100 200 400 600 800 Feet

AECOM

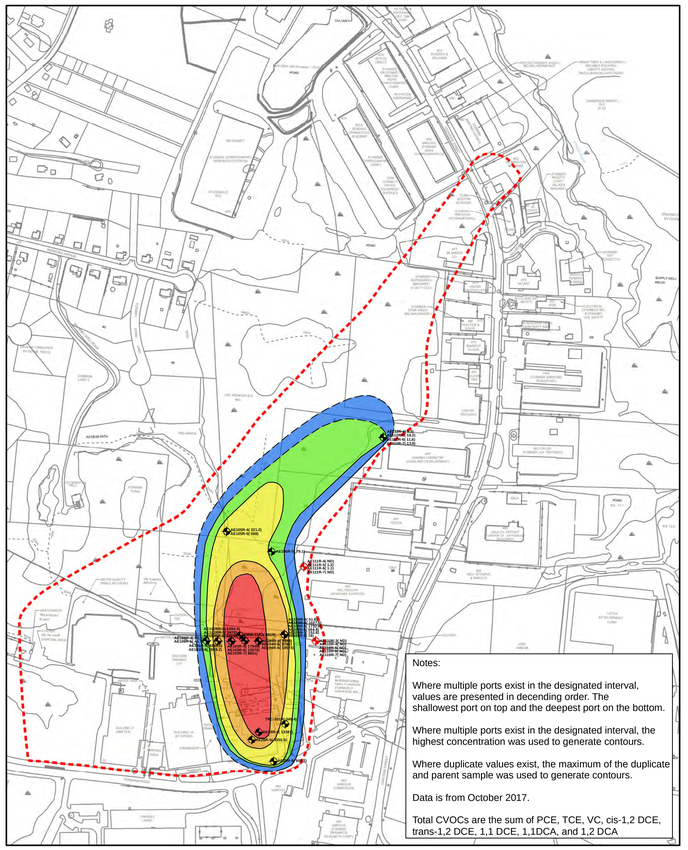
Total CVOCs in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-23

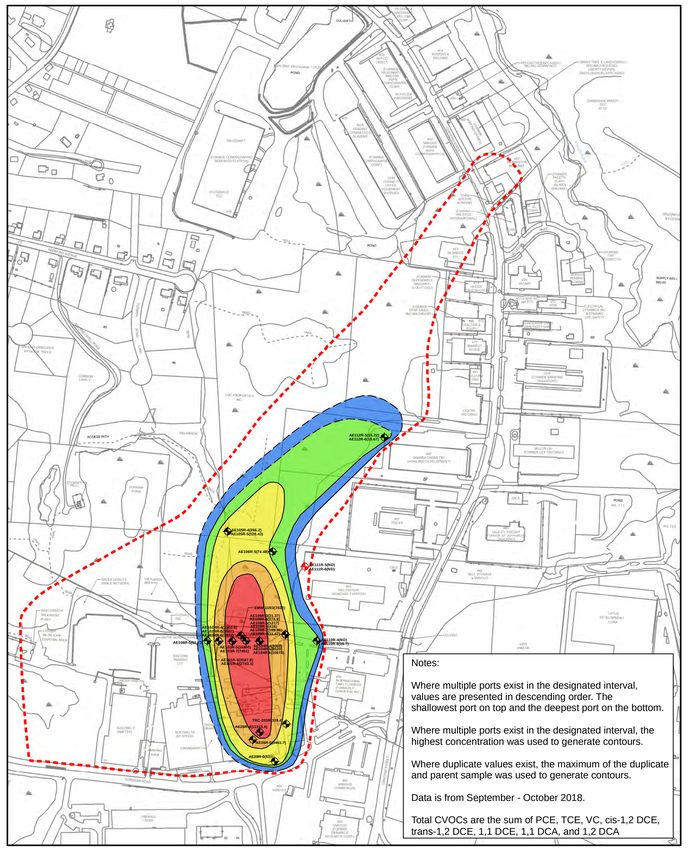
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\600-CAD-GIS\620 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_23_TCVOCS_Middle_BR_2016_2021.mxd



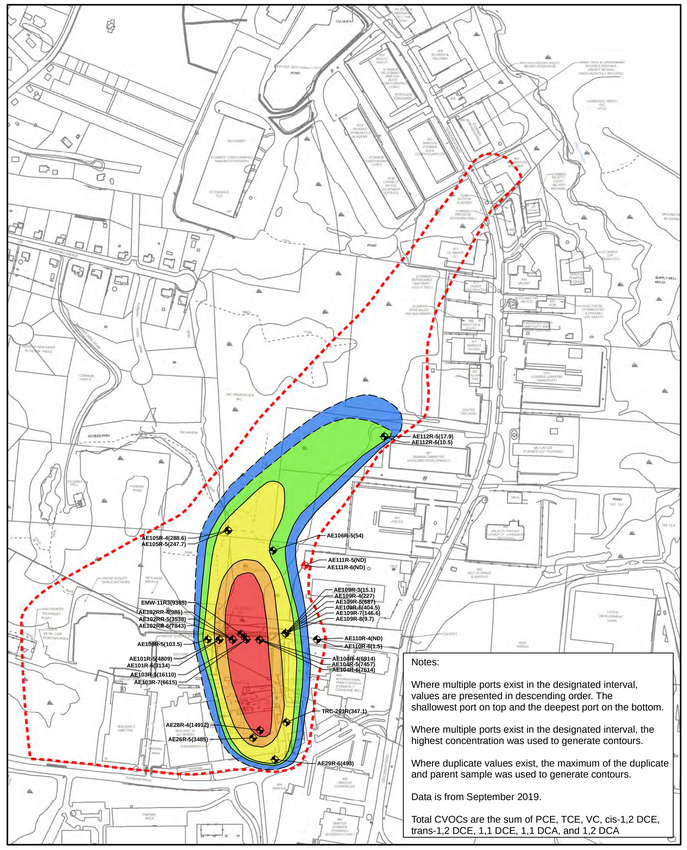
2016 Total CVOCs in Groundwater
Lower Bedrock (121 - 232 ft bgs)



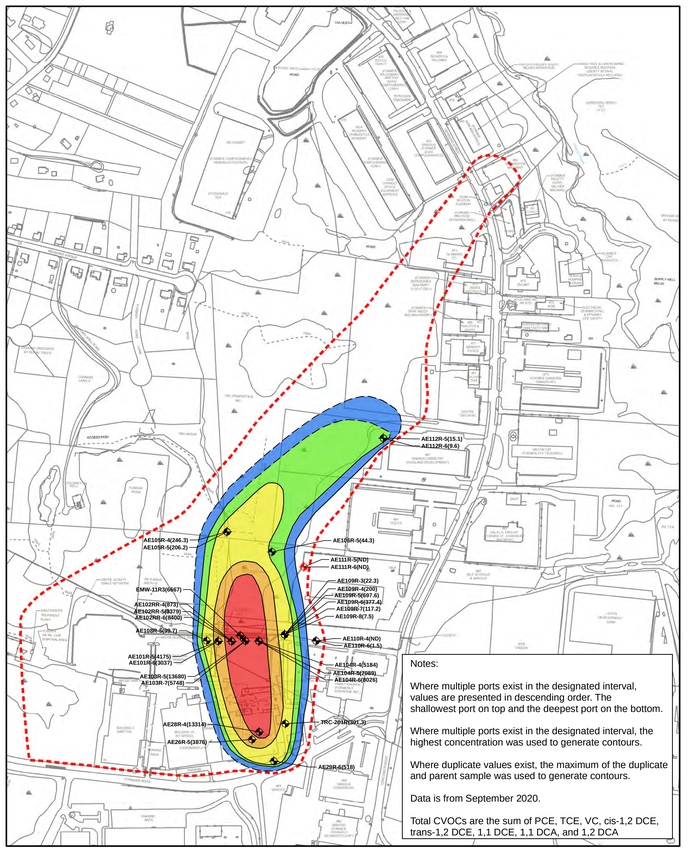
2017 Total CVOCs in Groundwater
Lower Bedrock (121 - 232 ft bgs)



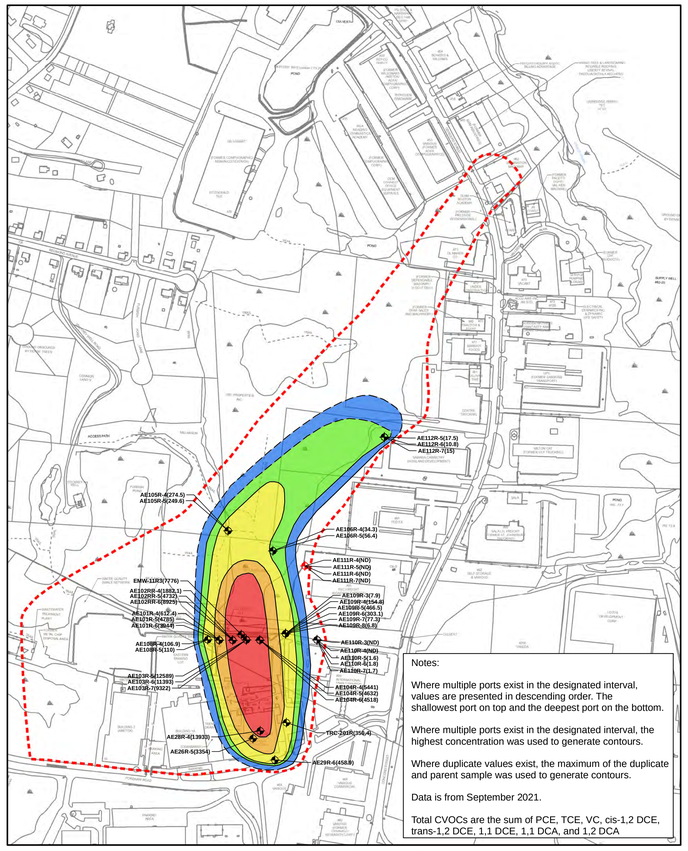
2018 Total CVOCs in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2019 Total CVOCs in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2020 Total CVOCs in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2021 Total CVOCs in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

N

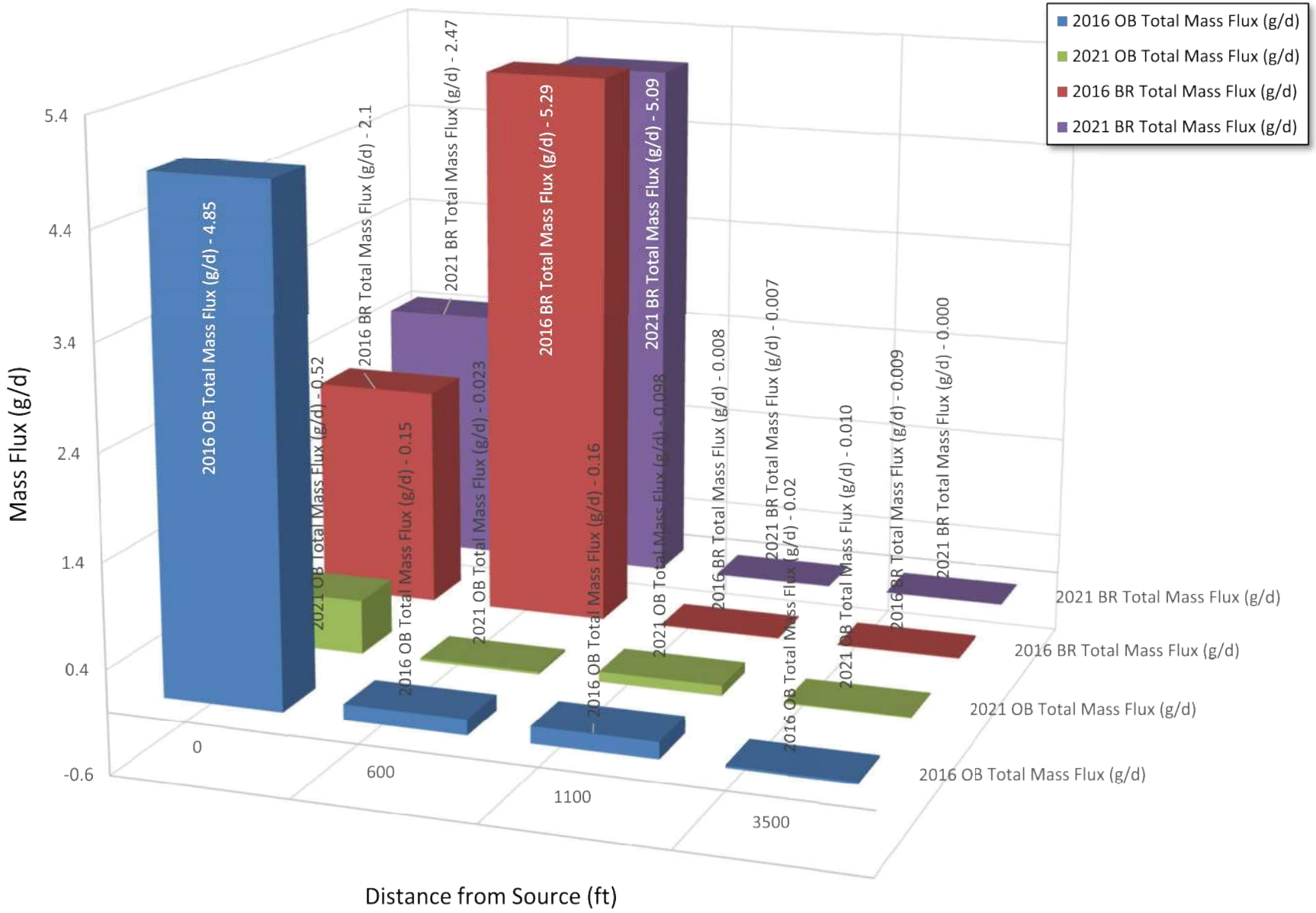
0 100 200 400 600 800 Feet

AECOM

Total CVOCs in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-24

Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_24_TCVOCS_Lower_BR_2016_2021.mxd



AECOM

Figure: 5-25

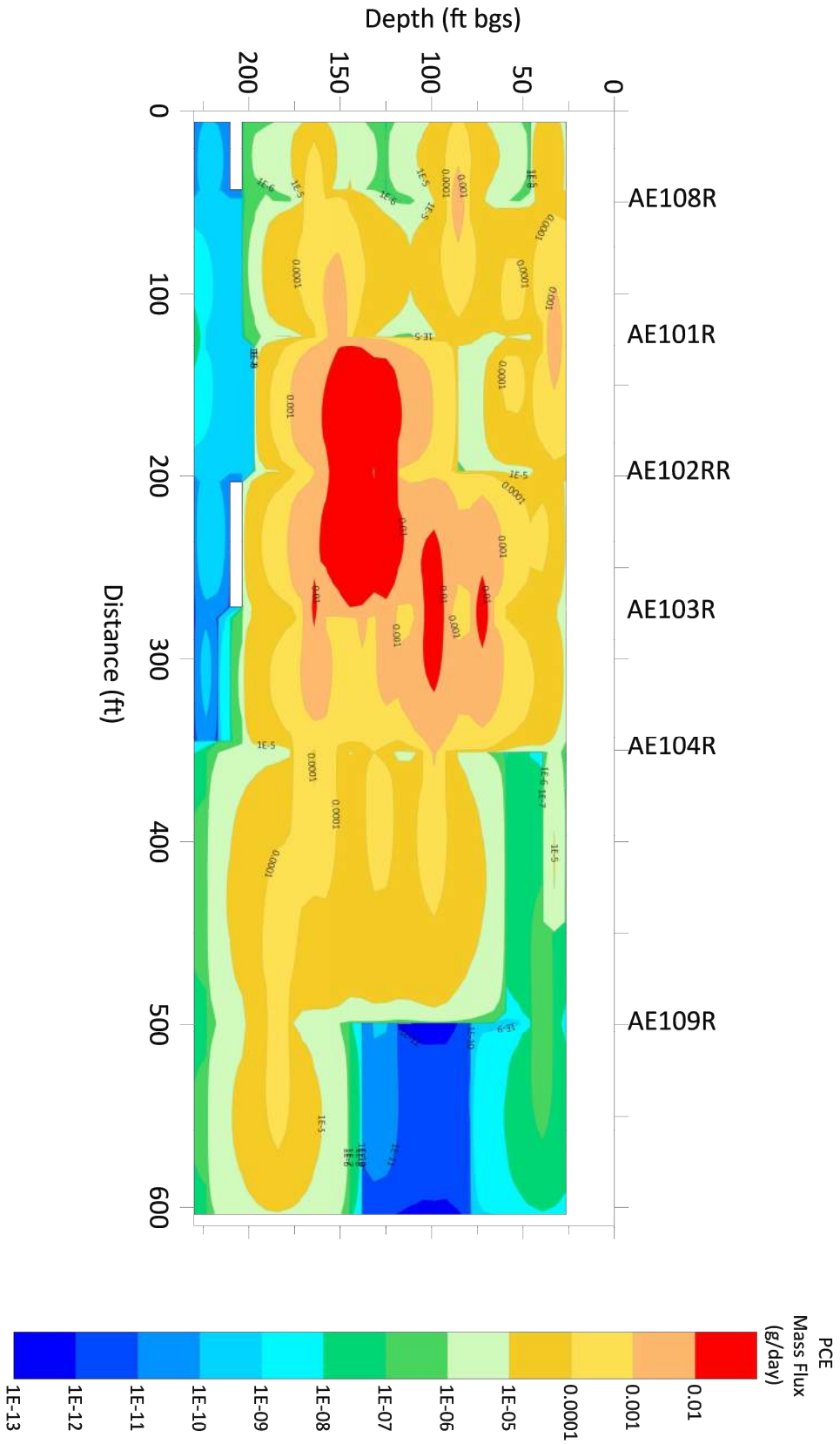
Overburden and Bedrock Mass Flux 2016 and 2021

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

60552044

Date: 2022-04-16

Last saved by: BARRYK(2022-04-17) Last Plotted: 2022-04-17 Project Management Initials: Designer: K.P.B. Checked: D.F. Approved: S.O. ANSI A 8.5" x 11"
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 5-25_OVERBURDEN_BEDROCK MASS FLUX 2016_2021.DWG



Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

PCE Mass Flux
Across Transect A - 2021

60552044

Date: 2022-03-11

AECOM

Figure: 5-26

Last saved by: BARRYK(2022-03-11) Last Plotted: 2022-03-11
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 5-26_PCE MASS FLUX ACROSS TRANSECT A - 2021.DWG
Project Management Initials:
Designer: K.P.B.
Checked: D.F.
Approved: S.O.
ANSI A 8.5" x 11"

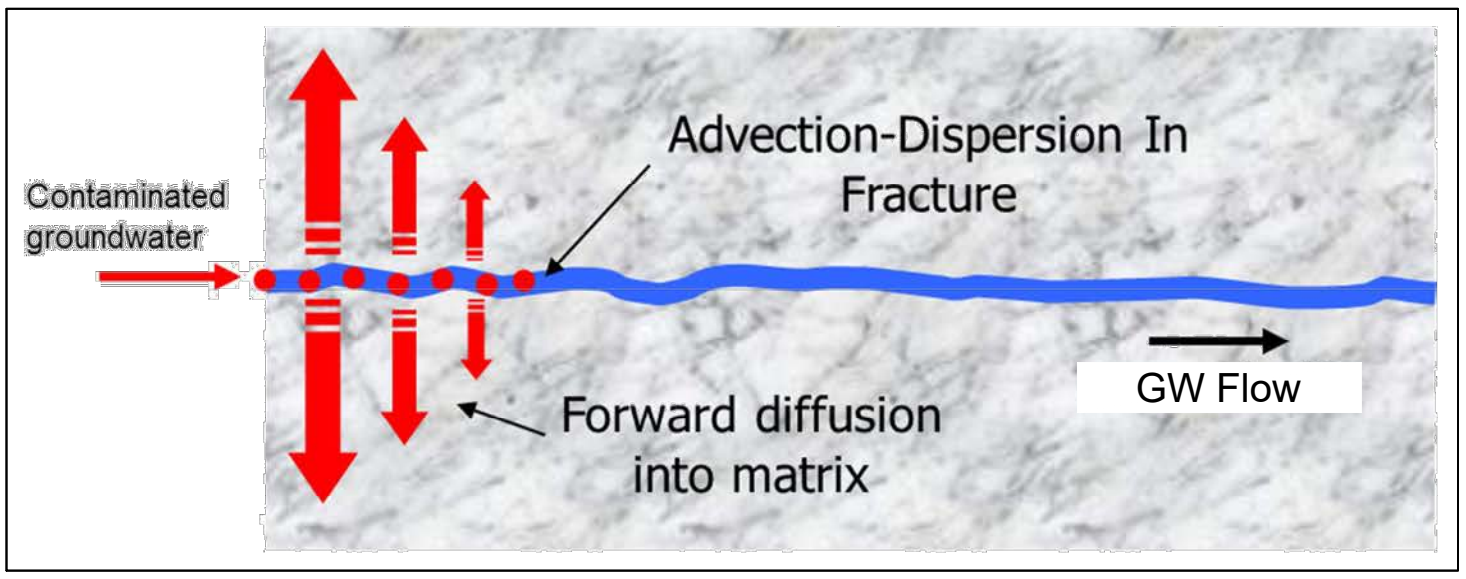


Figure 27a: Schematic illustration of forward diffusion of dissolved PCE from fracture pore water into primary porosity of the rock matrix.

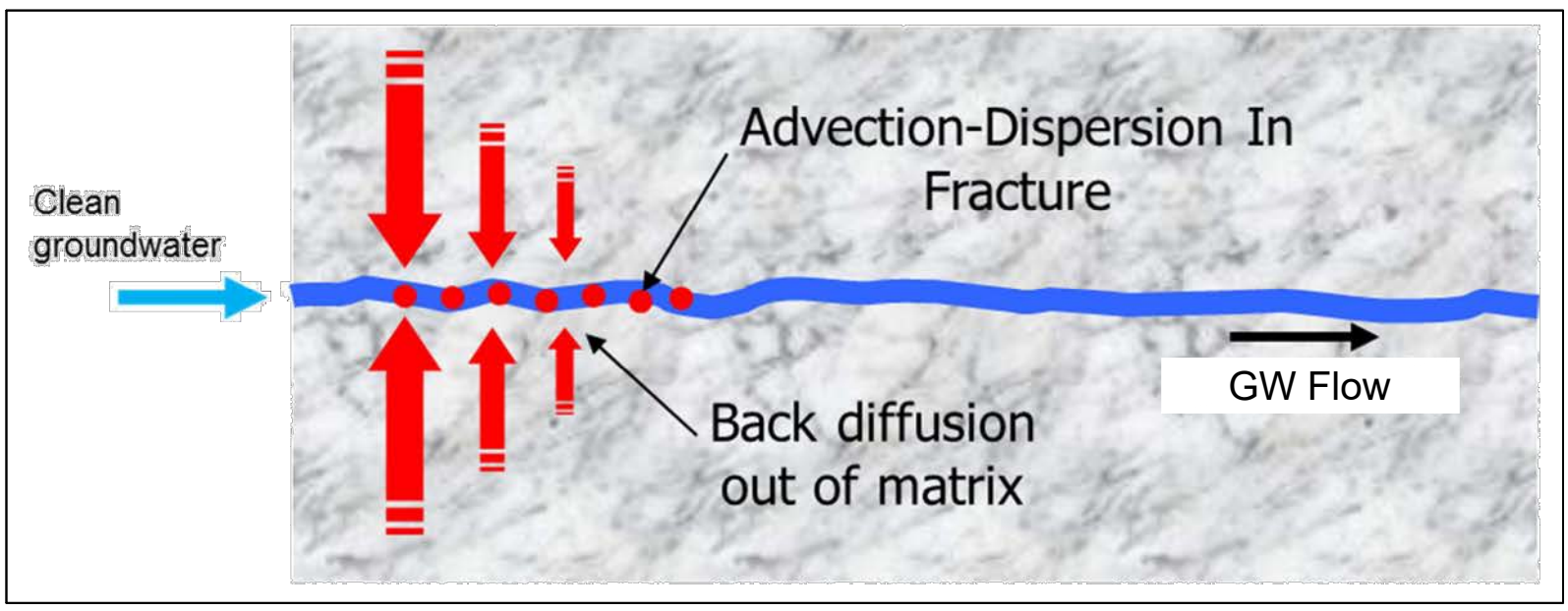
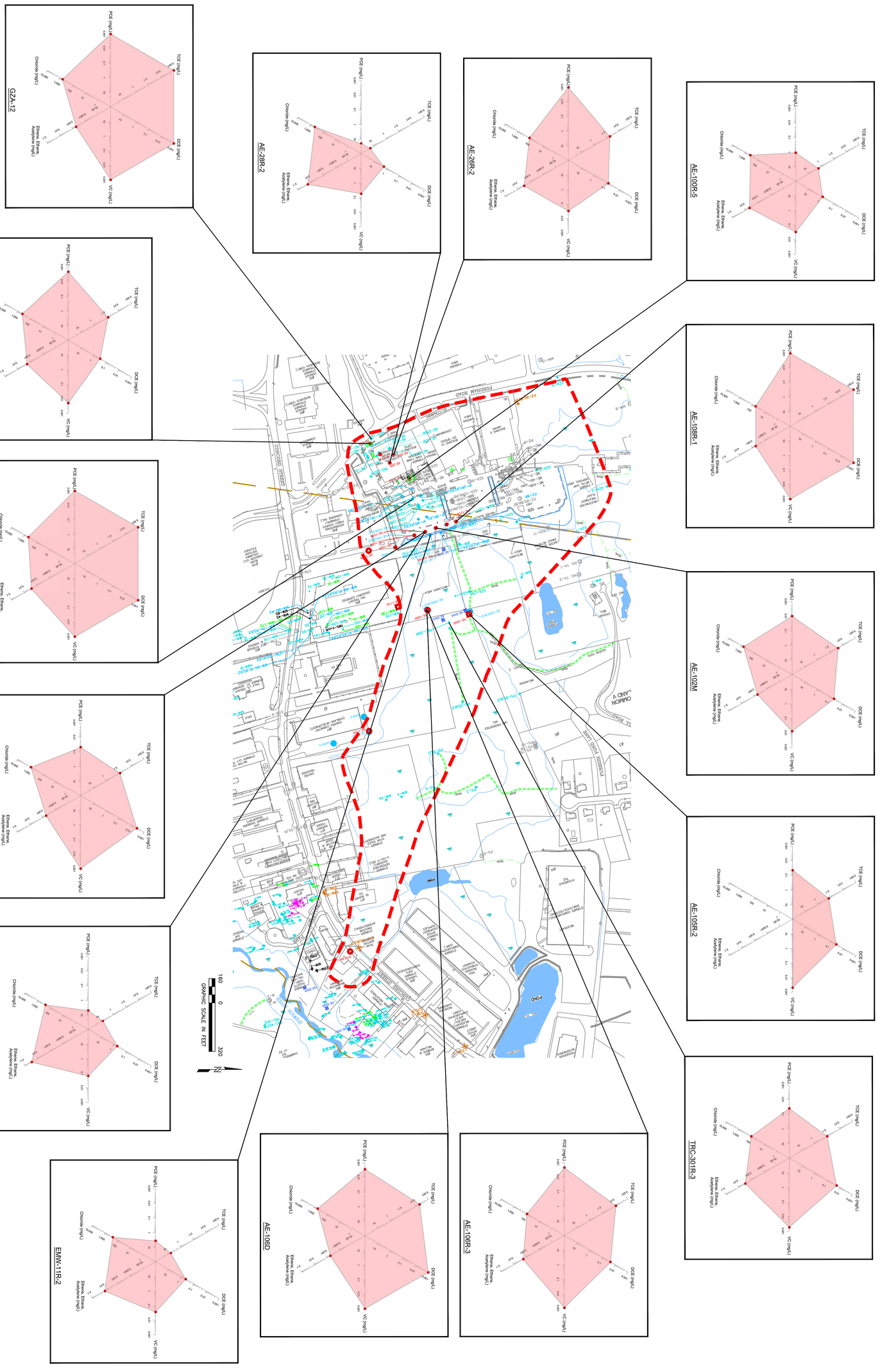


Figure 27b: Schematic illustration of back diffusion of dissolved PCE from the matrix pore water into the fracture.

Source:
Kueper, B.H., Stroo, H.F., Vogel, C.M. and Ward, C.H. (Editors), 2014. Textbook: Chlorinated Solvent Source Zone Remediation. Springer Science + Business Media, LLC, New York, NY, USA.



Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

2021 PCE AND DAUGHTERS
RADAR PLOTS

AECOM

60552044 Date: 2022-02-25

FIGURE: 5-28

AECOM

Figure: 5-29

Chlorine Numbers
(2015 - 2021)

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

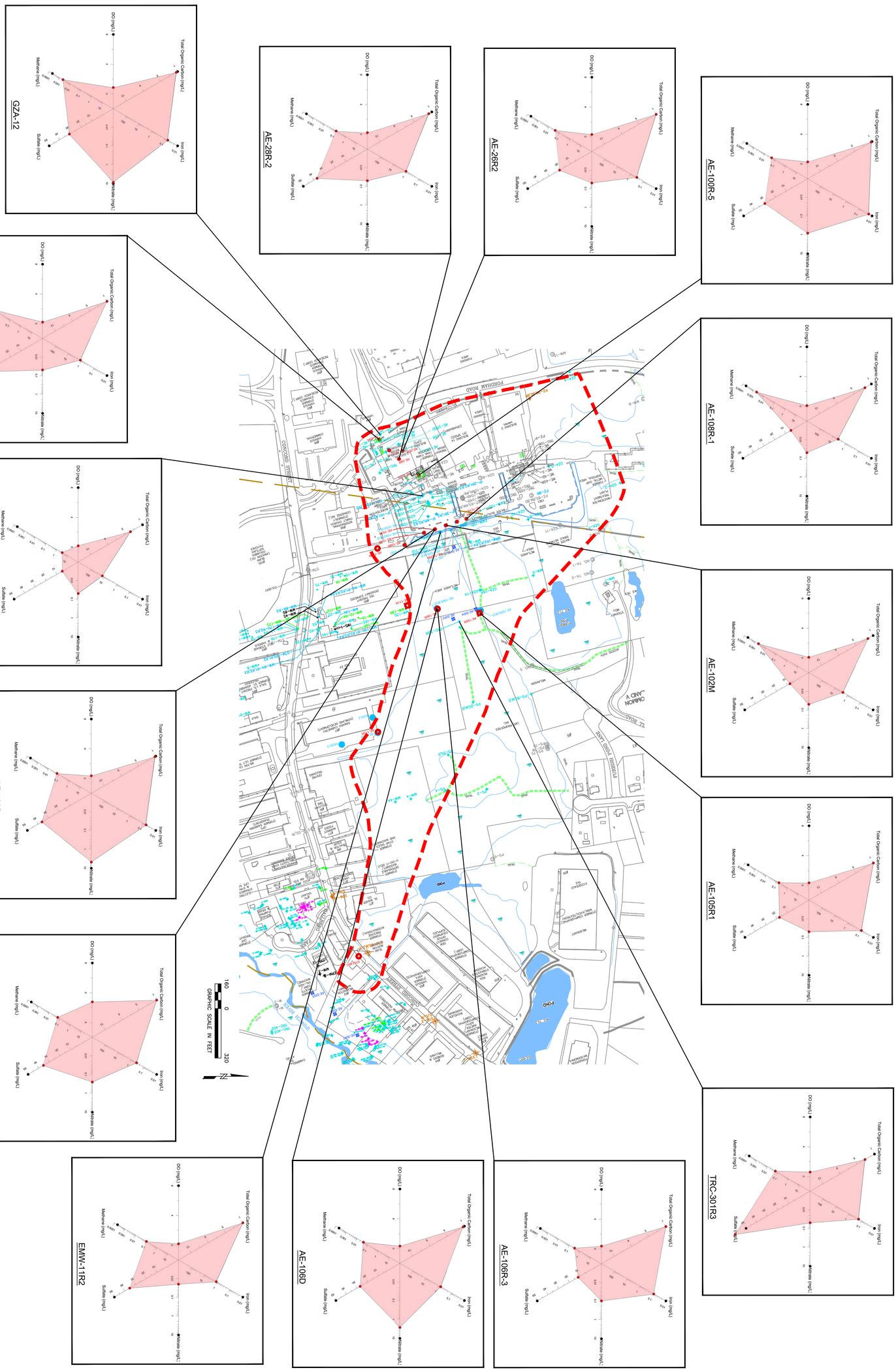
Date: 2022-03-11

60552044

Last saved by: BARRYK(2022-03-11) Last Plotted: 2022-03-11 Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: S.O. ANSI A 8.5" x 11"
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2022\FIG 5-29 - CHLORINE NUMBERS.DWG

Last saved by: BARRYK(2022-03-11) Last Plotted: 2022-03-11
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021 RADAR PLOTS\FIG 5-30_GEOCHEM PARAMETER RADAR PLOTS.DWG

Project Management Initials: Designer: K.P.B. Checked: D.F. Approved: S.O. ANSI D 22" x 34"



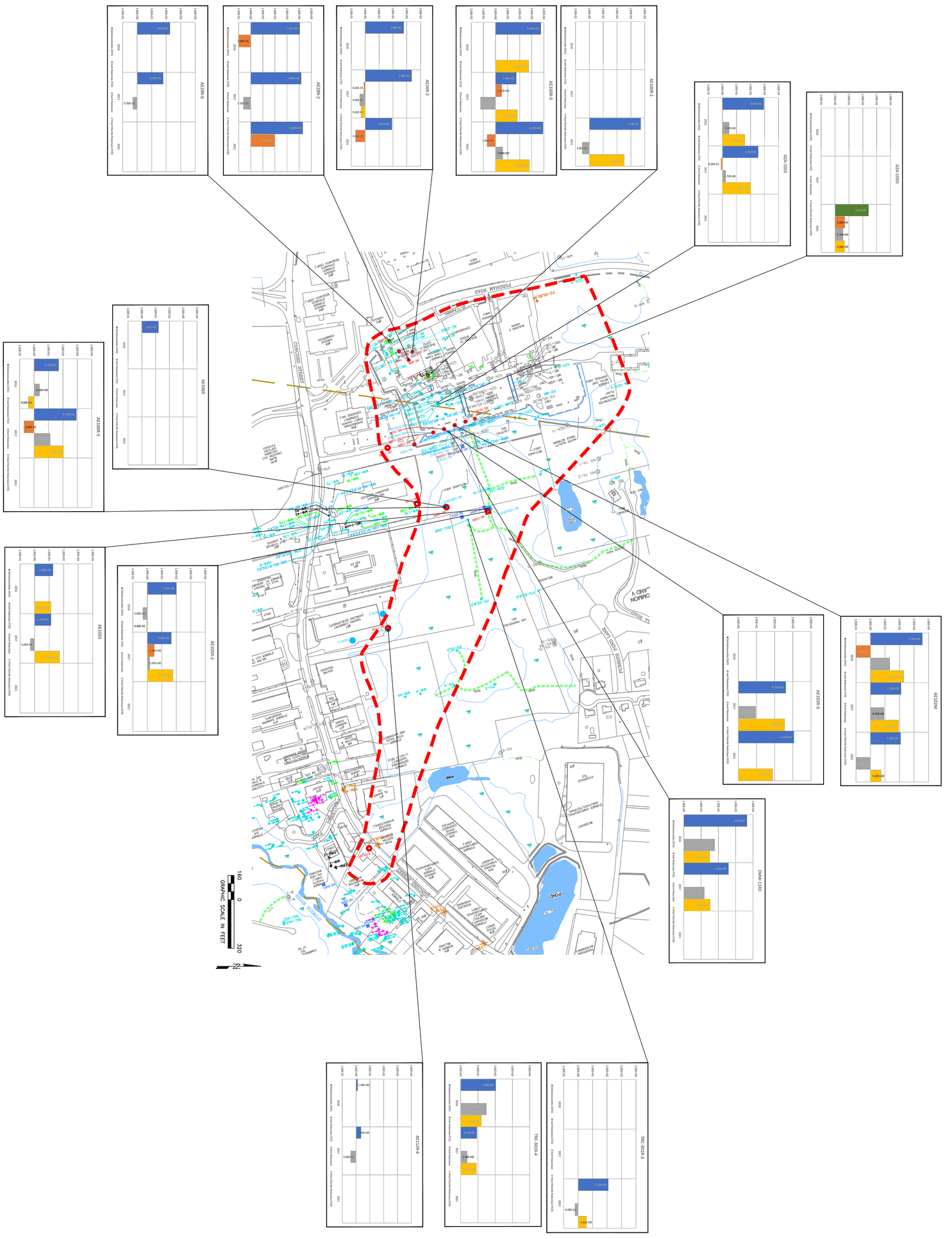
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

2021 GEOCHEMICAL
PARAMETER RADAR PLOTS

AECOM

60552044 Date: 2022-02-25

FIGURE: 5-30



Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

Microbial Groundwater Data Summary
2016, 2017, 2021

60552044 Date: 2022-03-22

AECOM

FIGURE: 5-31

NOTES:
1) The yellow horizontal line represents the most negative $\delta^{13}C$ value for the parent compound PCE.
2) The dotted blue horzontal line represents a $\delta^{13}C$ value of 2‰ above the yellow line to provide a margin for possible variability since the exact source of the parent PCE cannot be determined.

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

CSIA Groundwater Data Summary
2016, 2017, 2021

60552044

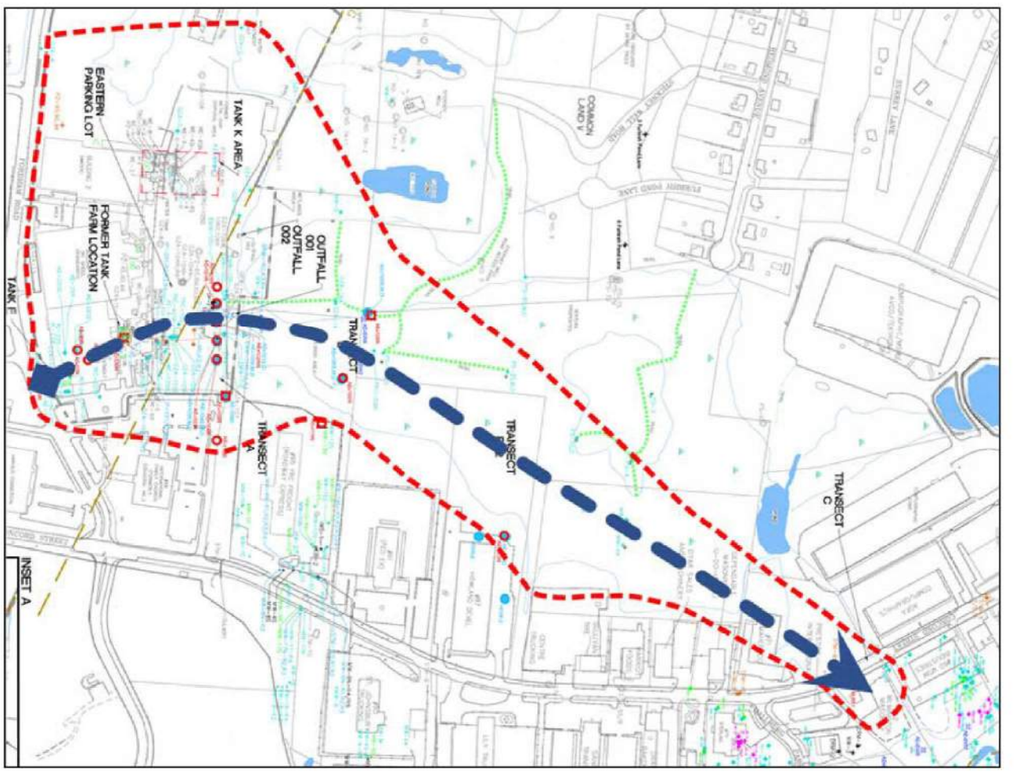
Date: 2022-03-22

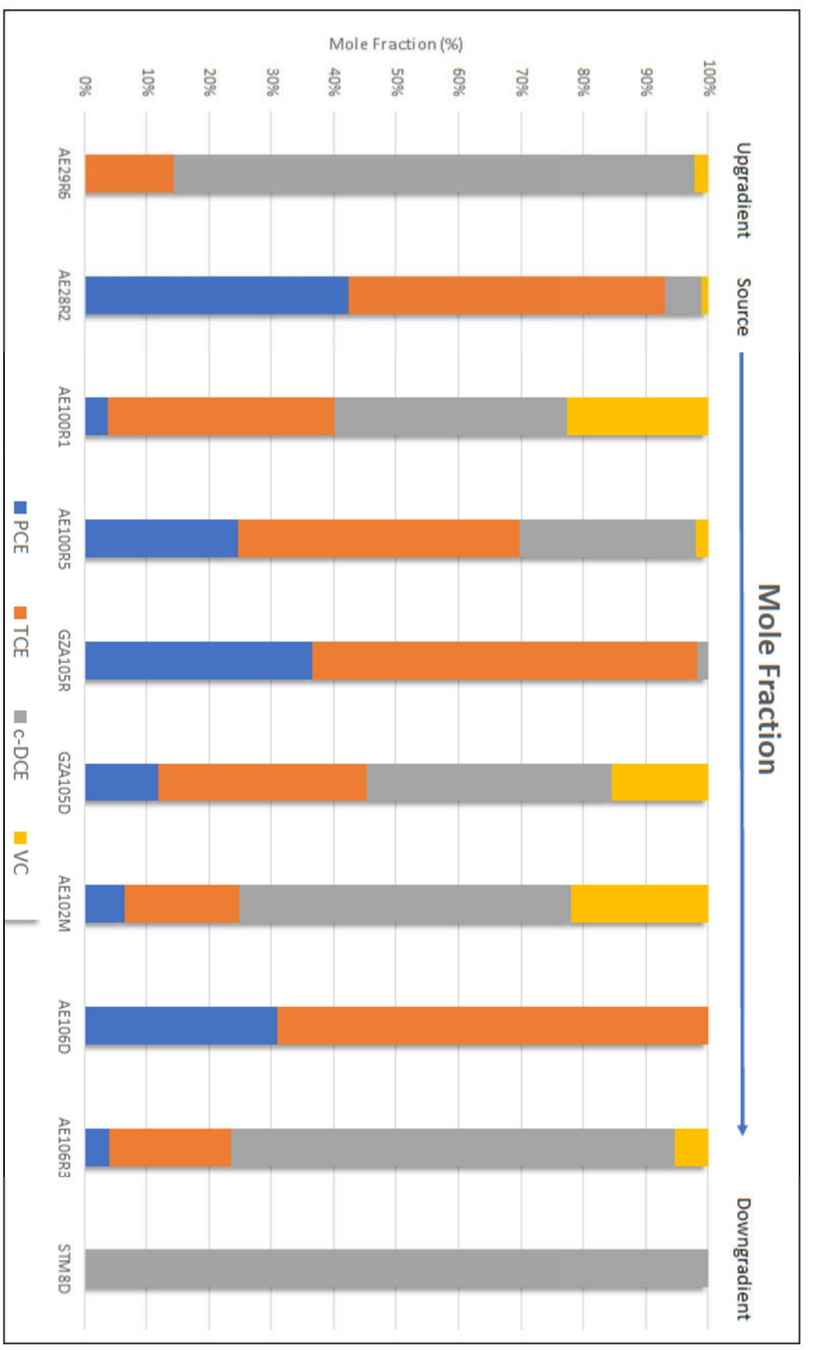
AECOM

FIGURE: 5-32

Project Management Initials: Designer:K.P.B. Checked:D.F. Approved:S.O. ANSI D 22" x 34"

Last saved by: BARRYK(2022-04-14) Last Plotted: 2022-04-14
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 5-32_CSIA GW DATA.DWG





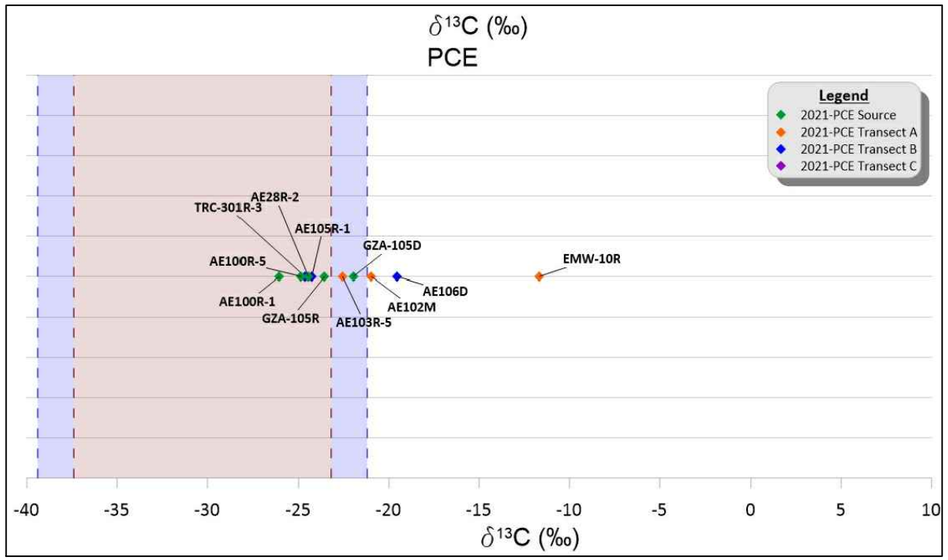
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

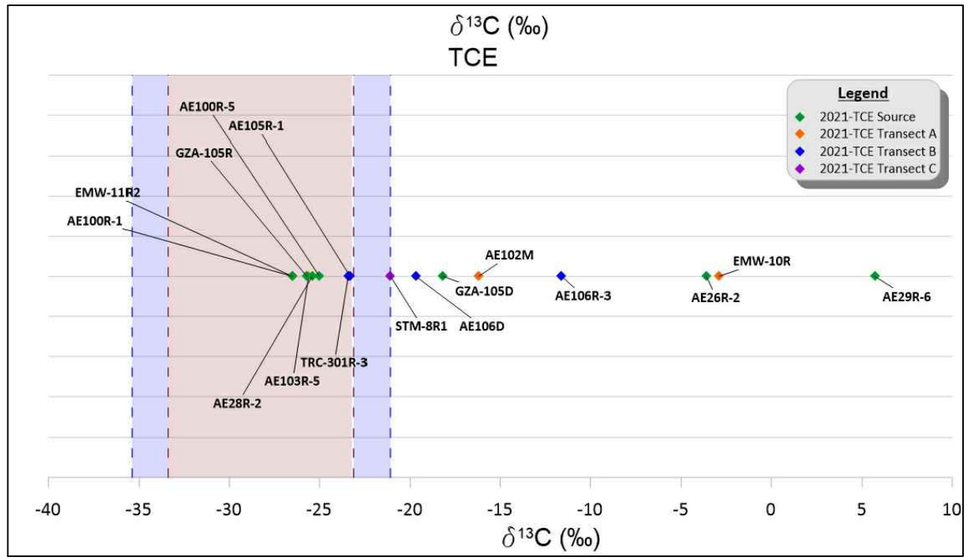
CVOC MOLE FRACTIONS
ALONG PLUME CENTERLINE

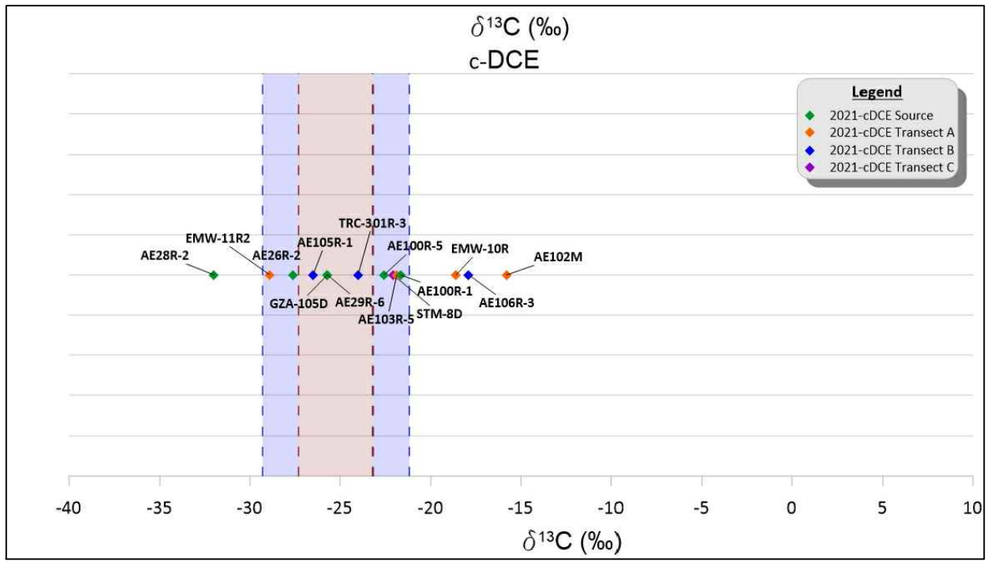
AECOM

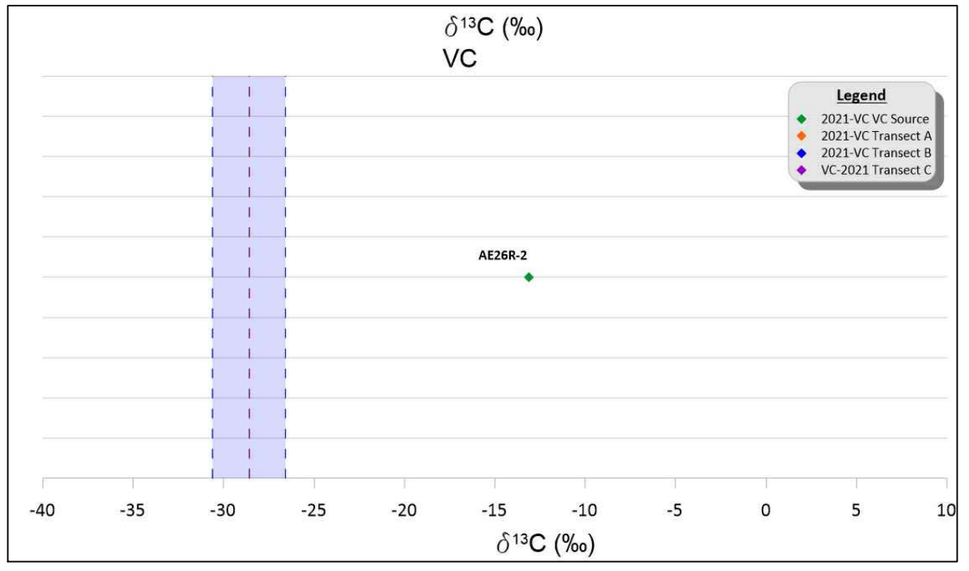
60552044 Date: 2022-04-18

FIGURE: 5-33









NOTE:

Pink Shaded Area - represents range (max/min) of un-degraded Manufactured PCE/TCE/c-DCE/VC based on data from Microbial Insights CSIA Database; Max/Min values for VC were the same therefore only single dashed red line shown.

Blue Shaded Area - represents +/- 2 ‰ on either side of the displayed Manufactured Range for particular CVOC.

$\delta^{13}C$ values appearing outside of Pink/Blue Shaded Areas have been enriched and provides evidence of biotic/abiotic reductive degradation processes.

AECOM

FIGURE: 5-34

CSIA $\delta^{13}C$ ENRICHMENT PLOTS

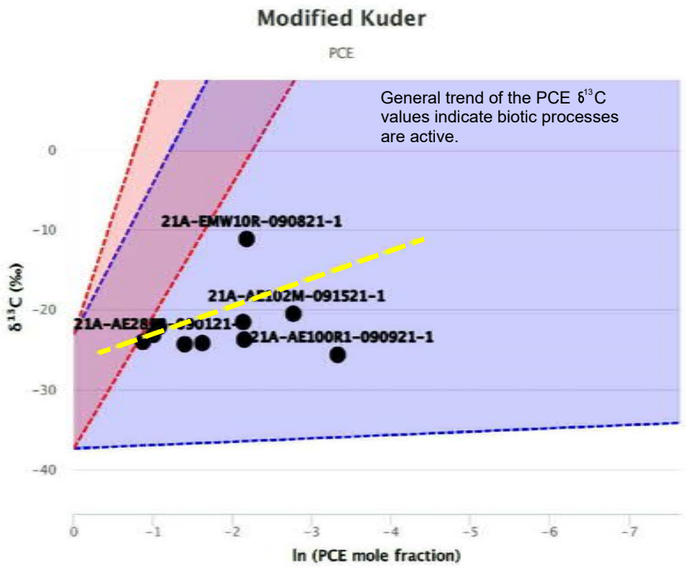
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

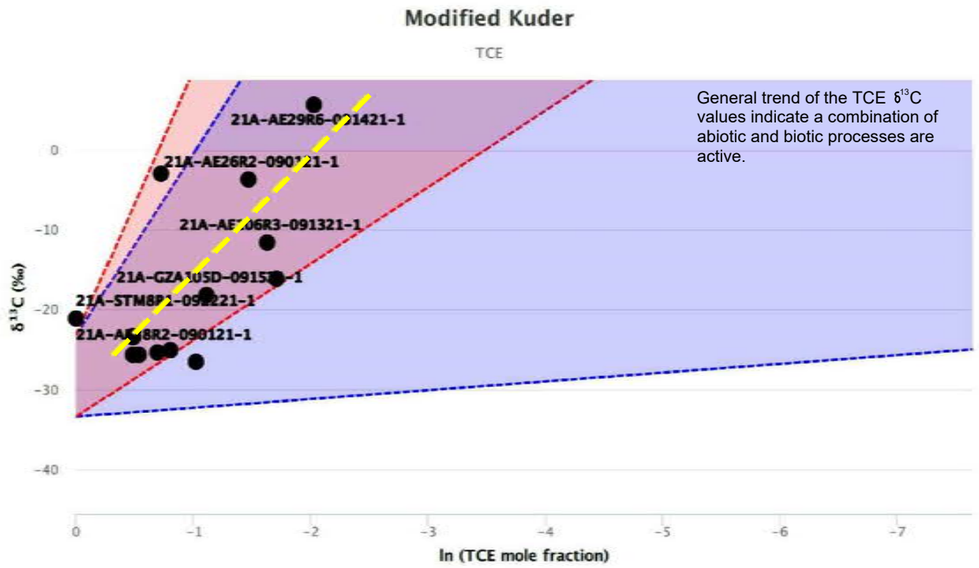
60552044

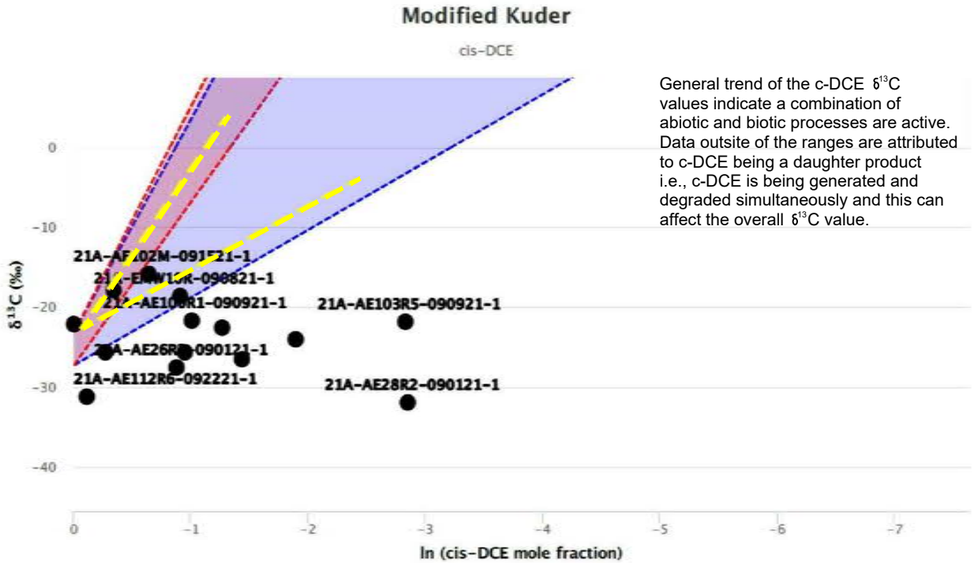
Date: 2022-04-18

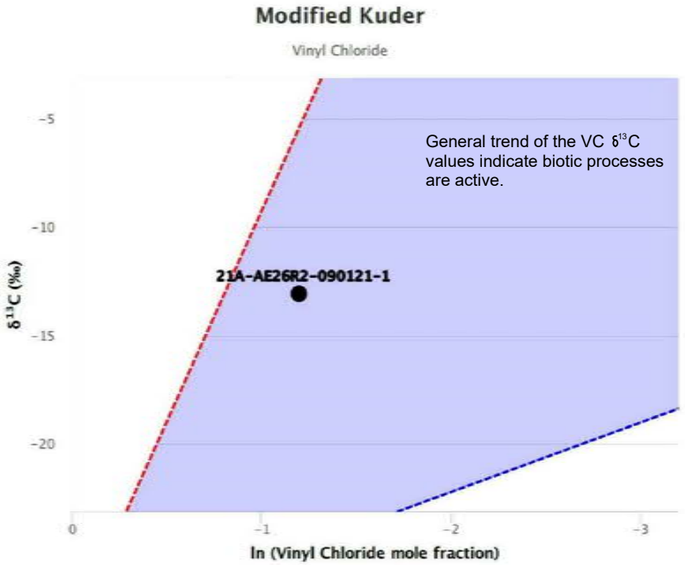
Project Management Initials: Designer: K.P.B. Checked: S.O. Approved:S.O. ANSI B 11" x 17"

Last saved by: BARRYK(2022-04-18) Last Plotted: 2022-04-18
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM\DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 5-34_CSIA ENRICHMENT PLOTS.DWG







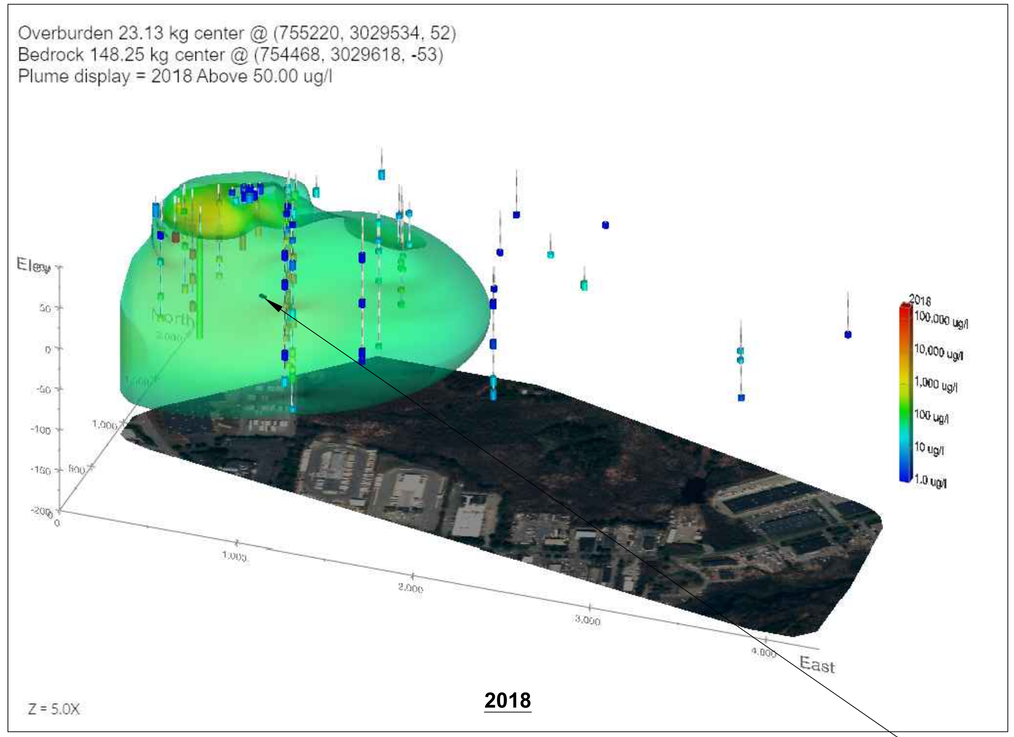


NOTE:
(Modified) Kuder Plots based on the 2021 sampling event and generated from the Microbial Insights CSIA Database https://database.microbe.com/csia/?

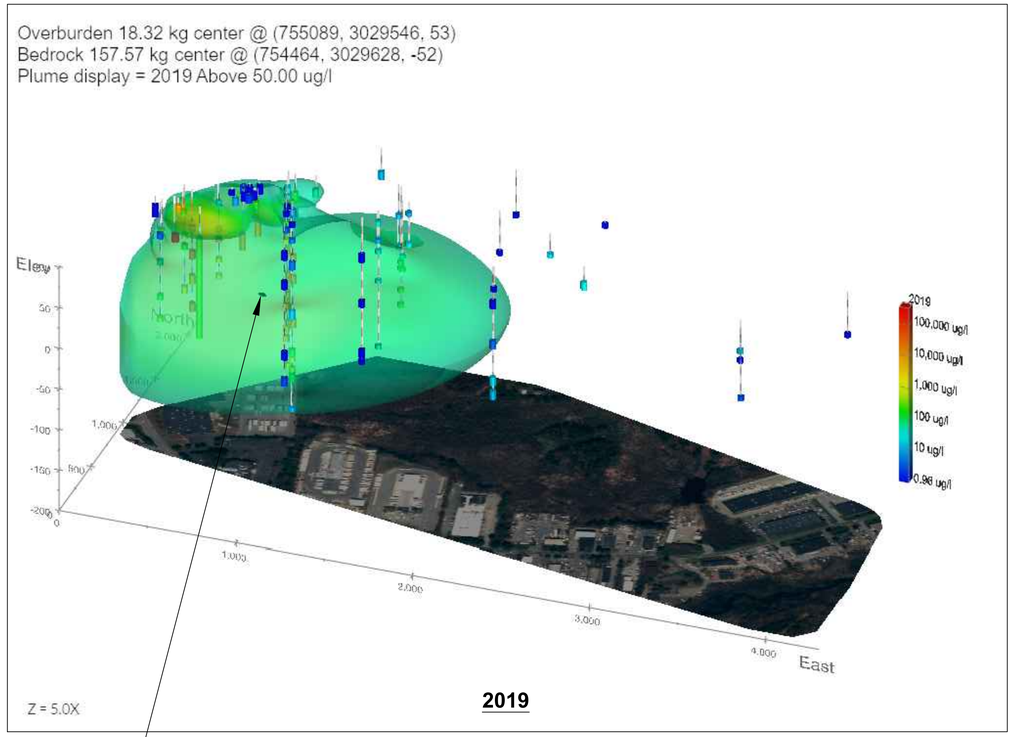
NOTES:
1. Values falling within the orange color range (upper left) are indicative of solely abiotic reductive degradation processes.
2. Values falling within the blue color range (right) are indicative of solely biotic reductive degradation processes.
3. Values falling within the red color range (middle) are indicative of both biotic and abiotic reductive degradation processes.
4. Yellow dashed line represents best fit trend of the $\delta^{13}C$ values.

AECOM
FIGURE: 5-35
CSIA MODIFIED KUDER PLOTS
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation
60552044
Date: 2022-04-18

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved:S.O. ANSI B 11" x 17"
Last saved by: BARRYK (2022-04-18) Last Plotted: 2022-04-18
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM\DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 5-35_CSIA MODIFIED KUDER PLOTS.DWG

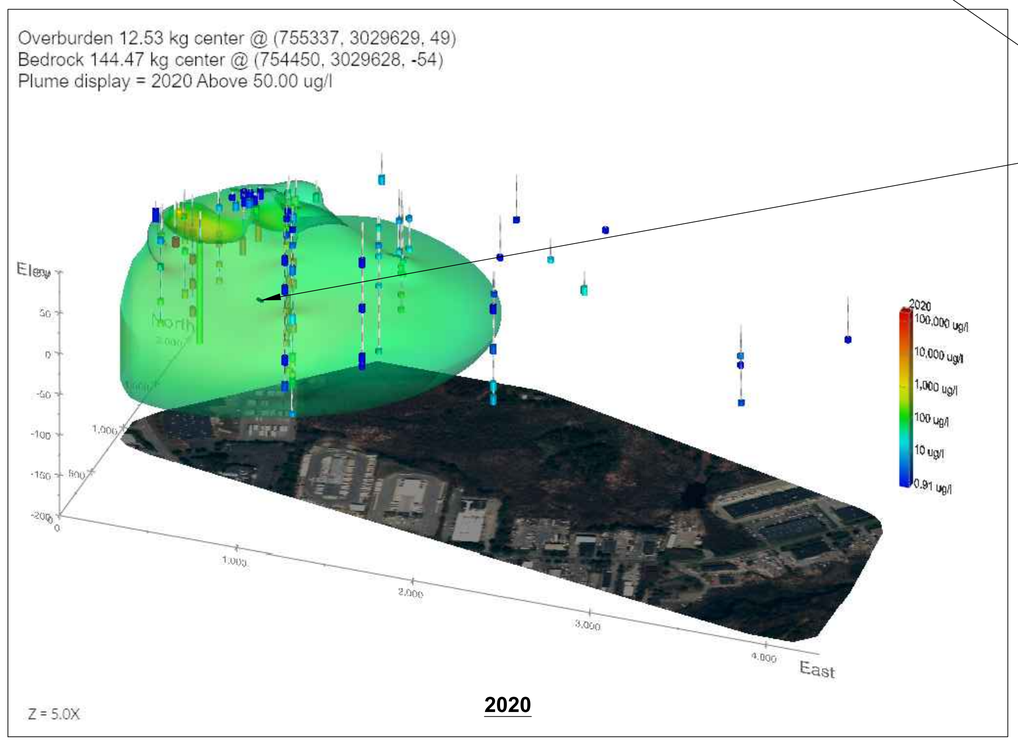


2018



2019

CENTER OF BEDROCK MASS



2020

NOTES:
- Total CVOCs are the sum of PCE, TCE, VC, cis-1,2 DCE, trans-1,2-DCE, 1,1 DCE, 1,1 DCA, and 1,2 DCA
- Data are presented for 2018, 2019 and 2020 as a similar group of monitoring wells were monitored.

AECOM

FIGURE: 5-36

CVOC Plume Mass - 2018, 2019, 2020

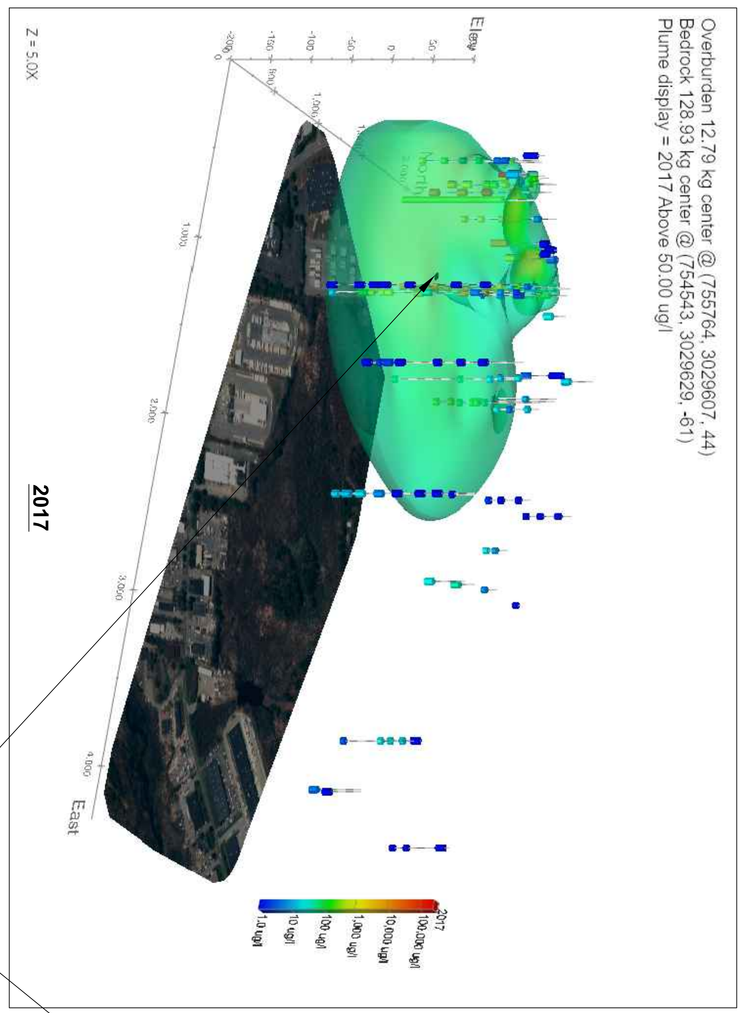
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

60552044

Date: 2022-04-18

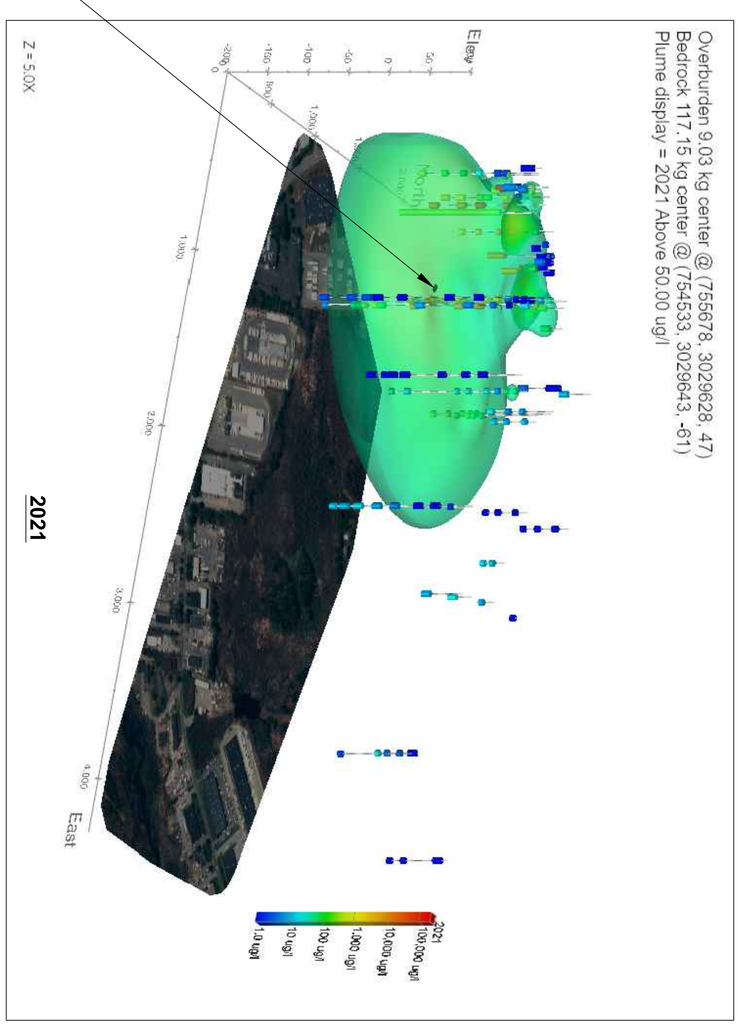
Project Management Initials: Designer:K.P.B. Checked:S.O. Approved:S.O. ANSI D 22" x 34"

Last saved by: BARRYK (2022-04-18) Last Plotted: 2022-04-18
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM\DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 5-36_FIG 5-37_CVOC PLUME MASS.DWG



2017

CENTER OF BEDROCK MASS



2021

NOTES:

- Total CVOCs are the sum of PCE, TCE, VC, cis-1,2 DCE, trans-1,2-DCE, 1,1 DCE, 1,1 DCA, and 1,2 DCA
- Data are presented for 2017 and 2021 as a similar group of monitoring wells were monitored.

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

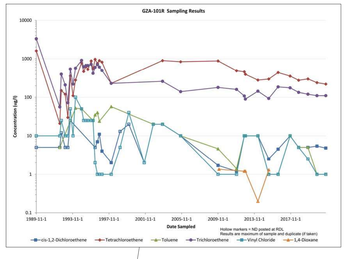
CVOC Plume Mass - 2017 and 2021

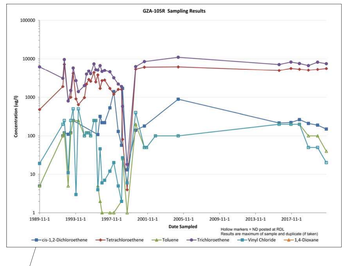
AECOM

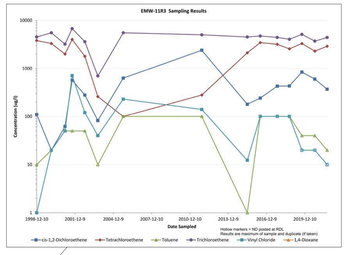
60552044 Date: 2022-04-18

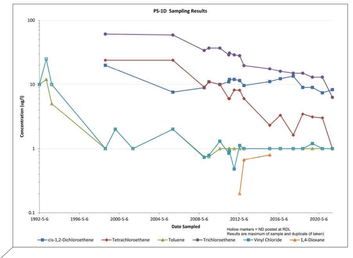
FIGURE: 5-37

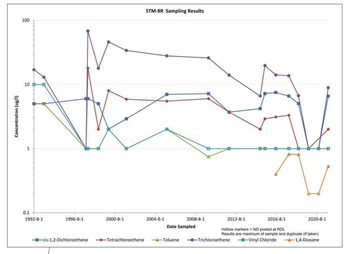
EVIDENCE OF STABLE OR DECREASING PLUME

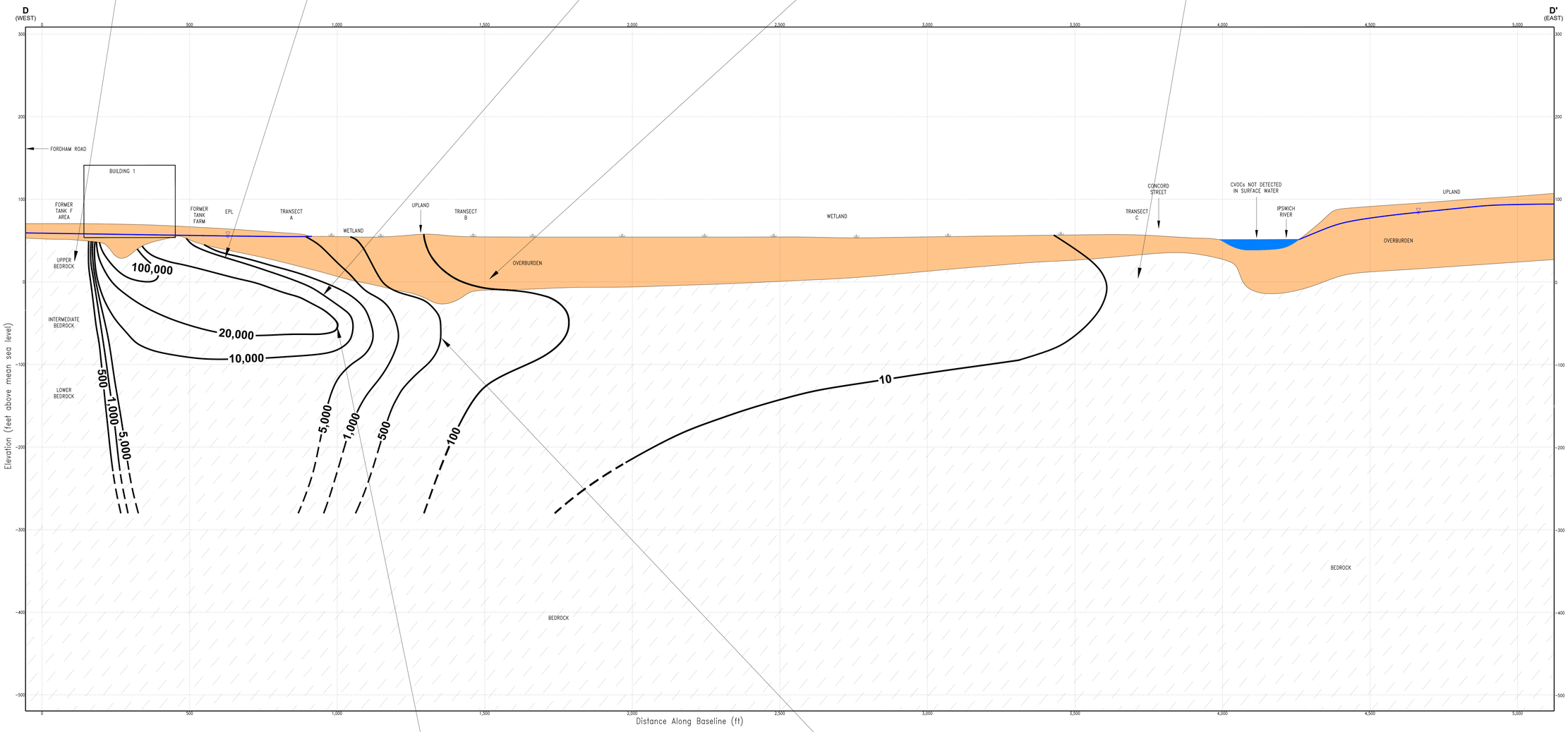


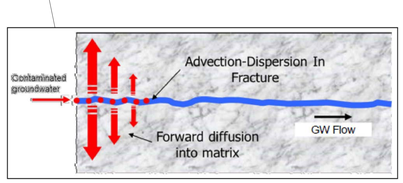


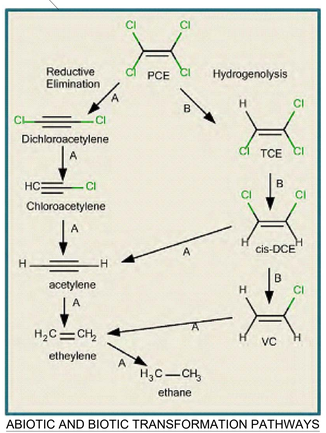




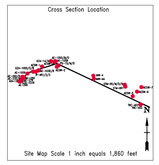








ABIOTIC AND BIOTIC TRANSFORMATION PATHWAYS



LEGEND:

GROUNDWATER ELEVATION

GROUNDWATER SAMPLE RESULTS
RESULTS IN ug/L
SAMPLE DATE: SEPTEMBER 2021

—1,000— ISOPLETH OF TOTAL cVOCs (ug/L)

Horizontal Scale (feet) 0 140

Vertical Scale (feet) 0 50

Vertical Exaggeration: 2.8

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1							
0							

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824
www.aecom.com

LOCKHEED MARTIN CORP.
50 FORDHAM ROAD, WILMINGTON, MA

DATE: 04/22

PROJ. NO.: 60552044

CONCEPTUAL SITE MODEL CROSS SECTION

50 FORDHAM ROAD, WILMINGTON, MA

FIGURE 5-38

SHEET NUMBER: 1 OF 1

REVISION 0

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Table 2-1
Water Level Measurements

Weather: Mostly Sunny, 80's °F	Recorders: Michaela Fitzgerald, Jillian Whittney, Scott Olson, Sean Haggett, Noushin Fallapour, Dylan Potter, Brandon King, Floyd Burton, Katy Teske,

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-100R-1	8/31/2021	14:15	5.64	83.59	77.95		0.4
AE-100R-2		14:15	5.72	83.60	77.88		0.3
AE-100R-3		14:15	5.67	83.55	77.88		0.3
AE-100R-4		14:15	5.73	83.52	77.79		0.3
AE-100R-5		14:15	5.85	83.51	77.66		0.3
AE-100R-6		14:15	5.83	83.51	77.68		0.3
AE-101R-1		9:20	2.34	79.07	76.73		0.5
AE-101R-2		9:20	2.31	79.07	76.76		0.5
AE-101R-3		9:20	2.27	79.07	76.80		0.4
AE-101R-4		9:20	2.22	79.07	76.85		0.3
AE-101R-5		9:20	2.23	79.07	76.84		0.3
AE-101R-6		9:20	2.23	79.07	76.84		0.3
AE-101S		9:15	2.49	79.34	76.85		0.1
AE-101D		9:15	2.59	79.37	76.78		1.9
AE-102RR-1		9:30	3.06	79.83	76.77		0.4
AE-102RR-2		9:30	3.00	79.84	76.84		0.4
AE-102RR-3		9:30	2.99	79.89	76.90		0.4
AE-102RR-4		9:30	2.87	79.84	76.97		0.3
AE-102RR-5		9:30	2.92	79.82	76.90		0.3
AE-102RR-6		9:30	2.91	79.83	76.92		0.3
AE-102S		18:00	3.41	80.12	76.71		NM
AE-102M		18:00	3.48	80.17	76.69		NM
AE-102D		18:00	3.62	80.16	76.54		NM
AE-103R-1		9:45	2.10	78.99	76.89	Roadbox replaced 9/27/2021	0.3
AE-103R-2		9:45	2.01	78.99	76.98		0.3
AE-103R-3		9:45	2.00	79.01	77.01		0.4
AE-103R-4		9:45	1.95	79.00	77.05		0.6
AE-103R-5		9:45	2.01	79.08	77.07		0.4
AE-103R-6		9:45	2.02	79.00	76.98		0.3
AE-103R-7		9:45	2.04	78.99	76.95		0.2
AE-103S		9:50	2.59	79.43	76.84		0.2
AE-103M		9:50	2.60	79.42	76.82		0.2
AE-103D		9:50	2.66	79.42	76.76		0.3
AE-104R-1		10:10	1.97	78.90	76.93		1.1
AE-104R-2		10:10	1.92	78.85	76.93		1.4
AE-104R-3		10:10	1.90	78.86	76.96		1.2
AE-104R-4		10:10	2.03	78.86	76.83		1.8
AE-104R-5		10:10	2.34	78.86	76.52		3.8
AE-104R-6		10:10	2.34	78.85	76.51		1.9

Notes:
R = replicate field measurement
NM = Not measured

Table 2-1
Water Level Measurements

Weather: Mostly Sunny, 80's °F	Recorders: Michaela Fitzgerald, Jillian Whittney, Scott Olson, Sean Haggett, Noushin Fallapour, Dylan Potter, Brandon King, Floyd Burton, Katy Teske,

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-104S	8/31/2021	10:00	2.42	79.30	76.88		0.2
AE-104M		10:00	2.42	79.28	76.86		0.2
AE-104D		10:00	2.43	79.30	76.87		0.3
AE-108R-1		9:00	2.09	78.81	76.72		0.1
AE-108R-2		9:00	1.96	78.85	76.89		0.0
AE-108R-3		9:00	1.92	78.82	76.90		0.0
AE-108R-4		9:00	1.87	78.79	76.92		0.0
AE-108R-5		9:00	1.86	78.80	76.94		0.0
AE-105R-1		15:00	3.55	79.81	76.26		0.0
AE-105R-2		15:01	3.61	79.89	76.28		0.0
AE-105R-3		15:02	3.57	79.87	76.30		0.0
AE-105R-4		15:03	3.66	79.83	76.17		0.0
AE-105R-5		15:04	3.60	79.81	76.21		0.0
AE-105R-6		NM	NM	79.87	-	Port not working	0.0
AE-105S		15:07	3.21	79.39	76.18		0.9
AE-105M		15:08	3.18	79.35	76.17		0.0
AE-105D		15:06	3.23	79.42	76.19		2.0
AE-106R-1		14:45	2.98	79.15	76.17		0.2
AE-106R-2		14:46	3.14	79.12	75.98	R=3.14	0.2
AE-106R-3		14:47	3.06	79.13	76.07		0.3
AE-106R-4		14:48	2.92	79.15	76.23		0.3
AE-106R-5		14:49	2.83	79.14	76.31		0.3
AE-106S		12:42	2.60	78.42	75.82		1.8
AE-106M		12:43	2.45	78.44	75.99		0.8
AE-106D		12:44	2.49	78.41	75.92		0.3
TRC-301R-1		12:30	2.45	78.57	76.12		0.0
TRC-301R- 2		12:31	2.49	78.57	76.08		0.0
TRC-301R-3		12:32	2.49	78.57	76.08		0.0
TRC-301R-4		12:33	2.47	78.57	76.10		0.0
PZ-9S		13:40	4.41	82.28	77.87		0.0
PZ-9D		13:40	4.53	82.25	77.72		0.0
PZ-9R		13:40	4.68	82.37	77.69		0.0
GZA-12		9:58	8.10	87.62	79.52		0.6
GZA-101R		10:30	5.91	87.41	81.50		3.0
AE-1S		9:36	6.96	86.26	79.30		0.3
AE-1I		9:43	7.36	86.68	79.32		0.3
AE-2R		10:22	6.32	85.23	78.91		0.8
AE-2I		9:16	6.46	85.39	78.93		0.0

Notes:
R = replicate field measurement
NM = Not measured

Table 2-1
Water Level Measurements

Weather: Mostly Sunny, 80's °F	Recorders: Michaela Fitzgerald, Jillian Whittney, Scott Olson, Sean Haggett, Noushin Fallapour, Dylan Potter, Brandon King, Floyd Burton, Katy Teske,

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
TRC-101	8/31/2021	16:08	5.13	82.18	77.05		*
TRC-102		16:20	4.18	81.21	77.03	Roadbox replaced 9/28/21	*
TRC-103		15:57	4.93	82.02	77.09	Roadbox replaced 9/28/21	*
TRC-201R		8:53	6.38	85.02	78.64		0.0
TRC-202R		--	--	78.53	--	Bedrock borehole sealed with Blank FLUTe	--
GZA-102S		15:50	5.53	82.82	77.29		*
GZA-102R1		17:10	4.52	83.09	78.57		0.0
GZA-102R2		17:10	5.56	83.08	77.52		0.0
PZ-2S		15:48	5.21	82.81	77.60		*
TRC-401R		16:35	4.34	82.00	77.66		*
GZA-105S		16:25	4.86	81.89	77.03		*
GZA-105D		17:00	4.78	81.82	77.04		0.1
GZA-105R		17:00	4.56	81.80	77.24		0.1
WE-105R2		16:52	3.59	82.05	78.46		*
BRW-1R2		11:00	3.98	80.76	76.78		0.1
BRW-1R3		11:00	3.59	80.57	76.98		0.5
BRW-1R4		11:00	3.69	80.60	76.91		0.4
EMW-10S		11:10	3.90	80.88	76.98		0.1
EMW-10D		11:10	4.01	80.78	76.77		0.6
EMW-10R		11:10	4.17	80.93	76.76		0.3
EMW-11S		10:50	3.42	80.32	76.90		0.4
EMW-11D		10:50	3.74	80.41	76.67		1.4
EMW-11R1		10:50	3.88	80.84	76.96		0.2
EMW-11R2		10:50	3.77	80.83	77.06		2.6
EMW-11R3		10:50	3.80	80.80	77.00		0.6
IP-1R1		17:01	4.58	82.12	77.54	Plow damage to edge of manhole ring	*
IP-1R2		17:02	4.50	82.07	77.57		*
IP-1R3		17:03	3.64	82.04	78.40		*
IP-2R1		17:10	4.97	82.17	77.20		*
IP-2R2		17:11	4.62	82.14	77.52		*
IP-2R3		14:11	4.48	82.12	77.64		*
IP-2R4		17:12	4.30	82.08	77.78		*
IP-3R1		16:50	3.79	81.02	77.23		*
IP-3R2		16:48	3.57	80.98	77.41		*
IP-4R1		16:44	3.70	80.84	77.14		*
IP-4R2		16:43	3.68	80.79	77.11		*
IP-4R3		16:42	3.55	80.77	77.22		*

Notes: R = replicate field measurement

*PID malfunctioning

Table 2-1
Water Level Measurements

Weather: Mostly Sunny, 80's °F	Recorders: Michaela Fitzgerald, Jillian Whittney, Scott Olson, Sean Haggett, Noushin Fallapour, Dylan Potter, Brandon King, Floyd Burton, Katy Teske,

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-23S	8/31/2021	12:50	6.58	85.62	79.04		0.9
AE-23R		13:15	7.46	85.54	78.08	Water in roadbox above PVC	285
AE-24		12:55	6.70	85.63	78.93		12.5
AE-25S		13:00	6.50	85.49	78.99		0.2
AE-25D		13:07	6.51	85.38	78.87		0.2
AE-25R		13:04	6.66	85.35	78.69		0.2
AE-26S		14:45	7.03	85.49	78.46		0.9
AE-26D		14:45	6.82	85.25	78.43		0.1
AE-27R		12:45	7.32	85.48	78.16	Water in roadbox below PVC	0.4
AE-3		16:05	5.32	82.41	77.09	replaced roadbox 9/29/2021	NM
AE-4		16:15	4.93	82.03	77.10	replaced roadbox 9/27/2021	NM
DP-1		11:25	3.04	80.01	76.97		0.1
DP-2		11:20	2.78	79.75	76.97		0.2
CW-1		17:19	3.83	80.94	77.11	Visible sheen	NM
CW-2		17:25	3.60	80.73	77.13	Visible sheen	NM
GZA-5		11:40	2.98	80.03	77.05		0.1
GZA-6		11:30	3.76	80.46	76.70		0.0
GZA-10		11:35	3.64	80.39	76.75		0.7
STM-3S		14:52	9.14	82.97	73.83		NM
STM-3D		14:50	9.18	82.93	73.75		NM
STM-3R		14:48	9.35	82.94	73.59		NM
STM-8S		15:32	4.13	78.91	74.78		0.1
STM-8M		15:39	4.95	78.87	73.92	R = 4.95	0.0
STM-8D		15:34	4.97	78.86	73.89		0.1
STM-8R		15:37	4.89	78.78	73.89		0.0
STM-8R1		15:47	5.52	79.08	73.56	1 bolt housing broken	0.1
STM-10S		17:30	17.98	95.70	77.72		0.0
STM-10R1		17:31	18.18	95.79	77.61		0.0
STM-10R2		17:32	18.17	95.79	77.62		0.0
TRC-402 (Reading)		9:55	24.98	97.47	72.49	R = 24.98	NM
TRC-403 (Reading)		10:10	25.22	97.73	72.51		NM

Notes:
R = replicate field measurement
NM = Not measured

Table 2-1
Water Level Measurements

Weather: Mostly Sunny, 80's °F	Recorders: Michaela Fitzgerald, Jillian Whittney, Scott Olson, Sean Haggett, Noushin Fallapour, Dylan Potter, Brandon King, Floyd Burton, Katy Teske,

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
MW-1	8/31/2021	15:31	2.24	78.81	76.57		0.0
MW-4		9:32	2.08	77.23	75.15		0.2
MW-4A		9:24	1.37	76.46	75.09		0.1
MW-5		16:40	2.73	78.99	76.26		0.4
MW-7		14:42	3.95	80.33	76.38		0.5
GZA-14		14:53	6.35	82.64	76.29		0.4
GZA-14A		14:51	5.93	82.31	76.38		0.1
PS-1S		12:25	3.41	79.21	75.80		0.0
PS-1M		12:05	2.40	77.30	74.90	R = 2.40	0.0
PS-1D		12:04	0.16	76.51	76.35		0.0
PS-2S		11:31	1.98	77.71	75.73		0.0
PS-2M		11:33	2.04	77.61	75.57		0.0
PS-2D		11:35	1.30	76.91	75.61		0.0
PS-3		10:00	1.43	76.64	75.21		0.0
PS-4		9:40	3.48	78.66	75.18	R = 3.48	0.0
PS-5S		9:47	4.93	80.49	75.56		0.0
PS-5D		9:48	6.53	79.68	73.15		0.0
PS-8S		15:16	7.39	83.37	75.98		0.0
PS-8M		15:17	7.07	82.77	75.70		0.0
PS-8D		15:18	6.68	82.53	75.85		0.0
GZA-1 (wwtp)		12:15	2.33	79.05	76.72		0.0
GZA-2 (wwtp)		11:45	2.37	79.12	76.75		0.0
GZA-3 (wwtp)		12:00	2.91	79.42	76.51		0.0
GZA-4 (wwtp)		12:30	6.01	83.37	77.36		0.0
STM-? (Wilm. Masonry)		15:03	3.28	75.57	72.29		0.0
AE-112R-1		12:13	6.00	81.76	75.76		0.2
AE-112R-2		12:14	5.89	81.78	75.89		0.1
AE-112R-3		12:15	5.80	81.78	75.98		0.1
AE-112R-4		12:16	5.86	81.80	75.94		0.1
AE-112R-5		12:17	5.85	81.75	75.90		0.1
AE-112R-6		12:18	5.80	81.73	75.93		0.0
AE-112R-7		12:19	5.79	81.74	75.95		0.1
AE-112D		12:21	6.69	82.27	75.58	R = 6.69	5.8
HOW-2 (MW-2)		12:31	8.69	84.35	75.66		0.0
HOW-3 (MW-3)		12:10	6.32	81.83	75.51		0.0
# 3 Furbish Pond Ln (Residential Irrigation)		17:11	18.62	103.21	84.59		0
GZA-107D		12:52	4.07	81.08	77.01		0.2
GZA-107M		12:50	4.29	80.87	76.58		0.4
GZA-107R		12:48	3.81	80.58	76.77		0.0

Notes: R = replicate field measurement

Table 2-1
Water Level Measurements

Weather: Mostly Sunny, 80's °F	Recorders: Michaela Fitzgerald, Jillian Whittney, Scott Olson, Sean Haggett, Noushin Fallapour, Dylan Potter, Brandon King, Floyd Burton, Katy Teske,

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-26R-1	8/31/2021	14:17	7.54	85.84	78.30	GW elevations calculated from measurements taken with vacuum water level gauge at shallow water FLUTes (AE-26R, AE-28R, AE-29R) TOC reference elevation for these calculations is the roadbox rim elevation.	0.1
AE-26R-2		14:25	7.39	85.84	78.45		1.3
AE-26R-3		14:30	7.38	85.84	78.46		2
AE-26R-4		14:40	7.42	85.84	78.42		2
AE-26R-5		14:45	7.40	85.84	78.44		2
AE-28R-1		14:55	7.47	85.88	78.41		-
AE-28R-2		15:02	7.45	85.88	78.43		-
AE-28R-3		15:09	7.52	85.88	78.37		-
AE-28R-4		15:18	7.56	85.88	78.33		-
AE-29R-1		11:05	8.06	86.97	78.91		0
AE-29R-2		11:25	8.31	86.97	78.66		0
AE-29R-3		11:32	8.47	86.97	78.50		0
AE-29R-4		11:41	8.55	86.97	78.42		0
AE-29R-5		11:50	8.38	86.97	78.59		0
AE-29R-6		11:55	8.42	86.97	78.55		0
AE-109R-1		9:13	3.33	80.20	76.87		0.0
AE-109R-2		9:14	3.30	80.17	76.87		0.0
AE-109R-3		9:14	3.34	80.19	76.85		0.0
AE-109R-4		9:15	3.57	80.17	76.60		0.0
AE-109R-5		9:15	3.57	80.18	76.61		0.0
AE-109R-6		9:16	3.57	80.15	76.58		0.0
AE-109R-7		9:18	3.56	80.17	76.61		0.0
AE-109R-8		9:18	3.53	80.20	76.67	R = 3.53	0.0
AE-109D		9:00	3.57	80.36	76.79		0.1
AE-110R-1		11:31	2.66	80.67	78.01		0.1
AE-110R-2		11:34	2.62	80.68	78.06		0.1
AE-110R-3		11:35	2.35	80.64	78.29		0.1
AE-110R-4		11:36	2.25	80.62	78.37		0.2
AE-110R-5		11:37	2.23	80.62	78.39		0.1
AE-110R-6		11:38	2.26	80.62	78.36		0.1
AE-110R-7		11:39	2.23	80.64	78.41	R = 2.23	0.1
AE-111R-1		10:13	12.75	89.03	76.28		0.1
AE-111R-2		10:15	12.69	89.01	76.32		0.3
AE-111R-3		10:16	12.65	89.02	76.37		0.2
AE-111R-4		10:18	12.58	89.02	76.44	R = 12.58	0.1
AE-111R-5		10:20	12.54	89.05	76.51		0.1
AE-111R-6		10:22	12.55	89.04	76.49		0.1
AE-111R-7		10:23	12.56	89.06	76.50		0.1

Notes: R = replicate field measurement

Table 2-1
Water Level Measurements

Weather: Mostly Sunny, 80's °F	Recorders: Michaela Fitzgerald, Jillian Whittney, Scott Olson, Sean Haggett, Noushin Fallapour, Dylan Potter, Brandon King, Floyd Burton, Katy Teske,

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
YRC Monitoring Wells							
MW-1R	8/31/2021	9:53	11.41	89.48	78.07		0.0
MW-1S		9:50	11.51	89.56	78.05		0.0
MW-4N-R1		--	NM	88.05	--		NM
MW-4N-R2		--	NM	88.02	--		NM
MW-4N-R3		--	NM	88.07	--		NM
MW-4N-R4		--	NM	88.06	--		NM
MW-6N-R1		--	NM	90.61	--		NM
MW-6N-R2		--	NM	90.40	--		NM
MW-6N-R3		--	NM	90.73	--		NM
MW-6N-R4		--	NM	90.51	--		NM
MW-6N-R5		--	NM	90.51	--		NM
MW-7S		--	NM	86.57	--		NM
MW-12S		10:44	8.89	92.43	83.54	R = 8.89	0.0
MW-13R		10:31	13.99	90.19	76.20		0.1
MW-13S		10:31	14.05	90.23	76.18		0.0
MW-14N-R1		--	NM	91.09	--		NM
MW-14N-R2		--	NM	91.14	--		NM
MW-14N-R3		--	NM	91.26	--		NM
MW-14N-R4		--	NM	91.39	--		NM

Notes:
R = replicate field measurement
NM = Not measured

Table 2-1
Water Level Measurements

Weather: Mostly Sunny, 80's °F	Recorders: Michaela Fitzgerald, Jillian Whittney, Scott Olson, Sean Haggett, Noushin Fallapour, Dylan Potter, Brandon King, Floyd Burton, Katy Teske,

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
Surface Water adjacent to Monitoring Wells						
AE-106S	8/31/2021	12:42	2.62	78.42	75.80	
AE-106R-1		14:45	3.25	79.15	75.90	
TRC-301R-1		12:30	2.72	78.57	75.85	
MW-4		9:32	1.96	77.23	75.27	
MW-4A		9:24	1.32	76.46	75.14	
MW-5		-	-	78.99	-	not measured
PS-1S		12:25	3.64	79.21	75.57	
PS-1M		12:05	2.71	77.30	74.59	
PS-1D		12:04	0.82	76.51	75.69	
PS-2S		11:31	2.02	77.71	75.69	
PS-2M		11:33	2.04	77.61	75.57	
PS-2D		11:35	1.30	76.91	75.61	
GZA-1 (wwtp)		--	--	79.05	--	not measured
GZA-2 (wwtp)		11:45	2.30	79.22	76.92	TOR to TOW=2.3; TOR to TOC=0.1
Stream Gauges						
SG-1	8/31/2021	12:20	0.94	75.78	76.72	ft above the 0.00 ref. mark
SG-2		13:20	1.12	70.82	71.94	ft above the 0.00 ref. mark
Surface Water						
Concord Street Pond	8/31/2021	15:01	0.70	75.91	75.21	Ref Elev is top of 2nd outfall pipe into Pond, west of Fordham Rd

Notes: R = replicate field measurement

Table 2-2
September 2021 Groundwater Sample Summary

Date Sampled	Area	Location ID	FLUTe port	Strata	Well Diameter (inch)	Screen Interval (Ft bgs)	Synoptic Water Level Reading *	Field Parameters: pH, temperature, conductivity, ORP, DO, and turbidity	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) to get DL <0.3 ug/l)	VPH (MassDEP- VPH-04-1.1 Revision 1)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-04-1.1 Revision 1)	Total Fe, Mn (SW846 - U SEPA Method 6010C)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010C)	Total As (SW846 - USEPA Method 6010C)	Dissolved As (field filtered) (SW846 - USEPA Method 6010C)	Chloride (USEPA 300.0)	Nitrite	Nitrate (USEPA 300.0)	Sulfate (USEPA 300.0)	Sulfide	Total organic carbon (SW- 846 9060A)	Methane, Ethane, Ethene, Acetylene and Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2- DCE, VC (Microbial Insights)	Microbial Analysis: Quantaray (Microbial Insights)	PIANO - Petroleum Analyses (Alpha Analytical Services)	Comments
9/1/2021	Building 1, inside	AE-26R	R1	Bedrock	FLUTE	50 - 56	1	1	1	1	1	1			1	1											1	
9/1/2021	Building 1, inside	AE-26R	R2	Bedrock	FLUTE	72 - 78	1	1	1				1	1			1	1	1	1	1	1	1	1	1	1		
9/1/2021	Building 1, inside	AE-26R	R3	Bedrock	FLUTE	81 - 88	1	1	1																			
9/1/2021	Building 1, inside	AE-26R	R4	Bedrock	FLUTE	104 - 114	1	1	1																			
9/1/2021	Building 1, inside	AE-26R	R5	Bedrock	FLUTE	123 - 132	1	1	1	1																		
9/3/2021	Building 1, inside	AE-26S	--	Overburden	2	25 - 30	1	1	1						1	1												
9/3/2021	Building 1, inside	AE-26D	--	Overburden	2	35 - 40	1	1	1																			
9/3/2021	Building 1, inside	AE-27R	--	Bedrock	2	50 - 60	1	1	1																			
9/1/2021	Building 1, inside	AE-28R	R1	Bedrock	FLUTE	45 - 51	1	1	1																			
9/1/2021	Building 1, inside	AE-28R	R2	Bedrock	FLUTE	75 - 85	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
9/1/2021	Building 1, inside	AE-28R	R3	Bedrock	FLUTE	98 - 108	1	1	1	1																		
9/1/2021	Building 1, inside	AE-28R	R4	Bedrock	FLUTE	132 - 142	1	1	1																			
9/3/2021	Building 1, inside	AE-25S	--	Overburden	2	20 - 30	1	1	1																			
9/3/2021	Building 1, inside	AE-25D	--	Overburden	2	34.5 - 39.5	1	1	1																			
9/3/2021	Building 1, inside	AE-25R	--	Bedrock	open rock 5"	45 - 62	1	1	1																			
9/3/2021	Building 1, inside	AE-23R	--	Bedrock	1.5	44.75 - 54.75	1	1	1	1	1	1															1	
9/3/2021	Building 1, inside	AE-23S	--	Overburden	2	10 - 20	1	1	1																			
9/3/2021	Building 1, inside	AE-24	--	Overburden	2	7.25 - 17.2.5	1	1	1	1																		MS/MSD
9/10/2021	Tank F	AE-29R	R1	Bedrock	FLUTE	37 - 44	1	1	1																			
9/10/2021	Tank F	AE-29R	R2	Bedrock	FLUTE	47 - 54	1	1	1																			
9/10/2021	Tank F	AE-29R	R3	Bedrock	FLUTE	70 -76	1	1	1																			
9/10/2021	Tank F	AE-29R	R4	Bedrock	FLUTE	90 - 96	1	1	1																			
9/10/2021	Tank F	AE-29R	R5	Bedrock	FLUTE	113 - 119	1	1	1																			
9/14/2021	Tank F	AE-29R	R6	Bedrock	FLUTE	140 -146	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	
9/10/2021	Tank F - south of Building 1	AE-2R	--	Bedrock	open rock 5"	22 - 36	1	1	1																			
9/10/2021	Building 1 - Tank F	AE-2I	--	Overburden	2	8 - 18	1	1	1																			
9/14/2021	Tank F	GZA-101R	--	Bedrock	PVC	36 - 38	1	1	1				1	1	1	1	1	1	1	1	1	1	1	1				Recollected dissolved gases on 9/22/2021 due to shipping delays with the initial sample from 9/16/2021
9/9/2021	Former Tank Farm	AE-100R	R1	Bedrock	FLUTE	18 - 24	1	1	1		1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	
9/9/2021	Former Tank Farm	AE-100R	R2	Bedrock	FLUTE	43 - 48	1	1	1																			
9/9/2021	Former Tank Farm	AE-100R	R3	Bedrock	FLUTE	50 - 56	1	1	1	1																		
9/9/2021	Former Tank Farm	AE-100R	R4	Bedrock	FLUTE	63 - 68	1	1	1	1																		
9/9/2021	Former Tank Farm	AE-100R	R5	Bedrock	FLUTE	88 - 93	1	1	1				1	1	1	1	1	1	1	1	1	1	1	1	1	1		
9/9/2021	Former Tank Farm	AE-100R	R6	Bedrock	FLUTE	108.5 - 113.5	1	1	1	1																		
9/7/2021	Transect A	AE-101D	--	Overburden	2	20 - 25	1	1	1	1																		
9/10/2021	Transect A	AE-101R	R1	Bedrock	CMT	30.5 - 35.5	1	1	1																			
9/10/2021	Transect A	AE-101R	R2	Bedrock	CMT	55-60	1	1	1	1																		
9/10/2021	Transect A	AE-101R	R3	Bedrock	CMT	80 - 85	1	1	1	1																		
9/10/2021	Transect A	AE-101R	R4	Bedrock	CMT	153 - 158	1	1	1																			
9/16/2021	Transect A	AE-101R	R5	Bedrock	CMT	175 - 180	1	1	1	1																		
9/16/2021	Transect A	AE-101R	R6	Bedrock	CMT	227-232	1	1	1	1																		
9/7/2021	Transect A	AE-101S	--	Overburden	2	10 - 15	1	1	1	1																		
9/15/2021	Transect A	AE-102D	--	Overburden	2	33 - 38	1	1	1	1																		
9/15/2021	Transect A	AE-102M	--	Overburden	2	23 - 28	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1		Recollected dissolved gases on 9/22/2021 due to shipping delays with the initial sample from 9/16/2021
9/7/2021	Transect A	AE-102RR	R1	Bedrock	FLUTE	43 - 48	1	1	1																			
9/7/2021	Transect A	AE-102RR	R2	Bedrock	FLUTE	75 - 80	1	1	1	1																		
9/7/2021	Transect A	AE-102RR	R3	Bedrock	FLUTE	111 - 116	1	1	1																			
9/7/2021	Transect A	AE-102RR	R4	Bedrock	FLUTE	125 - 130	1	1	1	1																		
9/7/2021	Transect A	AE-102RR	R5	Bedrock	FLUTE	141-146	1	1	1																			
9/7/2021	Transect A	AE-102RR	R6	Bedrock	FLUTE	153-158	1	1	1	1	1	1			1	1											1	
9/15/2021	Transect A	AE-102S	--	Overburden	2	13 - 18	1	1	1																			
9/14/2021	Transect A	AE-103D	--	Overburden	2	35 - 40	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1				MS/MSD; Recollected dissolved gases on 9/22/2021 due to shipping delays with the initial sample from 9/16/2021
9/16/2021	Transect A	AE-103M	--	Overburden	2	25 - 30	1	1	1																			
9/9/2021	Transect A	AE-103R	R1	Bedrock	FLUTE	48 - 53	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	
9/9/2021	Transect A	AE-103R	R2	Bedrock	FLUTE	62-67	1	1	1																			
9/9/2021	Transect A	AE-103R	R3	Bedrock	FLUTE	70 -76	1	1	1																			

Table 2-2
September 2021 Groundwater Sample Summary

Date Sampled	Area	Location ID	FLUTe port	Strata	Well Diameter (inch)	Screen Interval (Ft bgs)	Synoptic Water Level Reading *	Field Parameters: pH, temperature, conductivity, ORP, DO, and turbidity	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) to get DL <0.3 ug/l)	VPH (MassDEP- VPH-04-1.1 Revision 1)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-04-1.1 Revision 1)	Total Fe, Mn (SW846 - U SEPA Method 6010C)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010C)	Total As (SW846 - USEPA Method 6010C)	Dissolved As (field filtered) (SW846 - USEPA Method 6010C)	Chloride (USEPA 300.0)	Nitrite	Nitrate (USEPA 300.0)	Sulfate (USEPA 300.0)	Sulfide	Total organic carbon (SW- 846 9060A)	Methane, Ethane, Ethene, Acetylene and Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2- DCE, VC (Microbial Insights)	Microbial Analysis: Quantaray (Microbial Insights)	PIANO - Petroleum Analyses (Alpha Analytical Services)	Comments
9/9/2021	Transect A	AE-103R	R4	Bedrock	FLUTE	98-105	1	1	1	1																	
9/9/2021	Transect A	AE-103R	R5	Bedrock	FLUTE	122 - 128	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	
9/9/2021	Transect A	AE-103R	R6	Bedrock	FLUTE	138-144	1	1	1																		
9/9/2021	Transect A	AE-103R	R7	Bedrock	FLUTE	162.5-168	1	1	1																		
9/16/2021	Transect A	AE-103S	--	Overburden	2	15 - 20	1	1	1						1	1											
9/22/2021	Transect A	AE-104D	--	Overburden	2	35 - 40	1	1	1	1																	
9/22/2021	Transect A	AE-104M	--	Overburden	2	25 - 30	1	1	1																		
9/2/2021	Transect A	AE-104R	R1	Bedrock	FLUTE	48 - 54	1	1	1	1																	
9/2/2021	Transect A	AE-104R	R2	Bedrock	FLUTE	62 - 68	1	1	1																		
9/2/2021	Transect A	AE-104R	R3	Bedrock	FLUTE	97-102	1	1	1	1																	
9/2/2021	Transect A	AE-104R	R4	Bedrock	FLUTE	128-133	1	1	1	1	1	1														1	
9/2/2021	Transect A	AE-104R	R5	Bedrock	FLUTE	156 - 162	1	1	1																		
9/2/2021	Transect A	AE-104R	R6	Bedrock	FLUTE	168-174	1	1	1	1																	
9/22/2021	Transect A	AE-104S	--	Overburden	2	15 - 20	1	1	1																		
9/9/2021	Transect A	AE-108R	R1	Bedrock	FLUTE	36.5 - 43.5	1	1	1				1	1	1	1	1	1	1	1	1	1	1	1	1	1	
9/9/2021	Transect A	AE-108R	R2	Bedrock	FLUTE	68 - 73	1	1	1																		
9/9/2021	Transect A	AE-108R	R3	Bedrock	FLUTE	84 - 89	1	1	1																		
9/9/2021	Transect A	AE-108R	R4	Bedrock	FLUTE	145 - 150	1	1	1																		
9/9/2021	Transect A	AE-108R	R5	Bedrock	FLUTE	163 - 168	1	1	1																		
9/2/2021	Transect A	AE-109R	R1	Bedrock	FLUTE	38 - 43	1	1	1																		
9/2/2021	Transect A	AE-109R	R2	Bedrock	FLUTE	66 - 76	1	1	1	1																	Duplicate
9/2/2021	Transect A	AE-109R	R3	Bedrock	FLUTE	126 - 136	1	1	1																		
9/2/2021	Transect A	AE-109R	R4	Bedrock	FLUTE	174 - 180.5	1	1	1																		
9/2/2021	Transect A	AE-109R	R5	Bedrock	FLUTE	183 - 189	1	1	1	1	1	1			1	1										1	Accidentally omitted 1,4-dioxane on the COC; this sample was not analyzed for 1,4-dioxane
9/2/2021	Transect A	AE-109R	R6	Bedrock	FLUTE	196-201	1	1	1																		
9/2/2021	Transect A	AE-109R	R7	Bedrock	FLUTE	204 - 214	1	1	1	1																	
9/2/2021	Transect A	AE-109R	R8	Bedrock	FLUTE	245 - 250	1	1	1																		
9/7/2021	Transect A	AE-109D	--	Overburden	2	18 - 23	1	1	1	1					1	1											
9/2/2021	Transect A	AE-110R	R1	Bedrock	FLUTE	34 - 44	1	1	1																		
9/2/2021	Transect A	AE-110R	R2	Bedrock	FLUTE	70 - 80	1	1	1																		
9/2/2021	Transect A	AE-110R	R3	Bedrock	FLUTE	128 - 138	1	1	1																		
9/2/2021	Transect A	AE-110R	R4	Bedrock	FLUTE	158 - 168	1	1	1																		
9/2/2021	Transect A	AE-110R	R5	Bedrock	FLUTE	171 - 182	1	1	1																		
9/2/2021	Transect A	AE-110R	R6	Bedrock	FLUTE	190 - 200	1	1	1	1																	
9/2/2021	Transect A	AE-110R	R7	Bedrock	FLUTE	224 -234	1	1	1																		
9/17/2021	Transect B	AE-105D	--	Overburden	2	73 - 78	1	1	1	1																	
9/17/2021	Transect A	AE-105M	--	Overburden	2	52 - 57	1	1	1																		
9/13/2021	Transect B	AE-105R	R1	Bedrock	FLUTE	90.5 - 95.5	1	1	1				1	1			1	1	1	1	1	1	1	1	1		
9/13/2021	Transect B	AE-105R	R2	Bedrock	FLUTE	98 - 103	1	1	1	1	1	1			1	1											
9/13/2021	Transect B	AE-105R	R3	Bedrock	FLUTE	107.50 - 112.50	1	1	1																		
9/13/2021	Transect B	AE-105R	R4	Bedrock	FLUTE	125 - 130	1	1	1	1	1	1															
9/13/2021	Transect B	AE-105R	R5	Bedrock	FLUTE	143 - 148	1	1	1																		
9/17/2021	Transect B	AE-105S	--	Overburden	2	35 - 40	1	1	1						1	1											
9/13/2021	Transect B	AE-106D	--	Overburden	2	34 - 39	1	1	1				1	1	1	1	1	1	1	1	1	1	1	1	1		
9/13/2021	Transect B	AE-106M	--	Overburden	2	22.5 - 27.5	1	1	1																		
9/13/2021	Transect B	AE-106R	R1	Bedrock	FLUTE	47 - 52	1	1	1																		
9/13/2021	Transect B	AE-106R	R2	Bedrock	FLUTE	69.50 - 74.50	1	1	1																		
9/13/2021	Transect B	AE-106R	R3	Bedrock	FLUTE	84 - 88	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
9/13/2021	Transect B	AE-106R	R4	Bedrock	FLUTE	144.50 - 150.50	1	1	1																		
9/13/2021	Transect B	AE-106R	R5	Bedrock	FLUTE	164 - 169	1	1	1	1	1	1															
9/13/2021	Transect B	AE-106S	--	Overburden	2	12 - 17	1	1	1																		
9/13/2021	Transect B	TRC-301R	R4	Bedrock	CMT	65.5 - 69.5	1	1	1						1	1											
9/13/2021	Transect B	TRC-301R	R3	Bedrock	CMT	75.5 - 79.5	1	1	1				1	1			1	1	1	1	1	1	1	1	1	1	
9/13/2021	Transect B	TRC-301R	R2	Bedrock	CMT	81.5 - 85.5	1	1	1						1	1											
9/13/2021	Transect B	TRC-301R	R1	Bedrock	CMT	96.5 - 100.5	1	1	1																		
9/7/2021	Transect B	AE-111R	R1	Bedrock	FLUTE	44 - 54	1	1	1																		Duplicate

Table 2-2
September 2021 Groundwater Sample Summary

Date Sampled	Area	Location ID	FLUTe port	Strata	Well Diameter (inch)	Screen Interval (Ft bgs)	Synoptic Water Level Reading *	Field Parameters: pH, temperature, conductivity, ORP, DO, and turbidity	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) to get DL <0.3 ug/l)	VPH (MassDEP- VPH-04-1.1 Revision 1)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-04-1.1 Revision 1)	Total Fe, Mn (SW846 - U SEPA Method 6010C)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010C)	Total As (SW846 - USEPA Method 6010C)	Dissolved As (field filtered) (SW846 - USEPA Method 6010C)	Chloride (USEPA 300.0)	Nitrite	Nitrate (USEPA 300.0)	Sulfate (USEPA 300.0)	Sulfide	Total organic carbon (SW- 846 9060A)	Methane, Ethane, Ethene, Acetylene and Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2- DCE, VC (Microbial Insights)	Microbial Analysis: Quantaray (Microbial Insights)	PIANO - Petroleum Analyses (Alpha Analytical Services)	Comments
9/7/2021	Transect B	AE-111R	R2	Bedrock	FLUTE	66 - 74	1	1	1																		
9/7/2021	Transect B	AE-111R	R3	Bedrock	FLUTE	95 - 103	1	1	1																		
9/7/2021	Transect B	AE-111R	R4	Bedrock	FLUTE	140 - 150	1	1	1																		
9/7/2021	Transect B	AE-111R	R5	Bedrock	FLUTE	155 - 165	1	1	1																		
9/7/2021	Transect B	AE-111R	R6	Bedrock	FLUTE	168 -173	1	1	1																		
9/7/2021	Transect B	AE-111R	R7	Bedrock	FLUTE	181 - 191	1	1	1																		
9/16/2021	Transect B 1/2	AE-112R	R1	Bedrock	FLUTE	41 - 51	1	1	1						1	1											
9/16/2021	Transect B 1/2	AE-112R	R2	Bedrock	FLUTE	62 - 72	1	1	1																		
9/16/2021	Transect B 1/2	AE-112R	R3	Bedrock	FLUTE	91 - 101	1	1	1																		
9/16/2021	Transect B 1/2	AE-112R	R4	Bedrock	FLUTE	113 - 123	1	1	1																		
9/16/2021	Transect B 1/2	AE-112R	R5	Bedrock	FLUTE	136 - 146	1	1	1																		Duplicate
9/16/2021	Transect B 1/2	AE-112R	R6	Bedrock	FLUTE	153 - 163	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0		Recollected CSIA and dissolved gases on 9/22/2021 due to shipping delays with the initial samples from 9/16/2021
9/16/2021	Transect B 1/2	AE-112R	R7	Bedrock	FLUTE	168 - 175	1	1	1																		
9/10/2021	Transect B 1/2	AE-112D	--	Overburden	2	24.5 - 29.5	1	1	1						1	1											
9/8/2021	Transect C - Concord Street	STM-8S	--	Overburden	0.75	1 - 11	1	1	1																		
9/8/2021	Transect C - Concord Street	STM-8D	--	Overburden	0.75	34.7 - 39.7	1	1	1	1			1	1			1	1	1	1	1	1	1	1	1		
9/8/2021	Transect C - Concord Street	STM-8M	--	Overburden	0.75	19.5 - 24.5	1	1	1																		
9/8/2021	Transect C - Concord Street	STM-8R	--	Bedrock	0.75	46.5 - 51.5	1	1	1	1																	
9/16/2021	Transect C - Concord Street	STM-8R1	--	Bedrock	2	85 - 90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			Duplicate; Recollected CSIA and dissolved gases on 9/22/2021 due to shipping delays with the initial samples from 9/16/2021
9/22/2021	Transect C - Concord Street	STM-3S	--	Overburden	0.75	5 -15	1	1	1																		
9/22/2021	Transect C - Concord Street	STM-3D	--	Overburden	0.75	49.8 - 54.8	1	1	1																		Duplicate
9/22/2021	Transect C - Concord Street	STM-3R	--	Bedrock	0.75	66.9 - 71.9	1	1	1																		
9/14/2021	Upgradient	GZA-12	--	Overburden	1.5	9.5 - 24.5	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1			Recollected dissolved gases on 9/22/2021 due to shipping delays with the initial sample from 9/16/2021
9/14/2021	EPL Area	AE-03	--	Overburden	2	3 - 13	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		MS/MSD; Recollected dissolved gases on 9/22/2021 due to shipping delays with the initial sample from 9/16/2021
9/15/2021	EPL Area	AE-04	--	Overburden	2	3 - 13	1	1	1		1	1															
9/16/2021	EPL Area	GZA-102S	--	Overburden	1.5	1.7 - 10.7	1	1	1		1	1															
9/15/2021	EPL Area	GZA-105D	--	Overburden	1.5	16 - 26	1	1	1	1	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	Duplicate; Recollected dissolved gases on 9/22/2021 due to shipping delays with the initial sample from 9/16/2021
9/14/2021	EPL Area	GZA-105R	--	Bedrock	0.5	34.5 - 36.5	1	1	1				1	1			1	1	1	1	1	1	1	1	1		1	Recollected dissolved gases on 9/22/2021 due to shipping delays with the initial sample from 9/16/2021
9/15/2021	EPL Area	GZA-105S	--	Overburden	1.5	4 - 14	1	1	1		1	1			1	1											1	
9/21/2021	EPL Area	PZ-2S	--	Overburden	4	3.55 - 8.55	1	1	1		1	1															
9/14/2021	EPL Area	TRC-101	--	Overburden	1.25	1.5 - 10.5	1	1	1		1	1	1	1			1	1	1	1	1	1	1	1	1			Recollected dissolved gases on 9/22/2021 due to shipping delays with the initial sample from 9/16/2021
9/7/2021	EPL Area	TRC-102	--	Overburden	1.25	2.25 - 12.25	1	1	1		1	1			1	1											
9/7/2021	EPL Area	TRC-103		Overburden	1.25	1.25 - 11.25	1	1	1		1	1															
9/8/2021	LTGMP	EMW-10D	--	Overburden	2	19 - 29	1	1	1																		
9/8/2021	LTGMP	EMW-10R	--	Bedrock	2	42 - 52	1	1	1				1	1			1	1	1	1	1	1	1	1	1		
9/8/2021	LTGMP	EMW-11D	--	Overburden	2	22 - 32	1	1	1																		
9/8/2021	LTGMP	EMW-11R1	--	Bedrock	0.75	79 - 89	1	1	1																		MS/MSD
9/8/2021	LTGMP	EMW-11R2	--	Bedrock	0.75	104 - 114	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	
9/8/2021	LTGMP	EMW-11R3	--	Bedrock	0.75	158 - 168	1	1	1																		
9/8/2021	LTGMP	GZA-6	--	Overburden	2	8 - 18	1	1							1	1											
9/8/2021	LTGMP	GZA-10	--	Overburden	1..5	13 - 38	1	1							1	1											
9/21/2021	Source Control - Downgradient	GZA-14	--	Overburden	1.5	39 - 49	1	1	1																		
9/21/2021	Source Control - Downgradient	GZA-14A	--	Overburden	1.5	0 - 15	1	1	1						1	1											Duplicate
9/20/2021	Source Control - Downgradient	MW-4	--	Overburden	1.5	18 - 28	1	1	1	1					1	1											
9/20/2021	Source Control - Downgradient	MW-4A	--	Overburden	1.5	38 - 48	1	1	1						1	1											
9/21/2021	Source Control - Downgradient	MW-5	--	Overburden	1.5	28 - 38	1	1	1																		
9/21/2021	Source Control - Downgradient	MW-7	--	Overburden	1.5	15 - 25	1	1	1																		
9/17/2021	Source Control - Downgradient	PS-1D	--	Overburden	0.62	49.25 - 54.25	1	1	1																		
9/17/2021	Source Control - Downgradient	PS-1M	--	Overburden	0.62	34.25 - 39.25	1	1	1																		

Table 2-2
September 2021 Groundwater Sample Summary

Date Sampled	Area	Location ID	FLUTe port	Strata	Well Diameter (inch)	Screen Interval (Ft bgs)	Synoptic Water Level Reading *	Field Parameters: pH, temperature, conductivity, ORP, DO, and turbidity	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) to get DL <0.3 ug/l)	VPH (MassDEP- VPH-04-1.1 Revision 1)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-04-1.1 Revision 1)	Total Fe, Mn (SW846 - U SEPA Method 6010C)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010C)	Total As (SW846 - USEPA Method 6010C)	Dissolved As (field filtered) (SW846 - USEPA Method 6010C)	Chloride (USEPA 300.0)	Nitrite	Nitrate (USEPA 300.0)	Sulfate (USEPA 300.0)	Sulfide	Total organic carbon (SW- 846 9060A)	Methane, Ethane, Ethene, Acetylene and Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2- DCE, VC (Microbial Insights)	Microbial Analysis: Quantaray (Microbial Insights)	PIANO - Petroleum Analyses (Alpha Analytical Services)	Comments
9/17/2021	Source Control - Downgradient	PS-1S	--	Overburden	0.62	12 - 17	1	1	1																		
9/17/2021	Source Control - Downgradient	PS-2D	--	Overburden	0.62	49.1 - 54.1	1	1	1																		
9/17/2021	Source Control - Downgradient	PS-2M	--	Overburden	0.62	34 - 39	1	1	1																		
9/17/2021	Source Control - Downgradient	PS-2S	--	Overburden	0.62	12.5 - 17.5	1	1	1																		
9/20/2021	Source Control - Downgradient	PS-3	--	Overburden	0.62	2.7 - 7.7	1	1	1																		
9/20/2021	Source Control - Downgradient	PS-4	--	Overburden	0.62	12.9 - 17.9	1	1	1																		
9/21/2021	Source Control - Downgradient	PS-5D	--	Overburden	0.62	24.1 - 29.1	1	1	1																		
9/20/2021	Source Control - Downgradient	PS-5S	--	Overburden	0.62	13 - 18	1	1	1																		
9/21/2021	Source Control - Downgradient	PS-8D	--	Overburden	0.62	51.8 - 56.8	1	1	1						1	1											
9/21/2021	Source Control - Downgradient	PS-8M	--	Overburden	0.62	34.3 - 39.3	1	1	1																		
9/21/2021	Source Control - Downgradient	PS-8S	--	Overburden	0.62	13 - 18	1	1	1																		
9/10/2021	Source Control - Onsite	TRC-201R	--	Bedrock	6"	38 - 161	1	1	1																		
9/21/2021	Source Control - Onsite	IP-1R2	--	Overburden	2	54 - 74	1	1	1																		Duplicate
9/16/2021	Source Control - Onsite	TRC-401R	--	Overburden	0.5	38 - 58	1	1	1																		MS/MSD

Total number of samples	174	174	172	45	25	25	25	25	36	36	25	25	25	25	25	25	25	25	19	10	13		
Duplicates (1 per 20)	--	0	8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0		
Equipment blanks (1 per 20**)	--	0	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0		
Trip blanks (Phoenix = 1 per shipment)	--	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0		
Total	--	**174**	**198**	**48**	**28**	**28**	**28**	**28**	**39**	**39**	**28**	**28**	**28**	**28**	**28**	**28**	**32**	**25**	**19**	**10**	**13**		

Notes:

* All wells measured during site-wide water level event 8/31/2021.

** 1 per 20 for wells with non-dedicated sampling equipment

Rinse Blanks:

21A-EB01-091621-1 Hurricane Pump at STM8R1 - all analyses except H2, CSIA, Quantarray, and PIANO

21A-EB02-091601-1 Bladde pump at TRC201R - VOCs only

Table 2-3
September 2021 Groundwater Field Parameter Data Summary

Well ID	Date	Temperature (degrees C)	pH (SU)	Specific Conductivity (uS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Visual	Odor
On-Site									
AE-2I	9/10/2021	18.3	5.39	1363	4.23	221.6	2.01	Clear	None
AE-2R	9/10/2021	17.8	6.50	2943	0.16	-76.4	162	Brown particles	None
AE-3	9/15/2021	22.7	6.20	1774	0.17	-87.3	1.14	Clear	Organic decay
AE-4	9/15/2021	25.0	5.84	1191	0.19	10.6	3.21	Iron oxide floc	none
AE-23S	9/3/2021	17.5	5.10	347.9	4.04	240.8	7.09	Clear	Organic decay
AE-23R	9/3/2021	15.8	7.09	1918	0.80	-82.4	21.7	Clear	Organic decay
AE-24	9/3/2021	17.5	6.17	347.1	7.65	189.1	5.10	Clear	Organic decay
AE-25S	9/3/2021	15.4	5.28	863	1.69	158.5	0.02	Clear	None
AE-25D	9/3/2021	15.6	5.45	1227	2.18	160.7	2.10	Clear	None
AE-25R	9/3/2021	17.0	11.47	1204	0.27	-50.7	7.50	Clear	None
AE-26S	9/3/2021	16.8	5.21	354.9	0.97	149.3	0.31	Clear	None
AE-26D	9/3/2021	16.7	5.11	538	2.53	132.6	0.42	Clear	None
AE-26R-1	9/1/2021	16.3	10.60	709	0.25	-255.9	0.02	Clear	slight hydrogen sulfide
AE-26R-2	9/1/2021	17.8	7.16	574	0.29	-174.9	2.17	Clear	None
AE-26R-3	9/1/2021	17.6	7.83	713	0.39	-198.9	1.04	Clear	None
AE-26R-4	9/1/2021	17.6	7.60	1228	0.36	-180.4	1.98	Clear	slight hydrogen sulfide
AE-26R-5	9/1/2021	18.8	7.69	1467	0.21	-217.5	1.08	Clear	None
AE-27R	9/3/2021	16.8	7.37	1960	0.40	-171.6	43.6	Clear	None
AE-28R-1	9/1/2021	17.4	6.96	2362	0.17	-128.0	2.96	Clear	None
AE-28R-2	9/1/2021	17.4	7.55	1689	0.21	-257.4	1.27	Clear	None
AE-28R-3	9/1/2021	17.5	7.53	1508	0.09	-264.7	0.83	Clear	None
AE-28R-4	9/1/2021	17.5	7.53	1616	0.11	-274.8	1.88	Clear	None
AE-29R-1	9/10/2021	14.5	5.81	2680	0.25	115.7	0.02	Clear	Organic decay
AE-29R-2	9/10/2021	15.3	5.70	2703	0.31	131.5	0.02	Clear	Organic decay
AE-29R-3	9/10/2021	16.4	5.97	2769	0.20	55.8	0.02	Clear	Organic decay
AE-29R-4	9/10/2021	16.9	6.74	1595	0.16	-187.6	0.02	Clear	Organic decay
AE-29R-5	9/10/2021	17.0	7.29	535	0.18	-188.4	0.02	Clear	Organic decay
AE-29R-6	9/10/2021	19.1	7.29	1676	0.20	-176.5	4.88	Clear	Organic decay
AE-100R-1	9/9/2021	15.1	6.60	2458	0.33	-50.8	0.02	Clear	None
AE-100R-2	9/9/2021	15.0	6.04	2692	0.28	23.6	0.02	Clear	None
AE-100R-3	9/9/2021	15.2	5.93	1941	0.18	43.8	0.02	Clear	None
AE-100R-4	9/9/2021	15.1	6.15	1732	0.24	67.5	0.02	Clear	None
AE-100R-5	9/9/2021	15.0	6.39	1323	0.27	68.2	0.02	Clear	None
AE-100R-6	9/9/2021	15.2	6.87	598	0.26	-7.9	0.02	Clear	None
GZA-12	9/14/2021	17.2	5.64	2132	0.86	211.6	0.77	Clear	None
GZA-101R	9/14/2021	15.7	6.74	3245	0.11	-113.7	1.00	Clear	None
GZA-102S	9/16/2021	21.8	6.79	72.5	4.91	37.6	0.02	Clear	None
GZA-105S	9/15/2021	24.3	6.16	1742	0.17	-109.2	0.02	Clear	None
GZA-105D	9/15/2021	20.1	5.79	2184	0.21	70.1	6.02	Iron oxide floc	None
GZA-105R	9/14/2021	18.2	6.87	1137	0.30	-47.1	0.02	Clear	None
IP-1R2	9/17/2021	18.8	7.62	2231	0.24	-141.6	20.9	Clear	None
PZ-2S	9/21/2021	22.9	6.59	1478	0.85	-32.2	36.4	Silty	None
TRC-101	9/14/2021	22.9	6.38	2351	0.22	-81.5	5.55	Clear	None
TRC-102	9/7/2021	22.5	6.14	1515	0.14	-72.9	5.11	Clear	None
TRC-103	9/7/2021	23.3	6.07	1676	0.16	-91.2	136	Cloudy	None
TRC-201R	9/10/2021	17.1	7.52	891	0.38	-126.4	9.40	Clear	None
TRC-401R	9/16/2021	17.2	8.29	826	0.08	-138.9	0.02	Clear	None

Table 2-3
September 2021 Groundwater Field Parameter Data Summary

Well ID	Date	Temperature (degrees C)	pH (SU)	Specific Conductivity (uS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Visual	Odor
Transect A									
AE-101S	9/7/2021	20.0	5.81	2211	0.16	-10.1	7.62	Clear	None
AE-101D	9/7/2021	17.1	5.79	2227	0.09	-10.5	8.12	Clear	None
AE-101R-1	9/10/2021	16.3	5.54	2301	0.34	66.6	0.02	Clear	None
AE-101R-2	9/10/2021	16.5	6.72	1586	0.40	-108.1	0.02	Clear	None
AE-101R-3	9/10/2021	16.5	6.61	2155	0.62	-105.5	0.02	Clear	None
AE-101R-4	9/10/2021	18.0	6.16	385	2.21	-55.9	0.02	Clear	none
AE-101R-5	9/10/2021	17.0	6.40	555	0.88	-42.8	0.02	Clear	none
AE-101R-6	9/10/2021	15.8	6.99	596	0.59	-115.8	0.02	Clear	None
AE-102S	9/15/2021	19.4	6.19	1885	0.08	175.9	0.85	Clear	None
AE-102M	9/15/2021	17.6	6.06	2414	0.08	213.0	0.21	Clear	None
AE-102D	9/15/2021	18.8	6.55	2323	0.15	99.3	2.78	Clear	None
AE-102RR-1	9/7/2021	14.4	8.72	279.6	0.51	-113.1	10.6	Clear	None
AE-102RR-2	9/7/2021	14.4	7.65	371.6	0.30	-68.2	0.68	Clear	None
AE-102RR-3	9/7/2021	14.3	7.27	314.4	0.41	-73.2	0.02	Clear	None
AE-102RR-4	9/7/2021	14.2	7.21	344.0	0.38	-38.9	0.02	Clear	None
AE-102RR-5	9/7/2021	14.3	7.11	443.0	0.37	-36.6	0.02	Clear	None
AE-102RR-6	9/7/2021	14.4	6.89	745	0.29	-95.7	0.30	Clear	None
AE-103S	9/16/2021	16.6	6.37	202.3	0.20	-120.9	5.00	Clear	None
AE-103M	9/16/2021	17.3	6.39	241.7	0.19	-109.7	3.52	Clear	None
AE-103D	9/14/2021	16.2	5.64	2489	0.36	132.0	0.02	Clear	None
AE-103R-1	9/9/2021	13.9	5.96	2170	0.80	114.8	0.02	Clear	Organic decay
AE-103R-2	9/9/2021	14.2	6.01	1575	0.51	109.8	0.02	Clear	Organic decay
AE-103R-3	9/9/2021	14.2	6.38	955	0.59	93.1	0.02	Clear	Organic decay
AE-103R-4	9/9/2021	14.1	6.59	866	0.73	54.1	0.02	Clear	Organic decay
AE-103R-5	9/9/2021	14.2	6.54	1084	2.76	47.6	0.02	Clear	Organic decay
AE-103R-6	9/9/2021	14.3	6.78	785	0.71	-19.9	0.02	Clear	Organic decay
AE-103R-7	9/9/2021	14.3	6.99	692	0.60	-33.9	0.02	Clear	Organic decay
AE-104S	9/22/2021	17.4	6.07	345	0.14	25.6	0.02	Clear	None
AE-104M	9/22/2021	17.8	6.09	282	0.22	88.8	0.02	Clear	None
AE-104D	9/22/2021	18.2	5.44	2942	0.79	157.7	0.02	Clear	None
AE-104R-1	9/2/2021	13.5	8.52	981	0.31	-183.7	0.05	Clear	Organic decay
AE-104R-2	9/2/2021	13.8	8.27	826	0.19	-170.3	0.02	Clear	Organic decay
AE-104R-3	9/2/2021	13.6	8.15	700	0.18	-133.3	0.02	Clear	Organic decay
AE-104R-4	9/2/2021	13.5	8.03	890	0.19	-138.2	0.02	Clear	Organic decay
AE-104R-5	9/2/2021	13.5	7.97	782	0.19	-161.2	0.02	Clear	Organic decay
AE-104R-6	9/2/2021	13.5	7.94	733	0.20	-159.2	0.02	Clear	Organic decay
AE-108R-1	9/9/2021	15.2	9.65	171	0.09	-43.0	22.4	Clear	None
AE-108R-2	9/9/2021	14.7	6.73	234	0.06	-24.7	0.02	Clear	None
AE-108R-3	9/9/2021	14.9	5.78	241	0.13	66.2	0.02	Clear	None
AE-108R-4	9/9/2021	14.9	6.57	578	0.06	-12.4	0.02	Clear	None
AE-108R-5	9/9/2021	14.6	6.68	635	0.06	-53.4	0.02	Clear	None
AE-109D	9/7/2021	18.3	6.33	1250	0.14	82.7	0.43	Clear	None
AE-109R-1	9/2/2021	16.9	7.70	1181	1.50	-28.9	1.31	Clear	None
AE-109R-2	9/2/2021	14.8	7.66	1178	0.19	-74.7	0.82	Clear	None
AE-109R-3	9/2/2021	14.7	7.62	518	0.60	-109.5	0.31	Clear	None
AE-109R-4	9/2/2021	15.6	7.91	290	0.40	-153.8	0.02	Clear	None
AE-109R-5	9/2/2021	14.9	8.04	239	0.33	-171.8	0.02	Clear	None
AE-109R-6	9/2/2021	17.1	7.84	352	0.31	-160.0	0.02	Clear	None
AE-109R-7	9/2/2021	14.7	7.89	258	0.29	-164.6	0.02	Clear	None
AE-109R-8	9/2/2021	14.0	7.92	159	0.27	-165.4	0.02	Clear	None

Table 2-3
September 2021 Groundwater Field Parameter Data Summary

Well ID	Date	Temperature (degrees C)	pH (SU)	Specific Conductivity (uS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Visual	Odor
Transect A (continued)									
AE-110R-1	9/2/2021	13.8	9.10	1537	0.40	-205.5	38.5	Dark gray	None
AE-110R-2	9/2/2021	13.8	8.70	734	0.55	-172.1	0.02	Clear	None
AE-110R-3	9/2/2021	13.8	7.80	642	0.47	-138.1	0.02	Clear	None
AE-110R-4	9/2/2021	14.1	7.46	537	0.49	-127.4	0.02	Clear	none
AE-110R-5	9/2/2021	14.3	7.02	821	0.39	-123.2	0.02	Clear	none
AE-110R-6	9/2/2021	13.8	6.91	1085	0.37	-105.1	0.02	Clear	None
AE-110R-7	9/2/2021	13.6	6.77	1148	0.33	-99.4	0.02	Clear	None
EMW-10D	9/8/2021	17.1	5.10	2534	0.25	228.9	5.88	Clear	None
EMW-10R	9/8/2021	16.9	9.84	959	2.11	106.5	3.11	Clear	None
EMW-11D	9/8/2021	18.7	6.12	1545	0.27	-60.1	0.91	Clear	None
EMW-11R1	9/8/2021	16.8	7.11	781	0.21	-107.6	0.02	Clear	None
EMW-11R2	9/8/2021	18.1	7.01	886	0.18	-91.0	0.02	Clear	None
EMW-11R3	9/8/2021	17.2	7.59	728	0.21	-116.7	0.02	Clear	None
Transect B									
AE-105S	9/17/2021	12.0	6.11	1347	0.13	-11.1	0.02	Clear	None
AE-105M	9/17/2021	12.0	6.46	534	0.19	39.2	0.02	Clear	None
AE-105D	9/17/2021	12.4	7.03	1001	0.14	-115.0	0.02	Clear	None
AE-105R-1	9/13/2021	11.2	7.39	383	0.33	42.7	0.02	Clear	None
AE-105R-2	9/13/2021	11.8	7.17	756	0.13	8.6	0.02	Clear	None
AE-105R-3	9/13/2021	12.3	7.28	756	0.15	-17.2	0.02	Clear	None
AE-105R-4	9/13/2021	13.6	7.37	755	0.20	-44.9	0.02	Clear	None
AE-105R-5	9/13/2021	13.3	7.41	754	0.20	-58.2	0.02	Clear	None
AE-106S	9/13/2021	12.0	5.95	2571	0.41	166.6	0.02	Clear	none
AE-106M	9/13/2021	13.0	5.88	2935	0.27	150.7	3.69	Clear	None
AE-106D	9/13/2021	12.3	6.12	2579	0.32	172.8	1.22	Light particles	None
AE-106R-1	9/13/2021	11.5	7.26	661	0.41	-23.8	0.02	Clear	Organic decay
AE-106R-2	9/13/2021	11.4	7.40	511	0.48	-13.2	0.02	Clear	Organic decay
AE-106R-3	9/13/2021	11.1	7.49	377.9	0.37	-19.6	0.02	Clear	Organic decay
AE-106R-4	9/13/2021	11.4	7.57	310.5	0.40	-39.9	0.02	Clear	Organic decay
AE-106R-5	9/13/2021	11.3	7.94	163.1	0.43	-37.2	0.02	Clear	Organic decay
AE-111R-1	9/7/2021	14.0	8.43	1311	0.91	-10.0	5.17	Clear	Organic decay
AE-111R-2	9/7/2021	13.7	7.88	1327	0.45	-38.5	0.02	Clear	Organic decay
AE-111R-3	9/7/2021	13.7	7.84	1051	0.37	-63.1	0.02	Clear	Organic decay
AE-111R-4	9/7/2021	14.4	8.07	415.7	0.34	-156.0	0.02	Clear	Organic decay
AE-111R-5	9/7/2021	14.4	8.05	397.2	0.22	-155.0	0.02	Clear	Organic decay
AE-111R-6	9/7/2021	13.6	8.02	418	0.19	-126.6	0.02	Clear	Organic decay
AE-111R-7	9/7/2021	14.8	8.00	359.7	0.25	-151.9	0.02	Clear	Organic decay
TRC-301R4	9/13/2021	13.0	7.03	645	0.39	-174.3	0.02	Clear	None
TRC-301R3	9/13/2021	11.7	7.21	593	0.58	-141.1	0.02	Clear	None
TRC-301R2	9/13/2021	13.0	7.23	547	0.64	-129.3	0.02	Clear	None
TRC-301R1	9/13/2021	11.8	6.93	588	0.55	-101.9	4.06	Clear	None
Transect B 1/2									
AE-112D	9/10/2021	16.6	5.08	1647	2.26	198.9	0.02	Clear	None
AE-112R-1	9/16/2021	13.2	8.57	1110	1.35	-161.5	0.02	Clear	Organic decay
AE-112R-2	9/16/2021	13.0	7.91	908	0.71	-152.6	0.02	Clear	Organic decay
AE-112R-3	9/16/2021	13.0	7.68	951	0.63	-140.0	0.02	Clear	Organic decay
AE-112R-4	9/16/2021	13.2	7.27	940	0.36	-131.2	0.02	Clear	Organic decay
AE-112R-5	9/16/2021	13.2	7.17	958	0.44	-111.2	0.02	Clear	Organic decay
AE-112R-6	9/16/2021	13.0	7.11	914	2.06	-97.5	0.02	Clear	Organic decay
AE-112R-7	9/16/2021	12.9	7.06	956	0.39	-110.2	0.02	Clear	Organic decay

Table 2-3
September 2021 Groundwater Field Parameter Data Summary

Well ID	Date	Temperature (degrees C)	pH (SU)	Specific Conductivity (uS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Visual	Odor
Transect C									
STM-3S	9/22/2021	21.4	5.97	334.4	2.91	96.8	6.84	Clear	None
STM-3D	9/22/2021	19.5	6.75	527	0.29	-101.7	18.8	Black particles	None
STM-3R	9/22/2021	18.7	7.07	1053	0.37	-110.2	2.35	Clear	None
STM-8S	9/8/2021	20.6	5.92	279	0.50	39.4	2.00	Clear	None
STM-8M	9/8/2021	14.2	5.95	915	0.09	-24.4	0.02	Clear	None
STM-8D	9/8/2021	16.1	5.94	929	0.11	32.4	NM	Clear	None
STM-8R	9/8/2021	13.9	7.09	524	0.13	-117.6	0.02	Clear	None
STM-8R1	9/16/2021	14.2	7.67	317.8	3.89	93.0	13.0	Clear	None
Wetlands/Wooded Area									
GZA-6	9/8/2021	18.8	6.09	185.6	0.15	19.1	0.02	Clear	None
GZA-10	9/8/2021	16.8	5.37	1652	0.24	141.9	5.04	Clear	None
GZA-14	9/21/2021	12.5	5.79	1375	0.29	26.5	0.02	Clear	None
GZA-14A	9/21/2021	13.8	5.52	605	0.14	45.0	0.51	Clear	None
MW-4	9/20/2021	10.7	6.55	994	0.17	-72.9	6.71	Iron oxide floc	None
MW-4A	9/20/2021	11.1	6.35	1259	0.18	-71.0	2.65	Clear	None
MW-5	9/21/2021	11.7	5.83	1131	0.28	-71.9	4.20	Clear	None
MW-7	9/21/2021	14.5	5.66	2118	0.12	19.5	1.65	Clear	None
PS-1S	9/17/2021	14.0	6.47	519	0.35	-120.9	2.66	Clear	None
PS-1M	9/17/2021	12.2	6.14	1788	0.31	-59.9	3.30	Clear	None
PS-1D	9/17/2021	13.6	6.64	1062	0.30	-117.5	7.23	Clear	None
PS-2S	9/17/2021	11.6	6.55	578	1.98	-77.8	85.4	Clear	None
PS-2M	9/17/2021	14.8	8.27	986	4.40	-50.9	3.28	Clear	None
PS-2D	9/17/2021	11.8	6.48	913	1.09	-49.6	24.3	Clear	None
PS-3	9/20/2021	14.3	6.03	429.8	0.37	-35.2	3.12	Clear	None
PS-4	9/20/2021	14.5	5.49	1795	0.33	-18.1	67.9	Light brown	None
PS-5S	9/20/2021	14.6	6.20	534	1.16	-44.2	54.2	Light gray	None
PS-5D	9/21/2021	14.6	7.31	249	3.02	-63.9	61.4	Dark gray	None
PS-8S	9/21/2021	13.9	6.31	350	0.15	57.8	4.50	Clear	None
PS-8M	9/21/2021	12.8	6.51	286	0.11	-29.2	3.50	Clear	None
PS-8D	9/21/2021	12.4	6.99	320	0.19	-47.7	9.00	Clear	None

Notes:

Summary presents the final stabilized reading at each well just prior to sampling.

C - Celsius
uS/cm - microsiemens per centimeter
mg/l - milligrams per liter
SU - standard units
mV - millivolts
NTU - nephelometric turbidity units
NM - not measured

Table 2-4
Summary of LNAPL Observations and Removal

	PZ-2S				CW-1				CW-2				TRC-101				AE-3				AE-4				GZA-102S			
Date	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)
4/15/1994	(1)	(1)	0.85	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
6/20/1994	(1)	(1)	0.22	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
12/14/1994	(1)	(1)	0.39	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
6/14/1995	(1)	(1)	0	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
12/19/1995	(1)	(1)	0.25	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
6/10/1996	(1)	(1)	0.21	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0.1	NR
12/9/1996	(1)	(1)	0.83	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
6/30/1997	(1)	(1)	0.17	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
12/29/1997	(1)	(1)	0	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
9/11/1998	(1)	(1)	0.15	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
12/23/1998	6.8	5.81	0.99	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
6/23/1999	6.95	6.84	0.11	(2)	(3)				(3)				(3)				(3)				(3)				NR	NR	0	NR
12/6/1999	7.5	6.2	1.3	0.2	(3)				(3)				(3)				(3)				(3)				6.52	NA	NA	0
12/20/1999	7.65	6.15	1.5	0.26	(3)				(3)				(3)				(3)				(3)				(9)			
12/29/1999	6.72	6.12	0.6	0.13	(3)				(3)				(3)				(3)				(3)				(9)			
1/4/2000	6.75	6.22	0.53	0.13	(3)				(3)				(3)				(3)				(3)				(9)			
1/10/2000	6.61	5.98	0.63	0.13	(3)				(3)				(3)				(3)				(3)				(9)			
1/18/00(4)	6.01	5.95	0.06	0.13	(3)				(3)				(3)				(3)				(3)				(9)			
1/25/2000	6.74	6.14	0.6	0.13	(3)				(3)				(3)				(3)				(3)				(9)			
5/8/00*	5.5	5.31	0.19	0.01	(3)				(3)				(3)				(3)				(3)				(9)			
6/9/2000	5.65	5.45	0.2	0.01	(3)				(3)				(3)				(3)				(3)				(9)			
7/7/2000	6.95	6.45	0.5	0.02	(3)				(3)				(3)				(3)				(3)				6.50	NA	NA	0
8/2/2000	6.72	5.82	0.9	0.04	(3)				(3)				(3)				(3)				(3)				(9)			
9/12/2000	6.05	5.95	0.1	0.01	(3)				(3)				(3)				(3)				(3)				(9)			
10/9/2000	7.1	6.6	0.5	0.03	(3)				(3)				(3)				(3)				(3)				(9)			
11/8/2000	6.7	6.5	0.2	0.01	NM				NM				(3)				(3)				(3)				(9)			
12/5/00(5)	5.29	NA	0	0	NM				NM				NM				(3)				(3)				(9)			
12/7/2000	6.08(6)	NA	0	0	4.50(6)	NA	0	0.00	4.29(6)	NA	0	0.00	NM				(3)				(3)				(9)			
1/16/2001	6.53(6)	NA	0	0	NM				NM				NM				(3)				(3)				(9)			
1/19/2001	6.33(6)	NA	0	0	4.62	NA	0	0.00	4.4	NA	0	0.00	NM				(3)				(3)				(9)			
2/15/2001	5.5	NA	0	0	3.99(6)	NA	0	0.00	3.79(6)	NA	0	0.00	NM				(3)				(3)				(9)			
3/9/2001	5.65(6)	NA	0	0	4.15(6)	NA	0	0.00	3.93(6)	NA	0	0.00	NM				(3)				(3)				(9)			
4/01	5.45	NA	0	0	3.98(6)	NA	0	0.00	3.79(6)	NA	0	0.00	NM				(3)				(3)				(9)			
5/24/2001	6.25	NA	0	0	4.53(6)	NA	0	0.00	4.2(6)	NA	0	0.00	NM				(3)				(3)				(9)			
8/6/2001	6.1	NA	0	0	3.36	3.35	0.01	0.00	4.56	4.55	0.01	0.00	NM				(3)				(3)				(9)			
10/4/2001	6.85	NA	0	0	5.15(6)	NA	0	0.00	4.94	4.93	0.01	0.00	NM				(3)				(3)				(9)			
11/1/2001	7.05	7.04	0.01	0	5.2	NA	0	0.00	5.2	NA	0	0.00	NM				(3)				(3)				(9)			
11/29/2001	7.22	NA	0	0	6.4	NA	0	0.00	6.32	NA	0	0.00	NM				(3)				(3)				(9)			
12/19/2001	5.59	5.14	0.45	0	4.69	NA	0	0.00	4.48	NA	0	0.00	NM				(3)				(3)				(9)			
1/9/2002	NA	NA	NA	0.26	NA	NA	0	0.00	NA	NA	0	0.00	NM				(3)				(3)				(9)			
1/29/2002	6.25	6.1	0.15	0	4.6	NA	0	0.00	4.46	NA	0	0.00	NM				(3)				(3)				(9)			
2/18/2002	LNAPL removed via vacuum extraction at PZ-2S, CW-1, and CW-2.												NM				(3)				(3)				(9)			
2/21/2002	Tank Farm System is turned off. Booms are removed from CW-1 and CW-2.												NM				(3)				(3)				(9)			
2/21/2002	6.1	NA	0	0	4.44	NA	0	0.00	4.2	NA	0	0.00	NM				(3)				(3)				(9)			
3/21/2002	5.93	NA	0	0	4.26	NA	0	0.00	4.08	NA	0	0.00	NM				(3)				(3)				(9)			
4/30/2002	5.67	NA	0	0	4.15	NA	0	0.00	3.91	NA	0	0.00	NM				(3)				(3)				(9)			
5/24/2002	5.4	NA	0	0	4.07	NA	0	0.00	3.82	NA	0	0.00	NM				(3)				(3)				(9)			
6/27/2002		NA	0	0	4.61	NA	0	0.00	4.38	NA	0	0.00	NM				(3)				(3)				(9)			
Monitoring Frequency Increased to Weekly																	(3)				(3)				(9)			
7/30/2002	6.60	NA	0	0	4.97(6)	4.91	0.06	0	4.74(6)	4.68	0.06	0	NM	NM	NA	0	(3)				(3)				(9)			
8/6/2002	6.76	NA	0	0	5.13(6)	5.06	0.07	0	4.93(6)	4.84	0.09	0	6.58	6.42	0.16	0	(3)				(3)				(9)			
8/9/2002	LNAPL removed via vacuum extraction at PZ-2S, CW-1, CW-2, and TRC-101.																(3)				(3)				(9)			
8/23/2002	NA	NA	0	0	NA	NA	0.003	0.05	NA	NA	0.003	0.025	NA	NA	0.001	0	(3)				(3)				(9)			
8/29/2002	7.57	7.18	0.39	0.13	5.65(6)	5.56	0.09	0.13	5.44	5.34	0.10	0.13	6.97	6.96	0.01	0	(3)				(3)				(9)			
9/4/2002	LNAPL removed via vacuum extraction at PZ-2S, CW-1, CW-2, and TRC-101.																(3)				(3)				(9)			
9/4/2002	6.95	6.71	0.24	0	5.15(6)	5.10	0.05	0.00	4.92	4.88	0.04	0	6.49	NA	0	0	(3)				(3)				(9)			

Notes:

LNAPL gauging results above from 1994 through 2011 collected by TRC or others. Data collection by AECOM started in 2012.
Bgs – Below ground surface.
NA – Not Applicable.
NM – Not Measured.
* LNAPL gauging at monitoring well PZ-2S was conducted on a semi-annual basis from April 1994 through May 2000. TRC then increased gauging frequency to monthly. MA DEP then requested that monthly LNAPL gauging continue at PZ-2S, CW-1, and CW-2 as part of the requirements of the Phase V O&M program, beginning December 2000.
During roadbox replacement on September 29, Maher Services cut down the top of PVC casing at one well, AE03, to accommodate the locking expansion plug within the roadbox. The new AE03 top of casing elevation post September 29, 2021 is 82.23 feet. The top of casing elevation up to September 29, 2021 was 82.41 feet.

(1) Not documented by Emcon.
(2) No recoverable LNAPL present.
(3) Well not installed.
(4) Water level meter may have been unreliable due to low temperature.
(5) Four-inch diameter well installed on November 30, 2000 to replace existing PZ-2S 0.5-inch diameter well.
(6) Noted a sheen on water surface.
(7) Product was detected with interface probe but not a measurable amount (product thickness < 0.01 ft)
(8) It is not understood why in November and December of 2011 that 3 gallons were indicated as removed from wells PZ-2S and TRC-101R when no LNAPL was detected. These 3 gallons are not included in approximate total LNAPL volume removed from these wells.

Table 2-4
Summary of LNAPL Observations and Removal

	PZ-2S				CW-1				CW-2				TRC-101				AE-3				AE-4				GZA-102S			
Date	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)
9/12/2002	7.20	NA	0	0	5.52[6]	NA	0	0	5.31	NA	0	0	6.92	NA	0	0	[3]				[3]				[9]			
9/18/2002	7.31	7.18	0.13	0.11	6.54[6]	6.45	0.09	0.04	6.37	6.25	0.12	0.05	6.87	NA	0	0	[3]				[3]				[9]			
9/25/2002	6.85[6]	6.85	0	0	5.28[6]	5.19	0.09	1.50	5.03	4.98	0.05	0.13	6.60	NA	0	0	[3]				[3]				[9]			
10/4/2002	6.88	6.85	0.03	0	5.28[6]	5.20	0.08	0.00	5.04	4.98	0.06	0.00	6.60	NA	0	0	[3]				[3]				[9]			
10/11/2002	7.07	7.04	0.03	0	5.44[6]	5.34	0.10	0.00	5.21	5.12	0.09	0.00	6.75	NA	0	0	[3]				[3]				[9]			
10/18/2002	6.28	6.23	0.05	0	4.82[6]	4.77	0.05	0.00	4.57	4.56	0.01	0.00	6.17	NA	0	0	[3]				[3]				[9]			
10/24/2002	6.48	NA	0	0	4.88[6]	NA	0	0	4.65[6]	NA	0	0	6.27	NA	0	0	[3]				[3]				[9]			
11/8/2002	6.13	6.10	0.03	0	4.59[6]	4.56	0.03	0	4.33	4.32	0.01	0	5.95	NA	0	0	[3]				[3]				[9]			
11/15/2002	5.88	NA	0	0	4.39[6]	NA	0	0	4.17	NA	0	0	5.80	NA	0	0	[3]				[3]				[9]			
11/20/2002	5.09	5.07	0.02	0.01	4.00[6]	NA	0	0	3.78[6]	NA	0	0	5.41	NA	0	0	[3]				[3]				[9]			
11/27/2002	5.45	NA	0	0	4.11[6]	NA	0	0	3.95(6)	NA	0	0	5.68	NA	0	0	[3]				[3]				[9]			
12/6/2002	5.91	NA	0	0	4.42[6]	4.42[7]	0	0	4.22(6)	NA	0	0	5.87	NA	0	0	[3]				[3]				[9]			
12/13/2002	5.66	NA	0	0	4.25[6]	NA	0	0	4.02[6]	4.02[7]	0	0	5.65	NA	0	0	[3]				[3]				[9]			
12/20/2002	5.19	NA	0	0	4.00[6]	NA	0	0	3.79[6]	NA	0	0	5.41	NA	0	0	[3]				[3]				[9]			
12/27/2002	5.12	NA	0	0	NM	NM	NM	0	NM	NM	NM	0	NM	NM	NM	0	[3]				[3]				[9]			
12/30/2002	5.30	NA	0	0	4.09[6]	NA	0	0	3.98[6]	NA	0	0	5.51	NA	0	0	[3]				[3]				[9]			
1/10/2003	5.35	NA	0	0	4.13[6]	NA	0	0	3.90[6]	NA	0	0	5.57	NA	0	0	[3]				[3]				[9]			
1/17/2003	5.67	NA	0	0	4.31[6]	NA	0	0	4.09[6]	4.09[7]	0	0	5.74	NA	0	0	[3]				[3]				[9]			
1/21/2003	5.86	NA	0	0	4.42[6]	NA	0	0	4.20[6]	4.20[7]	0	0	NA	NA	NA	NA	[3]				[3]				[9]			
1/30/2003	6.25	NA	0	0	4.65[6]	NA	0	0	4.43[6]	4.44	0.01	0	6.05	NA	0	0	[3]				[3]				[9]			
2/7/2003	4.94	NA	0	0	4.42	NA	0	0	NM	NM	NM	0	5.81	NA	0	0	[3]				[3]				[9]			
Monitoring Frequency Decreased to Monthly																	[3]				[3]				NM			
3/18/2003	5.04	NA	0	0	3.73[6]	NA	0	0	3.51[6]	NA	0	0	5.20	NA	0	0	[3]				[3]				NM			
4/21/2003	5.28	NA	0	0	3.92	NA	0	0	3.80	3.66	0.14	0	5.35	NA	0	0	[3]				[3]				NM			
4/25/2003	NM	NM	0	0	4.01	NA	0	0	3.90	3.76	0.14	0.5	NM	NM	0	0	[3]				[3]				NM			
4/30/2003	NM	NM	0	0	3.95	NA	0	0	3.85	3.72	0.13	0	NM	NM	0	0	[3]				[3]				NM			
4/30/2003	LNAPL removed via vacuum extraction at CW-1, and CW-2.																[3]				[3]				NM			
5/7/2003	NM	NM	0	0	4.25	NA	0	0	4.07	4.01	0.06	0	NM	NM	0	0	[3]				[3]				NM			
5/16/2003	NM	NM	0	0	4.36	NA	0	0	4.20	4.14	0.06	0	NM	NM	0	0	[3]				[3]				NM			
5/22/2003	6.14	NA	0	0	4.52	NA	0	0	4.37	4.30	0.07	0	5.95	NA	0	0	[3]				[3]				NM			
6/30/2003	5.95	NA	0	0	4.45	4.43	0.02	0	4.25	4.18	0.07	0	5.85	NA	0	0	[3]				[3]				NM			
7/31/2003	6.01	NA	0	0	4.53	4.52	0.01	0	4.25	NA	sheen	0	5.9	NA	0	0	[3]				[3]				NM			
8/29/2003	6.76	6.75	0.01	0	4.89	4.88	0.01	0	5.41	5.40	0.01	0	6.5	NA	0	0	[3]				[3]				NM			
9/29/2003	6.03	NA	sheen	0	4.61	4.6	0.01	0	5.38	5.37	0.01	0	6.35	NA	0	0	[3]				[3]				NM			
10/24/2003	6.11	NA	sheen	0	4.75	4.74	0.01	0	5.7	NA	sheen	0	6.48	NA	0	0	[3]				[3]				NM			
11/18/2003	5.98	NA	sheen	0	4.46	4.44	0.02	0	4.62	4.61	0.01	0	6.28	NA	0	0	[3]				[3]				NM			
12/23/2003	5.63	NA	sheen	0	4.31	4.30	0.01	0	4.55	4.54	0.01	0	6.11	NA	0	0	[3]				[3]				NM			
1/26/2004	5.72	NA	sheen	0	4.47	4.46	0.01	0	4.61	4.6	0.01	0	6.23	NA	0	0	[3]				[3]				NM			
2/25/2004	5.41	NA	sheen	0	3.98	3.99	0.01	0	4.13	4.13	sheen	0	6.01	NA	0	0	[3]				[3]				NM			
3/24/2004	5.48	NA	sheen	0	4.06	4.04	0.02	0	4.25	4.24	0.01	0	5.98	NA	0	0	[3]				[3]				NM			
4/26/2004	4.71	NA	sheen	0	3.21	NA	sheen	0	3.98	NA	sheen	0	4.01	NA	0	0	[3]				[3]				NM			
5/27/2004	5.11	NA	sheen	0	3.45	3.44	0.01	0	4.11	NA	sheen	0	4.35	NA	0	0	[3]				[3]				NM			
6/24/2004	5.89	NA	sheen	0	4.37	NA	sheen	0	4.21	4.2	0.01	0	5.79	NA	0	0	[3]				[3]				NM			
7/23/2004	5.91	NA	sheen	0	4.41	4.40	0.01	0	4.25	4.24	0.01	0	5.83	NA	0	0	[3]				[3]				NM			
8/27/2004	5.78	NA	sheen	0	4.37	4.36	0.01	0	4.19	4.18	0.01	0	5.75	NA	0	0	[3]				[3]				NM			
9/23/2004	5.61	NA	sheen	0	4.15	4.13	0.02	0	4.25	4.22	0.03	0	5.71	NA	0	0	[3]				[3]				NM			
10/27/2004	5.67	NA	sheen	0	4.35	4.28	0.07	0	4.51	4.47	0.04	0	5.68	NA	0	0	[3]				[3]				NM			
11/24/2004	5.56	NA	sheen	0	4.31	4.27	0.04	0	4.48	4.45	0.03	0	5.60	NA	0	0	[3]				[3]				NM			
12/22/2004	5.62	NA	sheen	0	4.34	4.29	0.05	0	4.42	NA	sheen	0	5.63	NA	0	0	[3]				[3]				NM			
1/27/2005	5.65	NA	sheen	0	4.40	4.37	0.03	0	4.44	4.43	0.01	0	6.15	NA	0	0	[3]				[3]				NM			
2/28/2005	5.34	NA	sheen	0	4.21	4.20	0.01	0	4.23	4.23	sheen	0	5.89	NA	0	0	[3]				[3]				NM			
3/25/2005	5.51	NA	sheen	0	4.36	4.31	0.05	0	4.38	4.35	0.01	0	6.05	NA	0	0	[3]				[3]				NM			
4/26/2005	5.02	NA		0	3.96	3.90	0.06	3	3.93	3.85	0.08	6	5.41	NA	0	0	[3]				[3]				NM			
4/26/2005	LNAPL removed via peristaltic pump at CW-1, and CW-2.																[3]				[3]				NM			
4/26/2005	Gauging after LNAPL removal:				3.95	3.92	0.03		3.84	3.86	0.02						[3]				[3]				NM			

Notes:

LNAPL gauging results above from 1994 through 2011 collected by TRC or others. Data collection by AECOM started in 2012.
Bgs – Below ground surface.
NA – Not Applicable.
NM – Not Measured.
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(8) It is not understood why in November and December of 2011 that 3 gallons were indicated as removed from wells PZ-2S and TRC-101R when no LNAPL was detected. These 3 gallons are not included in approximate total LNAPL volume removed from these wells.

Table 2-4
Summary of LNAPL Observations and Removal

	PZ-2S				CW-1				CW-2				TRC-101				AE-3				AE-4				GZA-102S			
Date	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)
5/1/2005	Installed 3 TB-400 Soakease Absorbent booms into both CW-1 and CW-2																(3)				(3)				NM			
5/10/2005	5.15	NA		0	4.16	4.05	0.11	2.25	4.10	3.97	0.13	2.25	5.62	NA	0	0	(3)				(3)				NM			
5/10/2005	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
5/24/2005	5.27	NA		0	4.27	4.17	0.10	2.25	4.17	4.05	0.12	2.25	5.75	NA	0	0	(3)				(3)				NM			
5/24/2005	Removed and replaced 3 Soakease Absorbent booms in both CW-1 and CW-2																(3)				(3)				NM			
6/10/2005	5.33	NA		0	4.32	4.21	0.11	2.25	4.26	4.13	0.13	2.25	5.79	NA	0	0	(3)				(3)				NM			
6/10/2005	Removed 3 Soakease Absorbent booms in both CW-1 and CW-2																(3)				(3)				NM			
6/17/2005	5.37	NA		0	4.35	4.25	0.10	0	4.31	4.20	0.11	0	5.82	NA	0	0	(3)				(3)				NM			
7/5/2005	LNAPL removed via peristaltic pump at CW-1 and CW-2																(3)				(3)				NM			
7/5/2005							0.01	10			0.04	3					(3)				(3)				NM			
7/6/2005							0.05	0			0.07	0					(3)				(3)				NM			
7/28/2005	5.81	NA		0	4.41	4.30	0.11	0	4.35	4.23	0.12	0	6.01	NA	0	0	(3)				(3)				NM			
8/24/2005	5.92	NA		0	4.29	4.41	0.12	0	4.39	4.26	0.13	0	5.98	NA	0	0	(3)				(3)				NM			
9/27/2005	5.95	NA		0	4.29	4.39	0.1	0	4.41	4.30	0.11	0	6.04	NA	0	0	(3)				(3)				NM			
10/17/2005	NA	NA		0	3.87	3.94	0.07	10	3.65	3.65	sheen	0	NA	NA	0	0	(3)				(3)				NM			
10/17/2005	LNAPL removed via peristaltic pump at CW-1																(3)				(3)				NM			
1/9/2006	5.36	5.35	0.01	0	4.2	4.15	0.05	2.25	3.96	3.95	0.01	2.25	5.60	NA	NA	0	(3)				(3)				NM			
1/9/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
1/9/2006	Gauging after LNAPL removal:				4.17	4.15	0.02		3.98	3.95	0.03						(3)				(3)				NM			
1/25/2006	5.01	5.01	sheen	0	3.8	3.75	0.05	2.5	3.7	3.55	0.15	2.5	5.24	NA	NA	0	(3)				(3)				NM			
1/25/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
1/25/2006	Gauging after LNAPL removal:				3.81	3.80	0.01		3.6	NA	sheen						(3)				(3)				NM			
2/7/2006	3.35	NA	sheen	0	3.30	NA	sheen	1.5	3.52	3.45	0.07	1.5	4.98	NA	NA	0	(3)				(3)				NM			
2/7/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
2/7/2006	Gauging after LNAPL removal:				3.52	3.5	0.02		3.3	NA	sheen						(3)				(3)				NM			
2/21/2006	5.21	NA	sheen	0	4.15	4.12	0.03	0	3.93	3.9	0.03	0	5.53	NA	NA	0	(3)				(3)				NM			
3/8/2006	5.9	NA	sheen	0	4.42	4.4	0.02	0	4.45	4.42	0.03	0	5.85	NA	NA	0	(3)				(3)				NM			
3/21/2006	6	NA	sheen	0	4.53	4.5	0.03	0	4.31	4.3	0.01	0	5.92	NA	NA	0	(3)				(3)				NM			
4/4/2006	6.05	NA	sheen	0	4.90	4.15	0.75	2.25	4.9	4.37	0.53	2.25	5.75	NA	NA	0	(3)				(3)				NM			
4/4/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
4/4/2006	Gauging after LNAPL removal:				4.25	4.15	0.1		4.6	4.37	0.23						(3)				(3)				NM			
4/17/2006	6.15	NA	sheen	0	4.44	4.42	0.02	0	4.47	4.46	0.01	0	6.10	NA	NA	0	(3)				(3)				NM			
5/2/2006	8.15	NA	sheen	0	4.48	4.38	0.1	2.25	4.5	4.3	0.2	2.25	5.92	NA	NA	0	(3)				(3)				NM			
5/2/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
5/2/2006	Gauging after LNAPL removal:				4.49	4.49	sheen		4.5	4.49	0.01						(3)				(3)				NM			
5/23/2006	4.15	4.14	0.01	0	2.95	NA	NA	2.25	3.15	NA	NA	2.25	4.66	NA	NA	0	(3)				(3)				NM			
5/23/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
5/23/2006	Gauging after LNAPL removal:				2.95		sheen		3.15		sheen						(3)				(3)				NM			
6/16/2006	4.23	NA	sheen	0	3.17	NA	NA	0	3.33	NA	sheen	0	4.81	NA	NA	0	(3)				(3)				NM			
6/29/2006	4.75	NA	sheen	0	3.52	NA	sheen	0	3.6	NA	NA	0	5.23	NA	NA	0	(3)				(3)				NM			
7/13/2006	4.92	NA	sheen	0	3.6	NA	sheen	0	3.72	NA	sheen	0	5.22	NA	NA	0	(3)				(3)				NM			
7/31/2006	5.75	NA	sheen	0	4.56	NA	sheen	0	4.45	NA	sheen	0	5.88	NA	NA	0	(3)				(3)				NM			
8/25/2006	6.2	NA	sheen	0	4.4	NA	sheen	0	4.6	NA	sheen	0	5.8	NA	NA	0	(3)				(3)				NM			
9/7/2006	5.77	NA	sheen	0	4.35	NA	sheen	0	4.55	NA	sheen	0	5.95	NA	NA	0	(3)				(3)				NM			
9/20/2006	5.95	NA	sheen	0	4.36	NA	sheen	0	4.48	NA	sheen	0	6.8	NA	NA	0	(3)				(3)				NM			
10/5/2006	6.12	NA	sheen	0	6	NA	sheen	0	5.9	NA	sheen	0	6.11	NA	NA	0	(3)				(3)				NM			
10/18/2006	5.47	NA	sheen	0	4.7	NA	sheen	0	4.6	NA	sheen	0	5.7	NA	NA	0	(3)				(3)				NM			
11/3/2006	5.46	NA	sheen	0	4.43	NA	sheen	0	4.35	NA	sheen	0	5.7	NA	NA	0	(3)				(3)				NM			
11/14/2006	4.5	NA	NA	0	4.85	NA	sheen	0	4.73	NA	sheen	0	5.05	NA	NA	0	(3)				(3)				NM			
11/28/2006	4.92	NA	NA	0	5.42	NA	sheen	0	5.51	NA	sheen	0	5.32	NA	NA	0	(3)				(3)				NM			
12/14/2006	5.65	NA	NA	0	4.10	NA	sheen	0	4.28	NA	sheen	0	5.71	NA	NA	0	(3)				(3)				NM			
12/29/2006	5.46	NA	NA	0	4.32	NA	sheen	0	4.22	NA	NA	0	5.70	NA	NA	0	(3)				(3)				NM			
1/9/2007	5.15	NA	NA	0	3.70	NA	NA	0	3.91	NA	sheen	0	5.37	NA	NA	0	(3)				(3)				NM			
1/25/2007	5.64	NA	NA	0	4.14	NA	sheen	0	4.32	NA	sheen	0	5.75	NA	NA	0	(3)				(3)				NM			
2/13/2007	5.62	NA	NA	0	4.20	NA	sheen	0	4.35	NA	NA	0	NM	NM	NM	0	(3)				(3)				NM			
2/28/2007	6.08	NA	NA	0	4.48	NA	sheen	1	4.65	NA	sheen	1	NM	NM	NM	0	(3)				(3)				NM			

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3/27/2007	4.65	NA	NA	0	3.23	NA	sheen	0	3.52	NA	sheen	0	5.00	NA	NA	0	(3)				(3)				NM			
4/11/2007	5.8	NA	NA	0	4.43	NA	NA	0	4.71	NA	sheen	0	5.87	NA	NA	0	(3)				(3)				NM			
4/24/2007	5.50	NA	NA	0	4.98	NA	sheen	0	4.80	NA	NA	0	5.62	NA	NA	0	(3)				(3)				NM			
5/8/2007	5.20	NA	NA	0	3.75	NA	sheen	0	4.00	NA	NA	0	5.41	NA	NA	0	(3)				(3)				NM			
5/21/2007	3.95	NA	NA	0	3.05	NA	sheen	0	3.30	NA	NA	0	4.78	NA	sheen	0	(3)				(3)				NM			
11/19/2007	6.26	5.85	0.41	0	4.72	4.69	0.03	0	4.47	NA	sheen	0	6.12	NA	NA	0	(3)				(3)				NM			
12/5/2007	6.53	6.14	0.39	0	4.78	4.72	0.06	0	5.52	NA	sheen	0	NM	NM	NM	0	(3)				(3)				NM			
12/19/2007	6.61	NA	NA	0	4.72	4.71	0.01	0	4.46	NA	NA	0	NM	NM	NM	0	(3)				(3)				NM			
1/7/2008	6.00	5.99	0.01	0	4.32	NA	sheen	0	4.11	4.08	0.03	0	5.71	NA	NA	0	(3)				(3)				NM			
1/17/2008	5.68	NA	NA	0	3.99	NA	NA	0	3.88	NA	NA	0	5.43	NA	NA	0	(3)				(3)				NM			
1/31/2008	6.17	NA	sheen	0.35	4.38	NA	sheen	0.35	4.15	4.20	0.05	1.3	5.81	NA	NA	0	(3)				(3)				NM			
2/14/2008	4.32	NA	sheen	0	3.31	NA	sheen	0	3.10	NA	sheen	0	4.79	NA	NA	0	(3)				(3)				NM			
2/27/2008	4.74	NA	sheen	0	3.51	NA	sheen	0	3.32	NA	sheen	1.1	4.95	NA	NA	0	(3)				(3)				NM			
3/11/2008	4.14	NA	sheen	0	3.16	NA	sheen	0	2.95	NA	sheen	0	4.66	NA	NA	0	(3)				(3)				NM			
4/9/2008	5.01	NA	sheen	0	3.87	NA	sheen	0	3.65	NA	sheen[7]	0	5.31	NA	NA	0	(3)				(3)				NM			
5/13/2008	5.63	NA	NA	0	4.30	4.28	0.02	0	4.10	4.04	0.06	0	5.70	NA	NA	0	(3)				(3)				NM			
6/11/2008	6.10	NA	NA	0	4.60	4.59	0.01	0	4.40	4.37	0.03	1.1	6.01	NA	NA	0	(3)				(3)				NM			
7/16/2008	5.89	NA	NA	0	4.63	4.61	0.02	0	4.43	4.38	0.05	1.2	6.03	NA	NA	0	(3)				(3)				NM			
8/28/2008	5.94	NA	NA	0	4.61	4.58	0.03	0	4.40	4.36	0.04	1.4	6.01	NA	NA	0	(3)				(3)				NM			
9/25/2008	5.97	NA	NA	0	4.60	4.58	0.02	1.5	4.39	4.36	0.03	1.1	6.09	NA	NA	0	(3)				(3)				NM			
10/16/2008	5.81	NA	NA	0	4.40	NA	sheen	0.75	4.22	NA	sheen	0.75	5.89	NA	NA	0	(3)				(3)				NM			
11/11/2008	5.58	NA	NA	0	4.44	4.43	0.01	0	4.22	4.20	0.02	0	5.85	NA	NA	0	(3)				(3)				NM			
12/4/2008	5.01	NA	NA	0	4.03	NA	sheen	1	3.82	NA	sheen	0.5	5.47	NA	NA	0	(3)				(3)				NM			
1/13/2009	5.21	NA	NA	0	4.04	NA	sheen	0	3.83	NA	sheen	0	5.49	NA	NA	0	(3)				(3)				NM			
2/12/2009	5.23	NA	NA	0	3.98	NA	sheen	0	3.75	NA	sheen	0	5.41	NA	NA	0	(3)				(3)				NM			
3/19/2009	4.96	NA	NA	0	3.74	NA	sheen	0	3.55	NA	sheen	0	5.21	NA	NA	0	(3)				(3)				NM			
4/16/2009	5.03	NA	NA	0	3.89	3.87	0.02	0	3.66	NA	NA	0	5.32	NA	NA	0	(3)				(3)				NM			
5/4/2009	5.46	5.46[7]	0	0	4.12	4.10	0.02	0	3.91	3.90	0.01	0	5.54	NA	NA	0	(3)				(3)				NM			
6/25/2009	4.92	NA	sheen	0	3.93	3.92	0.01	0	3.74	3.72	0.02	0	5.36	NA	NA	0	(3)				(3)				NM			
7/14/2009	5.16	NA	NA	0	4.14	4.12	0.02	0	3.93	3.91	0.02	0	5.56	NA	NA	0	(3)				(3)				NM			
8/20/2009	6.03	NA	NA	0	4.70	4.65	0.05	0	4.46	4.42	0.04	0	6.05	NA	NA	0	(3)				(3)				NM			
9/25/2009	6.24	NA	NA	0	4.89	4.84	0.05	1.5	4.68	4.63	0.05	1.1	6.27	NA	NA	0	(3)				(3)				NM			
10/30/2009	5.02	NA	NA	0	4.09	4.08	0.01	1.5	3.88	3.87	0.01	1.5	5.51	NA	NA	0	(3)				(3)				NM			
11/13/2009	5.85	NA	NA	0	4.49	4.48	0.01	0	4.28	4.27	<0.01	0	5.91	NA	NA	0	(3)				(3)				NM			
12/2/2009	5.18	NA	NA	0	4.11	NA	sheen	0	3.90	NA	sheen	0	5.53	NA	NA	0	(3)				(3)				NM			
1/29/2010	4.67	NA	NA	0	3.68	3.68[7]	0	0	3.47	NA	sheen	0	5.13	NA	NA	0	(3)				(3)				NM			
2/22/2010	5.53	NA	NA	0	4.17	NA	sheen	0	3.98	NA	sheen	0	5.58	NA	NA	0	(3)				(3)				NM			
3/24/2010	3.24	NA	sheen	0	2.54	2.53	0.01	0	2.33	2.32	0.01	0	3.90	NA	NA	0	(3)				(3)				NM			
4/5/2010	3.72	NA	NA	0	2.82	2.82[7]	0	0	2.63	2.62	0.01	0	4.27	NA	NA	0	(3)				(3)				NM			
5/12/2010	5.50	NA	NA	0	4.17	4.16	0.01	0	3.96	NA	sheen	0	5.57	NA	NA	0	(3)				(3)				NM			
6/4/2010	5.93	NA	NA	0	4.49	4.48	0.01	0	4.23	NA	sheen	0	5.90	NA	NA	0	(3)				(3)				NM			
7/8/2010	6.53	NA	NA	0	5.09	5.05	0.04	0	4.85	4.84	0.01	0	6.47	NA	NA	0	(3)				(3)				NM			
8/30/2010	6.47	6.46	0.01	0	5.10	5.02	0.08	0	4.84	4.82	0.02	0	6.48	NA	NA	0	(3)				(3)				NM			
9/27/2010	7.20	7.19	0.01	0	5.82	5.69	0.13	1.1	5.55	5.49	0.06	0.75	7.15	NA	NA	0	(3)				(3)				NM			
10/21/2010	5.88	5.87	0.01	0	5.70	5.67	0.03	1.5	5.50	NA	sheen	1.1	6.08	NA	NA	0	(3)				(3)				NM			
11/11/2010	5.18	NA	sheen	0	4.28	NA	NA	1.5	4.10	NA	NA	0	5.70	NA	NA	0	(3)				(3)				NM			
12/18/2010	5.70	NA	NA	0	4.60	4.60[7]	0	0	4.39	4.38	0.01	0	6.05	NA	NA	0	(3)				(3)				NM			
1/26/2011	NA	NA	NA	0	NA	NA	NA	0	NA	NA	NA	0	NA	NA	NA	0	(3)				(3)				NM			
2/7/2011	5.45	NA	NA	0	4.3	NA	NA	0	4.11	NA	NA	0	5.75	NA	NA	0	(3)				(3)				NM			
3/17/2011	4.05	NA	NA	0	3.06	NA	NA	0	2.87	NA	film	0	4.49	NA	NA	0	(3)				(3)				NM			
4/23/2011	4.53	NA	NA	0	3.7	NA	NA	0	3.5	NA	NA	0	5.14	NA	NA	0	(3)				(3)				NM			
5/24/2011	5.27	NA	NA	0	4.08	NA	NA	0	3.87	NA	NA	0	5.38	NA	NA	0	(3)				(3)				NM			
6/28/2011	4.81	NA	NA	0	3.98	NA	NA	0.00	3.77	NA	sheen	0.00	5.41	NA	NA	0	(3)				(3)				NM			
7/21/2011	5.92	NA	NA	0	4.69	4.67	0.02	0.00	4.49	4.47	0.02	0.00	6.11	NA	NA	0	(3)				(3)				NM			
8/15/2011	5.18	NA	NA	0	3.90	NA	sheen	0.00	3.70	NA	NA	0.00	5.14	NA	NA	0	(3)				(3)				NM			
11/28/2011	4.46	NA	NA	1[8]	3.65	NA	NA	0	3.45	NA	NA	0.00	5.08	NA	NA	1[8]	(3)				(3)				NM			
12/22/2011	4.63	NA	NA	2[8]	3.62	NA	NA	0	3.43	NA	sheen	0.00	5.03	NA	NA	2[8]	(3)				(3)				NM			

Notes:

LNAPL gauging results above from 1994 through 2011 collected by TRC or others. Data collection by AECOM started in 2012.
Bgs – Below ground surface.
NA – Not Applicable.
NM – Not Measured.
* LNAPL gauging at monitoring well PZ-2S was conducted on a semi-annual basis from April 1994 through May 2000. TRC then increased gauging frequency to monthly. MA DEP then requested that monthly LNAPL gauging continue at PZ-2S, CW-1, and CW-2 as part of the requirements of the Phase V O&M program, beginning December 2000.
During roadbox replacement on September 29, Maher Services cut down the top of PVC casing at one well, AE03, to accommodate the locking expansion plug within the roadbox. The new AE03 top of casing elevation post September 29, 2021 is 82.23 feet. The top of casing elevation up to September 29, 2021 was 82.41 feet.

(1) Not documented by Emcon.
(2) No recoverable LNAPL present.
(3) Well not installed.
(4) Water level meter may have been unreliable due to low temperature.
(5) Four-inch diameter well installed on November 30, 2000 to replace existing PZ-2S 0.5-inch diameter well.
(6) Noted a sheen on water surface.
(7) Product was detected with interface probe but not a measurable amount (product thickness < 0.01 ft)
(8) It is not understood why in November and December of 2011 that 3 gallons were indicated as removed from wells PZ-2S and TRC-101R when no LNAPL was detected. These 3 gallons are not included in approximate total LNAPL volume removed from these wells.

Table 2-4
Summary of LNAPL Observations and Removal

	PZ-2S				CW-1				CW-2				TRC-101				AE-3				AE-4				GZA-102S			
Date	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)
5/31/2012	5.30	NA	NA	0	4.10	NA	NA	0	3.91	NA	sheen	0.00	5.46	NA	NA	0	(3)				(3)				NM			
11/5/2012	4.90	NA	NA	0	4.10	NA	NA	0	3.82	3.81	0.01	0.00	5.46	NA	NA	0	5.44	NA	NA	0	5.08	NA	NA	0	NM	NM	NA	NA
5/21/2013	5.76	NA	NA	0	4.41	4.40	0.01	0.00	4.19	4.18	0.01	0.00	5.77	NA	NA	0	5.80	NA	NA	0	5.42	NA	NA	0	5.87	NA	NA	0
12/27/2013	5.15	NA	NA	0	4.26	NA	NA	0	4.03	NA	NA	0.00	5.61	NA	NA	0	5.66	NA	NA	0	5.31	NA	NA	0	5.41	NA	NA	0
3/17/2014	4.65	NA	NA	0	3.68	NA	NA	0	3.43	NA	NA	0.00	4.92	NA	NA	0	5.10	NA	NA	0	4.75	NA	NA	0	4.78	NA	NA	0
6/16/2014	5.60	NA	NA	0	4.31	NA	NA	0	4.08	NA	NA	0.00	5.70	NA	NA	0	5.72	NA	NA	0	5.28	NA	NA	0	5.35	NA	NA	0
9/12/2014	6.13	NA	NA	0	4.78	NA	NA	0	4.57	NA	NA	0.00	6.02	NA	NA	0	6.22	NA	NA	0	5.80	NA	NA	0	6.15	NA	NA	0
12/12/2014	3.70	NA	NA	0	2.92	NA	NA	0	2.70	NA	NA	0.00	4.17	NA	NA	0	4.38	NA	NA	0	4.05	NA	NA	0	4.00	NA	NA	0
3/20/2015	4.34	NA	NA	0	3.43	NA	NA	0	3.23	NA	NA	0.00	4.67	NA	NA	0	4.96	NA	NA	0	4.51	NA	NA	0	4.65	NA	NA	0
5/29/2015	6.01	NA	NA	0	4.60	NA	NA	0	4.38	NA	NA	0.00	4.84	NA	NA	0	6.07	NA	NA	0	4.55	NA	NA	0	5.94	NA	NA	0
9/28/2015	6.92	NA	NA	0	5.50	5.47	0.03	0.00	5.30	5.22	0.08	0.75	6.69	NA	NA	0	6.92	NA	NA	0	6.50	NA	NA	0	6.83	NA	NA	0
12/17/2015	5.90	NA	NA	0	4.50	NA	NA	0.00	4.35	4.34	0.01	0.00	5.76	NA	NA	0	6.01	NA	NA	0	5.55	NA	NA	0	5.91	NA	NA	0
3/25/2016	5.21	NA	NA	0	4.02	NA	NA	0.00	3.79	NA	NA	0.00	5.24	NA	NA	0	5.45	NA	NA	0	4.89	NA	NA	0	5.22	NA	NA	0
6/10/2016	5.11	NA	NA	0	4.70	NA	NA	0.00	4.51	4.49	0.02	0.00	5.93	NA	NA	0	6.15	NA	NA	0	4.61	NA	NA	0	6.04	NA	NA	0
9/13/2016	7.81	NA	NA	0	6.45	6.33	0.12	0.75	5.98	NA	NA	0.00	7.62	NA	NA	0	7.79	NA	NA	0	7.39	NA	NA	0	7.66	NA	NA	0
12/30/2016	5.28	NA	NA	0	4.17	4.14	0.03	0.75	3.89	NA	NA	0.00	5.30	NA	NA	0	5.51	NA	NA	0	5.12	NA	NA	0	5.38	NA	NA	0
3/28/2017	4.85	NA	NA	0	3.87	NA	NA	0.00	3.64	NA	NA	0.00	5.10	NA	NA	0	5.30	NA	NA	0	4.78	NA	NA	0	5.05	NA	NA	0
6/13/2017	5.22	NA	NA	0	4.01	NA	NA	0.00	3.79	3.78	0.01	0.00	5.26	NA	NA	0	5.44	NA	NA	0	4.89	NA	NA	0	5.19	NA	NA	0
9/1/2017	6.50	NA	NA	0	5.48	5.45	0.03	0.00	5.25	5.24	0.01	0.00	6.68	NA	NA	0	6.89	NA	NA	0	6.30	NA	NA	0	7.26	NA	NA	0
11/30/2017	5.87	NA	NA	0	4.51	NA	NA	0.56	4.27	NA	NA	0.00	5.73	NA	NA	0	5.96	NA	NA	0	5.55	NA	NA	0	6.32	NA	NA	0
3/7/2018	4.89	NA	NA	0	3.66	NA	NA	0.00	3.42	NA	NA	0.00	4.89	NA	NA	0	4.12	NA	NA	0	4.63	NA	NA	0	5.35	NA	NA	0
6/14/2018	5.89	NA	NA	0	4.56	4.55	0.01 (sheen)	0.00	4.32	4.31	0.01 (sheen)	0.00	5.72	NA	NA	0	6.99	NA	NA	0	5.49	NA	NA	0	6.35	NA	NA	0
9/17/2018	5.66	NA	NA	0	4.33	NA	NA	0.00	4.09	NA	NA	0.00	5.56	NA	NA	0	5.79	NA	NA	0	5.31	NA	NA	0	6.15	NA	NA	0
12/3/2018	4.13	NA	NA	0	2.93	NA	NA	0.00	2.69	NA	NA	0.00	4.23	NA	NA	0	4.36	NA	NA	0	4.02	NA	NA	0	4.52	NA	NA	0
2/25/2019	4.75	NA	NA	0	3.47	NA	NA	0.00	3.23	NA	NA	0.00	4.44	NA	NA	0	4.86	NA	NA	0	4.46	NA	NA	0	5.01	NA	NA	0
6/5/2019	5.54	NA	NA	0	4.12	NA	NA	0.00	3.88	NA	NA	0.00	5.40	NA	NA	0	5.58	NA	NA	0	5.02	NA	NA	0	5.89	NA	NA	0
9/13/2019	6.17	NA	NA	0	4.74	NA	NA	0.00	4.51	NA	NA	0.00	5.98	NA	NA	0	6.19	NA	NA	0	5.71	NA	NA	0	6.57	NA	NA	0
12/4/2019	5.37	NA	NA	0	4.12	NA	NA	0.00	3.89	NA	NA	0.00	5.06	NA	NA	0	5.50	NA	NA	0	5.09	NA	NA	0	5.61	NA	NA	0
2/11/2020	5.24	NA	NA	0	3.83	NA	NA	0.00	3.59	NA	NA	0.00	5.12	NA	NA	0	5.26	NA	NA	0	4.74	NA	NA	0	5.40	NA	NA	0
5/13/2020	5.24	NA	NA	0	3.85	NA	NA	0.00	3.61	NA	NA	0.00	5.06	NA	NA	0	5.28	NA	NA	0	4.67	NA	NA	0	5.54	NA	NA	0
9/8/2020	6.77	NA	NA	0	5.60	5.58	0.02	0.00	5.35	5.35	0.01	0.00	6.82	NA	NA	0	7.02	NA	NA	0	6.60	NA	NA	0	7.36	NA	NA	0
12/7/2020	4.30	NA	NA	0	3.15	NA	NA	0.00	2.93	NA	NA	0.00	4.35	NA	NA	0	4.58	NA	NA	0	4.27	NA	NA	0	4.76	NA	NA	0
2/17/2021	4.85	NA	NA	0	3.81	NA	NA	0.00	3.59	NA	NA	0.00	4.98	NA	NA	0	5.19	NA	NA	0	4.83	NA	NA	0	5.33	NA	NA	0
5/26/2021	5.62	NA	NA	0	4.19	NA	NA	0.00	3.97	NA	NA	0.00	5.48	NA	NA	0	5.66	NA	NA	0	5.04	NA	NA	0	5.95	NA	NA	0
8/31/2021	5.21	NA	NA	0	3.83	NA	NA	0.00	3.60	NA	NA	0.00	5.13	NA	NA	0	5.32	NA	NA	0	4.93	NA	NA	0	5.53	NA	NA	0
12/2/2021	5.53	NA	NA	0	4.06	NA	NA	0.00	3.83	NA	NA	0.00	5.28	NA	NA	0	5.33	NA	NA	0	4.96	NA	NA	0	5.79	NA	NA	0
2/23/2022	4.65	NA	NA	0	3.21	NA	NA	0.00	2.99	NA	NA	0.00	4.39	NA	NA	0	4.46	NA	NA	0	4.14	NA	NA	0	4.33	NA	NA	0
gals removed (approx.):				2.1				58.23				44.24				0				0				0				0

Notes:

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(9) Well not measured, or data has not been located in historical TRC reports.

Table 4-1
Summary of Natural Source Zone Depletion Rates

Well ID	Measurement Year	NSZD Rate (gallons/acre/year)	
		Soil Gas Concentration Gradient	Biogenic Heat
AE-3	2020	590	420
	2021	250	1,800
CW-1	2020	550	2,500
	2021	100	1,600
CW-2	2020	520	NA
	2021	130	NA
GZA-102R	2020	NA	750
	2021	NA	600
GZA-105S/D	2020	540	1,300
	2021	170	1,300
PZ-2S	2020	970	≥ 940
	2021	530	≥ 700
TRC-101	2020	630	NA
	2021	260	NA
TRC-102	2020	NA	2,000
	2021	NA	2,800
TRC-103	2020	NA	1,000
	2021	NA	1,000
Minimum	**100**		
Maximum	**2,800**		
Median	**670**		

≥ only upward heat flux could be estimated from PZ-2S data, providing a lower-bound estimate of the total

Table 5-1
Summary of 2016 - 2021 Groundwater Analytical Results for Arsenic

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
Upgradient	GZA-12	16A-GZA12-061416-1	Normal	6/14/2016	9.5 - 24.5 ft	4.0 U	4.0 U
		17A-GZA12-101017-1	Normal	10/10/2017	9.5 - 24.5 ft	4.0 U	4.0 U
		18A-GZA12-100118-1	Normal	10/1/2018	9.5 - 24.5 ft	4.0 U	4.0 U
		19A-GZA12-092619-1	Normal	9/26/2019	9.5 - 24.5 ft	4.0 U	4.0 U
		20A-GZA12-092420-1	Normal	9/24/2020	9.5 - 24.5 ft	4.0 U	4.0 U
		21A-GZA12-091421-1	Normal	9/14/2021	9.5 - 24.5 ft	4.0 U	4.0 U
Building 1 Tank F	AE23S	16A-AE23S-062716-1	Normal	6/27/2016	10 - 20 ft	4.0 U	4.0 U
		17A-AE23S-100517-1	Normal	10/5/2017	10 - 20 ft	4.0 U	4.0 U
Building 1 Tank F	AE26R-1	16B-AE26R1-062316-1	Normal	6/23/2016	50 - 56 ft	4.0 U	4.0 U
		17A-AE26R1-100417-1	Normal	10/4/2017	50 - 56 ft	4.0 U	4.0 U
		18A-AE26R1-091818-1	Normal	9/18/2018	50 - 56 ft	4.0 U	4.0 U
		19A-AE26R1-092319-1	Normal	9/23/2019	50 - 56 ft	4.0 U	4.0 U
		20A-AE26R1-091420-1	Normal	9/14/2020	50 - 56 ft	**6**	**6**
		21A-AE26R1-090121-1	Normal	9/1/2021	50 - 56 ft	**9**	**7**
Building 1 Tank F	AE26S	18A-AE26S-092518-1	Normal	9/25/2018	25 - 30 ft	4.0 U	4.0 U
		19A-AE26S-092319-1	Normal	9/23/2019	25 - 30 ft	4.0 U	4.0 U
		20A-AE26S-091420-1	Normal	9/14/2020	25 - 30 ft	4.0 U	4.0 U
		21A-AE26S-090321-1	Normal	9/3/2021	25 - 30 ft	4.0 U	4.0 U
Building 1 Tank F	AE28R-2	16B-AE28R2-062316-1	Normal	6/23/2016	75 - 85 ft	4.0 U	4.0 U
		17A-AE28R2-100417-1	Normal	10/4/2017	75 - 85 ft	4.0 U	4.0 U
		18A-AE28R2-091818-1	Normal	9/18/2018	75 - 85 ft	4.0 U	4.0 U
		19A-AE28R2-092319-1	Normal	9/23/2019	75 - 85 ft	4.0 U	4.0 U
		20A-AE28R2-091420-1	Normal	9/14/2020	75 - 85 ft	4.0 U	4.0 U
		21A-AE28R2-090121-1	Normal	9/1/2021	75 - 85 ft	**5**	4.0 U
Building 1 Tank F	AE29R-6	16B-AE29R6-062816-1	Normal	6/28/2016	140 - 146 ft	4.0 U	4.0 U
		17A-AE29R6-101717-1	Normal	10/17/2017	140 - 146 ft	4.0 U	4.0 U
		18A-AE29R6-091818-1	Normal	9/18/2018	140 - 146 ft	4.0 U	4.0 U
		19A-AE29R6-092419-1	Normal	9/24/2019	140 - 146 ft	**4**	4.0 U
		20A-AE29R6-092220-1	Normal	9/22/2020	140 - 146 ft	**6**	4.0 U
		21A-AE29R6-091421-1	Normal	9/14/2021	140 - 146 ft	4.0 U	4.0 U
Building 1 Tank F	GZA-101R	16A-GZA101R-061416-1	Normal	6/14/2016	36.5 - 38 ft	4.0 U	4.0 U
		17A-GZA101R-101017-1	Normal	10/10/2017	36 - 38 ft	4.0 U	**10.6**
		18A-GZA101R-091818-1	Normal	9/18/2018	36.5 - 38 ft	4.0 U	4.0 U
		19A-GZA101R-092619-1	Normal	9/26/2019	36.5 - 38 ft	4.0 U	4.0 U
		20A-GZA101R-092420-1	Normal	9/24/2020	36.5 - 38 ft	4.0 U	4.0 U
		21A-GZA101R-091421-1	Normal	9/14/2021	36.5 - 38 ft	**4**	4.0 U
Downgradient Wetland	GZA-14	16A-GZA14-063016-1	Normal	6/30/2016	39 - 49 ft	**28.0**	**30.8**
		17A-GZA14-102017-1	Normal	10/20/2017	39 - 49 ft	**20.3**	**20.1**
Downgradient Wetland	GZA-14A	16A-GZA14A-061716-1	Normal	6/17/2016	0 - 15 ft	**35.8**	**35.4**
		16A-GZA14A-061716-2	Duplicate	6/17/2016	0 - 15 ft	**35.8**	**34.7**
		17A-GZA14A-102017-1	Normal	10/20/2017	0 - 15 ft	**22.8**	**24.8**
		18A-GZA14A-092818-1	Normal	9/28/2018	0 - 15 ft	**8.6**	**12.30**
		19A-GZA14A-093019-1	Normal	9/30/2019	0 - 15 ft	**32**	**43**
		20A-GZA14A-091720-1	Normal	9/17/2020	0 - 15 ft	**12**	**14**
		21A-GZA14A-092121-1	Normal	9/21/2021	0 - 15 ft	**7**	**8**
		21A-GZA14A-092121-2	Duplicate	9/21/2021	0 - 15 ft	**7**	**9**

Table 5-1
Summary of 2016 - 2021 Groundwater Analytical Results for Arsenic

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
Downgradient Wetland	MW-4	16A-MW4-062416-1	Normal	6/24/2016	18 - 28 ft	4.0 U	**8.1**
		17A-MW4-101817-1	Normal	10/18/2017	18 - 28 ft	4.0 U	4.0 U
		18A-MW4-100418-1	Normal	10/4/2018	18 - 28 ft	4.0 U	4.0 U
		19A-MW4-091919-1	Normal	9/19/2019	18 - 28 ft	4.0 U	4.0 U
		19A-MW4-091919-2	Duplicate	9/19/2019	18 - 28 ft	4.0 U	4.0 U
		20A-MW4-091820-1	Normal	9/18/2020	18 - 28 ft	4.0 U	4.0 U
		20A-MW4-091820-2	Duplicate	9/18/2020	18 - 28 ft	4.0 U	4.0 U
		21A-MW4-092021-1	Normal	9/20/2021	18 - 28 ft	4.0 U	4.0 U
Downgradient Wetland	MW-4A	16A-MW4A-062416-1	Normal	6/24/2016	38 - 48 ft	**7.0**	4.0 U
		17A-MW4A-101817-1	Normal	10/18/2017	38 - 48 ft	**6.8**	**6.8**
		18A-MW4A-100418-1	Normal	10/4/2018	38 - 48 ft	**7.2**	**7.95**
		19A-MW4A-091919-1	Normal	9/19/2019	38 - 48 ft	4.0 U	**11**
		20A-MW4A-091820-1	Normal	9/18/2020	38 - 48 ft	**8**	**9**
		21A-MW4A-092021-1	Normal	9/20/2021	38 - 48 ft	**9**	**11**
Downgradient Wetland	PS-8D	18A-PS8D-100218-1	Normal	10/2/2018	51.8 - 56.8 ft	4.0 U	4.0 U
		19A-PS8D-091719-1	Normal	9/17/2019	51.8 - 56.8 ft	4.0 U	4.0 U
		20A-PS8D-091520-1	Normal	9/15/2020	51.8 - 56.8 ft	4.0 U	4.0 U
		21A-PS8D-092121-1	Normal	9/21/2021	51.8 - 56.8 ft	4.0 U	4.0 U
EPL	AE03	16A-AE03-062816-1	Normal	6/28/2016	3 - 13 ft	**39.5**	**40.4**
		17A-AE03-100917-1	Normal	10/9/2017	3 - 13 ft	**39.3**	**38.8**
		18A-AE03-092418-1	Normal	9/24/2018	3 - 13 ft	**58.0**	**57.15**
		18A-AE03-092418-2	Duplicate	9/24/2018	3 - 13 ft	**57.2**	**59.00**
		19A-AE03-091219-1	Normal	9/12/2019	3 - 13 ft	**57**	**58**
		19A-AE03-091219-2	Duplicate	9/12/2019	3 - 13 ft	**58**	**56**
		20A-AE3-092320-1	Normal	9/23/2020	3 - 13 ft	**44**	**43**
		20A-AE3-092320-2	Duplicate	9/23/2020	3 - 13 ft	**45**	**45**
		21A-AE3-091521-1	Normal	9/15/2021	3 - 13 ft	**34**	**34**
EPL	AE04	16A-AE04-061316-1	Normal	6/13/2016	3 - 13 ft	**7.3**	**8.0**
		17A-AE04-100917-1	Normal	10/9/2017	3 - 13 ft	**11.0**	**11.0**
EPL	GZA-06	18A-GZA6-100118-1	Normal	10/1/2018	8 - 18 ft	**9.1**	**9.10**
		19A-GZA6-092019-1	Normal	9/20/2019	8 - 18 ft	**9**	**11**
		20A-GZA6-092120-1	Normal	9/21/2020	8 - 18 ft	**10**	**9**
		21A-GZA6-090821-1	Normal	9/8/2021	8 - 18 ft	**10**	**9**
EPL	GZA-10	18A-GZA10-100118-1	Normal	10/1/2018	13 - 38 ft	**109**	**122.05**
		19A-GZA10-092619-1	Normal	9/26/2019	13 - 38 ft	**138**	**130**
		20A-GZA10-092120-1	Normal	9/21/2020	13 - 38 ft	**78**	**77**
		21A-GZA10-090821-1	Normal	9/8/2021	13 - 38 ft	**6**	**15**
EPL	GZA-105D	16A-GZA105D-061516-1	Normal	6/15/2016	16 - 26 ft	**99.4**	**102**
		17A-GZA-105D-101917-1	Normal	10/19/2017	16 - 26 ft	**89.0**	**90.6**
EPL	GZA-105S	16A-GZA105S-061516-1	Normal	6/15/2016	4 - 14 ft	**169**	**152**
		17A-GZA105S-100917-1	Normal	10/9/2017	4 - 14 ft	**242**	**242**
		17A-GZA105S-100917-2	Duplicate	10/9/2017	4 - 14 ft	**239**	**234**
		18A-GZA105S-092518-1	Normal	9/25/2018	4 - 14 ft	**238**	**228.05**
		19A-GZA105S-091819-1	Normal	9/18/2019	4 - 14 ft	**168**	**182**
		20A-GZA105S-092420-1	Normal	9/24/2020	4 - 14 ft	**194**	**195**
		21A-GZA105S-091521-1	Normal	9/15/2021	4 - 14 ft	**170**	**156**
EPL	TRC-102	16A-TRC102-062716-1	Normal	6/27/2016	2.25 - 12.25 ft	**30.4**	**33.8**
		17A-TRC102-100217-1	Normal	10/2/2017	2.25 - 12.25 ft	**27.4**	**27.3**
		18A-TRC102-092418-1	Normal	9/24/2018	2.25 - 12.25 ft	**39.6**	**41.75**
		19A-TRC102-092019-1	Normal	9/20/2019	2.25 - 12.25 ft	**50**	**60**
		20A-TRC102-092320-1	Normal	9/23/2020	2.25 - 12.25 ft	**57**	**56**
		21A-TRC102-090721-1	Normal	9/7/2021	2.25 - 12.25 ft	**38**	**43**

Table 5-1
Summary of 2016 - 2021 Groundwater Analytical Results for Arsenic

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
Former Tank Farm	AE100R-5	16A-AE100R5-061516-1	Normal	6/15/2016	88 - 93 ft	4.0 U	4.0 U
		17A-AE100R5-100417-1	Normal	10/4/2017	88.68 - 93.68 ft	4.0 U	4.0 U
		18A-AE100R5-091918-1	Normal	9/19/2018	88 - 93 ft	4.0 U	4.0 U
		19A-AE100R5-092319-1	Normal	9/23/2019	88 - 93 ft	4.0 U	4.0 U
		20A-AE100R5-091020-1	Normal	9/10/2020	88 - 93 ft	4.0 U	4.0 U
		21A-AE100R5-090921-1	Normal	9/9/2021	88 - 93 ft	**5**	4.0 U
Transect A	AE102M	16A-AE102M-061316-1	Normal	6/13/2016	23 - 28 ft	**12.0**	**14.1**
		17A-AE102M-100217-1	Normal	10/2/2017	23 - 28 ft	**9.8**	**9.8**
		18A-AE102M-100118-1	Normal	10/1/2018	23 - 28 ft	**4.6**	**4.35**
		19A-AE102M-092519-1	Normal	9/25/2019	23 - 28 ft	**8**	**9**
		20A-AE102M-090920-1	Normal	9/9/2020	23 - 28 ft	**10**	**10**
		21A-AE102M-091521-1	Normal	9/15/2021	23 - 28 ft	**15**	**13**
Transect A	AE102RR-6	16A-AE102RR6-061416-1	Normal	6/14/2016	153 - 158 ft	**4.1**	**4.5**
		17A-AE102RR6-100317-1	Normal	10/3/2017	153 - 158 ft	**5.2**	**5.3**
		18A-AE102RR6-091918-1	Normal	9/19/2018	153 - 158 ft	4.0 U	4.0 U
		19A-AE102RR6-092419-1	Normal	9/24/2019	153 - 158 ft	**5**	4.0 U
		20A-AE102RR6-090920-1	Normal	9/9/2020	153 - 158 ft	**4**	**4**
		21A-AE102RR6-090721-1	Normal	9/7/2021	153 - 158 ft	4.0 U	4.0 U
Transect A	AE103D	16A-AE103D-061316-1	Normal	6/13/2016	35 - 40 ft	4.0 U	4.0 U
		17A-AE103D-100317-1	Normal	10/3/2017	35 - 40 ft	4.0 U	4.0 U
		18A-AE103D-092418-1	Normal	9/24/2018	35 - 40 ft	4.0 U	4.0 U
		18A-AE103D-092418-2	Duplicate	9/24/2018	35 - 40 ft	4.0 U	4.0 U
		19A-AE103D-091919-1	Normal	9/19/2019	35 - 40 ft	4.0 U	4.0 U
		20A-AE103D-091020-1	Normal	9/10/2020	35 - 40 ft	4.0 U	4.0 U
		21A-AE103D-091421-1	Normal	9/14/2021	35 - 40 ft	4.0 U	4.0 U
Transect A	AE103R-1	16A-AE103R1-061516-1	Normal	6/15/2016	48 - 53 ft	4.0 U	4.0 U
		17A-AE103R1-100217-1	Normal	10/2/2017	48 - 53 ft	4.0 U	4.0 U
		18A-AE103R1-092518-1	Normal	9/25/2018	48 - 53 ft	4.0 U	4.0 U
		19A-AE103R1-091819-1	Normal	9/18/2019	48 - 53 ft	4.0 U	**5**
		20A-AE103R1-091020-1	Normal	9/10/2020	48 - 53 ft	4.0 U	4.0 U
		21A-AE103R1-090921-1	Normal	9/9/2021	48 - 53 ft	4.0 U	4.0 U
Transect A	AE103R-5	17A-AE103R5-100217-1	Normal	10/2/2017	122 - 128 ft	4.0 U	4.0 U
		18A-AE103R5-092518-1	Normal	9/25/2018	122 - 128 ft	4.0 U	4.0 U
		19A-AE103R5-091819-1	Normal	9/18/2019	122 - 128 ft	4.0 U	**5**
		20A-AE103R5-091020-1	Normal	9/10/2020	122 - 128 ft	4.0 U	4.0 U
		21A-AE103R5-090921-1	Normal	9/9/2021	122 - 128 ft	4.0 U	4.0 U
Transect A	AE103S	16A-AE103S-061516-1	Normal	6/15/2016	15 - 20 ft	**179**	**175**
		17A-AE103S-100317-1	Normal	10/3/2017	15 - 20 ft	**159**	**143**
		18A-AE103S-092418-1	Normal	9/24/2018	15 - 20 ft	**138**	**171.20**
		19A-AE103S-091919-1	Normal	9/19/2019	15 - 20 ft	**138**	**162**
		20A-AE103S-091020-1	Normal	9/10/2020	15 - 20 ft	**160**	**172**
		21A-AE103S-091621-1	Normal	9/16/2021	15 - 20 ft	**140**	**175**
Transect A	AE104R-4	16A-AE104R4-061416-1	Normal	6/14/2016	128 - 133 ft	4.0 U	4.0 U
Transect A	AE108R-1	16A-AE108R1-061616-1	Normal	6/16/2016	36.5 - 43.5 ft	4.0 U	4.0 U
		16A-AE108R1-061616-2	Duplicate	6/16/2016	36.5 - 43.5 ft	4.0 U	4.0 U
		17A-AE108R1-100917-1	Normal	10/9/2017	36.5 - 43.5 ft	4.0 U	4.0 U
		18A-AE108R1-091918-1	Normal	9/19/2018	36.5 - 43.5 ft	4.0 U	4.0 U
		19A-AE108R1-092419-1	Normal	9/24/2019	36.5 - 43.5 ft	4.0 U	4.0 U
		20A-AE108R1-090920-1	Normal	9/9/2020	36.5 - 43.5 ft	4.0 U	4.0 U
		21A-AE108R1-090921-1	Normal	9/9/2021	36.5 - 43.5 ft	4.0 U	4.0 U

Table 5-1
Summary of 2016 - 2021 Groundwater Analytical Results for Arsenic

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
Transect A	AE109D	18A-AE109D-092618-1	Normal	9/26/2018	18 - 23 ft	4.0 U	4.0 U
		19A-AE109D-092019-1	Normal	9/20/2019	18 - 23 ft	4.0 U	4.0 U
		20A-AE109D-091620-1	Normal	9/16/2020	18 - 23 ft	4.0 U	4.0 U
		21A-AE109D-090721-1	Normal	9/7/2021	18 - 23 ft	4.0 U	4.0 U
Transect A	AE109R-5	16A-AE109R5-061616-1	Normal	6/16/2016	183 - 189 ft	4.0 U	4.0 U
		17A-AE109R5-101017-1	Normal	10/10/2017	183 - 189 ft	4.0 U	4.0 U
		18A-AE109R5-100218-1	Normal	10/2/2018	183 - 189 ft	4.0 U	4.0 U
		19A-AE109R5-091819-1	Normal	9/18/2019	183 - 189 ft	4.0 U	4.0 U
		20A-AE109R5-091620-1	Normal	9/16/2020	183 - 189 ft	4.0 U	4.0 U
		21A-AE109R5-090221-1	Normal	9/2/2021	183 - 189 ft	4.0 U	4.0 U
Transect A	EMW-11R2	16A-EMW11R2-062116-1	Normal	6/21/2016	104 - 114 ft	4.0 U	4.0 U
		17A-EMW11R2-101017-1	Normal	10/10/2017	104 - 114 ft	4.0 U	4.0 U
		18A-EMW11R2-092418-1	Normal	9/24/2018	104 - 114 ft	4.0 U	**4.05**
		19A-EMW11R2-091719-1	Normal	9/17/2019	104 - 114 ft	**4**	4.0 U
		20A-EMW11R2-092120-1	Normal	9/21/2020	104 - 114 ft	**5**	**4**
		21A-EMW11R2-090821-1	Normal	9/8/2021	104 - 114 ft	**5**	**6**
Transect B	AE105R-2	16A-AE105R2-062016-1	Normal	6/20/2016	98 - 103 ft	4.0 U	4.0 U
		17A-AE105R2-101217-1	Normal	10/12/2017	98 - 103 ft	4.0 U	4.0 U
		18A-AE105R2-100318-1	Normal	10/3/2018	98 - 103 ft	4.0 U	4.0 U
		19A-AE105R2-091619-1	Normal	9/16/2019	98 - 103 ft	4.0 U	4.0 U
		20A-AE105R2-091720-1	Normal	9/17/2020	98 - 103 ft	4.0 U	4.0 U
		21A-AE105R2-091321-1	Normal	9/13/2021	98 - 103 ft	4.0 U	4.0 U
Transect B	AE105S	16A-AE105S-062216-1	Normal	6/22/2016	35 - 40 ft	**16.8**	**17.8**
		17A-AE105S-101217-1	Normal	10/12/2017	35 - 40 ft	**15.7**	**16.8**
		18A-AE105S-100318-1	Normal	10/3/2018	35 - 40 ft	**12.8**	**14.70**
		19A-AE105S-091619-1	Normal	9/16/2019	35 - 40 ft	**12**	**13**
		20A-AE105S-091720-1	Normal	9/17/2020	35 - 40 ft	**16**	**17**
		21A-AE105S-091721-1	Normal	9/17/2021	35 - 40 ft	**11**	**16**
Transect B	AE106D	16A-AE106D-062016-1	Normal	6/20/2016	34 - 39 ft	4.0 U	4.0 U
		17A-AE106D-101217-1	Normal	10/12/2017	34 - 39 ft	4.0 U	4.0 U
		18A-AE106D-100318-1	Normal	10/3/2018	34 - 39 ft	4.0 U	4.0 U
		19A-AE106D-091719-1	Normal	9/17/2019	34 - 39 ft	4.0 U	4.0 U
		20A-AE106D-091720-1	Normal	9/17/2020	34 - 39 ft	4.0 U	4.0 U
		21A-AE106D-091321-1	Normal	9/13/2021	34 - 39 ft	4.0 U	4.0 U
Transect B	AE106R-3	16A-AE106R3-062016-1	Normal	6/20/2016	84 - 88 ft	4.0 U	4.0 U
		17A-AE106R3-101217-1	Normal	10/12/2017	84 - 88 ft	4.0 U	4.0 U
		18A-AE106R3-100318-1	Normal	10/3/2018	84 - 88 ft	4.0 U	4.0 U
		19A-AE106R3-091619-1	Normal	9/16/2019	84 - 88 ft	4.0 U	4.0 U
		20A-AE106R3-091720-1	Normal	9/17/2020	84 - 88 ft	4.0 U	4.0 U
		21A-AE106R3-091321-1	Normal	9/13/2021	84 - 88 ft	4.0 U	4.0 U
Transect B	TRC-301R-2	18A-TRC301R2-092718-1	Normal	9/27/2018	81.5 - 85.5 ft	4.0 U	4.0 U
		19A-TRC301R2-091719-1	Normal	9/17/2019	81.5 - 85.5 ft	4.0 U	4.0 U
		20A-TRC301R2-091520-1	Normal	9/15/2020	81.5 - 85.5 ft	4.0 U	4.0 U
		21A-TRC301R2-091321-1	Normal	9/13/2021	81.5 - 85.5 ft	4.0 U	4.0 U
Transect B	TRC-301R-3	17A-TRC301R3-102317	Normal	10/23/2017	75.5 - 79.5 ft	4.0 U	4.0 U
Transect B	TRC-301R-4	16A-TRC301R4-062216-1	Normal	6/22/2016	65.5 - 69.5 ft	**22.8**	**23.0**
		17A-TRC301R4-102317-1	Normal	10/23/2017	65.5 - 69.5 ft	**22.4**	**21.6**
		18A-TRC301R4-092718-1	Normal	9/27/2018	65.5 - 69.5 ft	**18.6**	**19.70**
		19A-TRC301R4-091719-1	Normal	9/17/2019	65.5 - 69.5 ft	**21**	**19**
		20A-TRC301R4-091520-1	Normal	9/15/2020	65.5 - 69.5 ft	**19**	**23**
		21A-TRC301R4-091321-1	Normal	9/13/2021	65.5 - 69.5 ft	**18**	**20**

Table 5-1
Summary of 2016 - 2021 Groundwater Analytical Results for Arsenic

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
Transect B 1/2	AE112D	17A-AE112D-101717-1	Normal	10/17/2017	24.5 - 29.5 ft	4.0 U	4.0 U
		18A-AE112D-092618-1	Normal	9/26/2018	24.5 - 29.5 ft	4.0 U	4.0 U
		19A-AE112D-091319-1	Normal	9/13/2019	24.5 - 29.5 ft	4.0 U	4.0 U
		20A-AE112D-091120-1	Normal	9/11/2020	24.5 - 29.5 ft	4.0 U	4.0 U
		21A-AE112D-091021-1	Normal	9/10/2021	24.5 - 29.5 ft	4.0 U	4.0 U
Transect B 1/2	AE112R-1	18A-AE112R1-092618-1	Normal	9/26/2018	41 - 51 ft	4.0 U	**4.15**
		19A-AE112R1-091319-1	Normal	9/13/2019	41 - 51 ft	4.0 U	**5**
		20A-AE112R1-091120-1	Normal	9/11/2020	41 - 51 ft	**5**	**5**
		21A-AE112R1-091621-1	Normal	9/16/2021	41 - 51 ft	4.0 U	4.0 U
Transect B 1/2	AE112R-2	17A-AE112R2-101717-1	Normal	10/17/2017	62 - 72 ft	4.0 U	4.0 U
Transect B 1/2	AE112R-6	16B-AE112R6-062116-1	Normal	6/21/2016	153 - 163 ft	4.0 U	4.0 U
		17A-AE112R6-101717-1	Normal	10/17/2017	153 - 163 ft	4.0 U	4.0 U
		18A-AE112R6-092618-1	Normal	9/26/2018	153 - 163 ft	4.0 U	4.0 U
		18A-AE112R6-092618-2	Duplicate	9/26/2018	153 - 163 ft	4.0 U	4.0 U
		19A-AE112R6-091319-1	Normal	9/13/2019	153 - 163 ft	4.0 U	4.0 U
		20A-AE112R6-091120-1	Normal	9/11/2020	153 - 163 ft	4.0 U	4.0 U
		21A-AE112R6-091621-1	Normal	9/16/2021	153 - 163 ft	4.0 U	4.0 U
Transect C	STM-8R1	16A-STM8R1-062816-1	Normal	6/28/2016	85 - 90 ft	**11.6**	**12.6**
		17A-STM8R1-101717-1	Normal	10/17/2017	85 - 90 ft	**15.4 J**	**11.9 J**
		17A-STM8R1-101717-2	Duplicate	10/17/2017	85 - 90 ft	**15.2 J**	**10.3 J**
		18A-STM8R1-100218-1	Normal	10/2/2018	85 - 90 ft	**14.8**	**14.45**
		19A-STM8R1-092619-1	Normal	9/26/2019	85 - 90 ft	**14**	**17**
		20A-STM8R1-092320-1	Normal	9/23/2020	85 - 90 ft	**11**	**18**
		21A-STM8R1-091621-1	Normal	9/16/2021	85 - 90 ft	**7**	**11**
		21A-STM8R1-091621-2	Duplicate	9/16/2021	85 - 90 ft	**11**	**11**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-2
Groundwater Mann Kendall Trend Tests for Arsenic

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE03	Arsenic (Diss)	9	9	-17	-17	10	Downward Trend	14	Downward Trend
AE102M	Arsenic (Diss)	7	7	-1	-1	7	Not Significant	11	Not Significant
AE102RR-6	Arsenic (Diss)	7	5	-9	-9	7	Downward Trend	11	Not Significant
AE103S	Arsenic (Diss)	7	7	0	0		No Trend		No Trend
AE105S	Arsenic (Diss)	7	7	-13	-13	7	Downward Trend	11	Downward Trend
EMW-11R2	Arsenic (Diss)	7	3	10	10	7	Upward Trend	11	Not Significant
GZA-06	Arsenic (Diss)	6	6	10	10	7	Upward Trend	9	Upward Trend
GZA-10	Arsenic (Diss)	7	7	-9	-9	7	Downward Trend	11	Not Significant
GZA-101R	Arsenic (Diss)	10	4	11	11	11	Upward Trend	17	Not Significant
GZA-105S	Arsenic (Diss)	8	8	6	6	8	Not Significant	12	Not Significant
GZA-14A	Arsenic (Diss)	8	8	-2	-2	8	Not Significant	12	Not Significant
MW-4A	Arsenic (Diss)	7	6	11	11	7	Upward Trend	11	Upward Trend
STM-8R1	Arsenic (Diss)	6	6	-9	-9	7	Downward Trend	9	Downward Trend
TRC-102	Arsenic (Diss)	9	9	4	4	10	Not Significant	14	Not Significant
TRC-301R-4	Arsenic (Diss)	7	7	-12	-12	7	Downward Trend	11	Downward Trend

Notes:
Datasets presented for wells that were included in the sampling program in September 2021.
Field duplicates assigned the maximum value for the purposes of the trend test.
The detection limit was used for non-detect concentrations for the purposes of the trend test.
Trend test results were interpreted using a confidence level of 80% and 90%. If the absolute value of the statistic is equal to or greater than the critical value, a significant trend is concluded. The direction of the trend is determined by the sign of the statistic with positive statistics indicating an upward trend and negative statistics indicating a downward trend.
* When sample size > 10, the normal approximation is used and calculated per box 4-9 in Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S. When the normal approximati used, the critical value is the standard normal distribution.
When S is 0, no critical value is calculated and a conclusion of no trend is made.
NA = The Mann-Kendall trend test was not performed because there were less than 4 samples.
ND = The Mann-Kendall trend test was not performed because there were less than 3 detected concentrations.
- Analyte results not available for location.

Table 5-3
Summary of 2016 - 2021 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
Upgradient	GZA-12	18A-GZA12-100118-1	Normal	10/1/2018	9.5 - 24.5 ft	0.20 U
		19A-GZA12-092619-1	Normal	9/26/2019	9.5 - 24.5 ft	0.20 U
		20A-GZA12-092420-1	Normal	9/24/2020	9.5 - 24.5 ft	0.20 U
		21A-GZA12-091421-1	Normal	9/14/2021	9.5 - 24.5 ft	0.20 U
Building 1 Tank F	AE23R	16B-AE23R-062716-1	Normal	6/27/2016	44.75 - 54.75 ft	**16**
		17A-AE23R-101317-1	Normal	10/13/2017	44.75 - 54.75 ft	**19**
		18A-AE23R-091918-1	Normal	9/19/2018	44.75 - 54.75 ft	**19**
		19A-AE23R-092319-1	Normal	9/23/2019	44.75 - 54.75 ft	**15**
		20A-AE23R-091420-1	Normal	9/14/2020	44.75 - 54.75 ft	0.20 U
		21A-AE23R-090321-1	Normal	9/3/2021	44.75 - 54.75 ft	**12**
Building 1 Tank F	AE24	17A-AE24-101917-1	Normal	10/19/2017	7.25 - 17.25 ft	0.20 U
		17A-AE24-101917-2	Duplicate	10/19/2017	7.25 - 17.25 ft	0.20 U
		18A-AE24-092518-1	Normal	9/25/2018	7.25 - 17.25 ft	**0.29**
		19A-AE24-092319-1	Normal	9/23/2019	7.25 - 17.25 ft	**1.4**
		20A-AE24-091420-1	Normal	9/14/2020	7.25 - 17.25 ft	0.20 U
		21A-AE24-090321-1	Normal	9/3/2021	7.25 - 17.25 ft	0.20 U
Building 1 Tank F	AE26R-1	16B-AE26R1-062316-1	Normal	6/23/2016	50 - 56 ft	**9.2**
		17A-AE26R1-100417-1	Normal	10/4/2017	50 - 56 ft	**32**
		18A-AE26R1-091818-1	Normal	9/18/2018	50 - 56 ft	**22**
		19A-AE26R1-092319-1	Normal	9/23/2019	50 - 56 ft	**25**
		20A-AE26R1-091420-1	Normal	9/14/2020	50 - 56 ft	**21**
		21A-AE26R1-090121-1	Normal	9/1/2021	50 - 56 ft	**20**
Building 1 Tank F	AE26R-5	16B-AE26R5-062316-1	Normal	6/23/2016	123 - 132 ft	**13**
		17A-AE26R5-100417-1	Normal	10/4/2017	123 - 132 ft	**43**
		18A-AE26R5-091818-1	Normal	9/18/2018	123 - 132 ft	**29**
		19A-AE26R5-092319-1	Normal	9/23/2019	123 - 132 ft	**34**
		20A-AE26R5-091420-1	Normal	9/14/2020	123 - 132 ft	**27**
		21A-AE26R5-090121-1	Normal	9/1/2021	123 - 132 ft	**28**
Building 1 Tank F	AE28R-2	16B-AE28R2-062316-1	Normal	6/23/2016	75 - 85 ft	**34**
		17A-AE28R2-100417-1	Normal	10/4/2017	75 - 85 ft	**66**
		18A-AE28R2-091818-1	Normal	9/18/2018	75 - 85 ft	**50**
		19A-AE28R2-092319-1	Normal	9/23/2019	75 - 85 ft	**60**
		20A-AE28R2-091420-1	Normal	9/14/2020	75 - 85 ft	**48**
		21A-AE28R2-090121-1	Normal	9/1/2021	75 - 85 ft	**48**
Building 1 Tank F	AE28R-3	18A-AE28R3-091818-1	Normal	9/18/2018	98 - 108 ft	**39**
		19A-AE28R3-092319-1	Normal	9/23/2019	98 - 108 ft	**46**
		20A-AE28R3-091420-1	Normal	9/14/2020	98 - 108 ft	**39**
		21A-AE28R3-090121-1	Normal	9/1/2021	98 - 108 ft	**40**
Building 1 Tank F	AE29R-6	16B-AE29R6-062816-1	Normal	6/28/2016	140 - 146 ft	**2.5**
		17A-AE29R6-101717-1	Normal	10/17/2017	140 - 146 ft	**42**
		18A-AE29R6-091818-1	Normal	9/18/2018	140 - 146 ft	**43**
		19A-AE29R6-092419-1	Normal	9/24/2019	140 - 146 ft	**50**
		20A-AE29R6-092220-1	Normal	9/22/2020	140 - 146 ft	**43**
		21A-AE29R6-091421-1	Normal	9/14/2021	140 - 146 ft	**43**
Downgradient Wetland	MW-4	16A-MW4-062416-1	Normal	6/24/2016	18 - 28 ft	**0.68**
		17A-MW4-101817-1	Normal	10/18/2017	18 - 28 ft	**1.2**
		18A-MW4-100418-1	Normal	10/4/2018	18 - 28 ft	**1.4**
		19A-MW4-091919-1	Normal	9/19/2019	18 - 28 ft	**0.84**
		19A-MW4-091919-2	Duplicate	9/19/2019	18 - 28 ft	**0.86**
		20A-MW4-091820-1	Normal	9/18/2020	18 - 28 ft	**0.84**
		20A-MW4-091820-2	Duplicate	9/18/2020	18 - 28 ft	**0.83**
		21A-MW4-092021-1	Normal	9/20/2021	18 - 28 ft	**0.80**
Downgradient Wetland	MW-4A	16A-MW4A-062416-1	Normal	6/24/2016	38 - 48 ft	**0.69**
		17A-MW4A-101817-1	Normal	10/18/2017	38 - 48 ft	**0.89**

Table 5-3
Summary of 2016 - 2021 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
EPL	GZA-105D	16A-GZA105D-061516-1	Normal	6/15/2016	16 - 26 ft	**1.3**
		17A-GZA-105D-101917-1	Normal	10/19/2017	16 - 26 ft	**6.1**
		17A-GZA-105D-101917-2	Duplicate	10/19/2017	16 - 26 ft	**5.8**
		18A-GZA105D-092518-1	Normal	9/25/2018	16 - 26 ft	**2.3**
		19A-GZA105D-091819-1	Normal	9/18/2019	16 - 26 ft	**1.0**
		20A-GZA105D-092420-1	Normal	9/24/2020	16 - 26 ft	**0.68 J-**
		21A-GZA105D-091521-1	Normal	9/15/2021	16 - 26 ft	**0.65**
		21A-GZA105D-091521-2	Duplicate	9/15/2021	16 - 26 ft	**0.70**
Former Tank Farm	AE100R-1	16A-AE100R1-061516-1	Normal	6/15/2016	18 - 24 ft	**0.42**
		17A-AE100R1-100417-1	Normal	10/4/2017	18.68 - 24.68 ft	**0.50**
Former Tank Farm	AE100R-2	16A-AE100R2-061516-1	Normal	6/15/2016	43 - 48 ft	**1.3**
		17A-AE100R2-100417-1	Normal	10/4/2017	43.68 - 48.68 ft	**1.8**
Former Tank Farm	AE100R-3	16A-AE100R3-061516-1	Normal	6/15/2016	50 - 56 ft	**4.0**
		17A-AE100R3-100417-1	Normal	10/4/2017	50.68 - 56.68 ft	**9.8**
		18A-AE100R3-091918-1	Normal	9/19/2018	50 - 56 ft	**9.4**
		19A-AE100R3-092319-1	Normal	9/23/2019	50 - 56 ft	**13**
		20A-AE100R3-091020-1	Normal	9/10/2020	50 - 56 ft	**9.2**
		21A-AE100R3-090921-1	Normal	9/9/2021	50 - 56 ft	**12**
Former Tank Farm	AE100R-4	16A-AE100R4-061516-1	Normal	6/15/2016	63 - 68 ft	**3.6**
		17A-AE100R4-100417-1	Normal	10/4/2017	63.68 - 68.68 ft	**8.6**
		18A-AE100R4-091918-1	Normal	9/19/2018	63 - 68 ft	**11**
		19A-AE100R4-092319-1	Normal	9/23/2019	63 - 68 ft	**13**
		20A-AE100R4-091020-1	Normal	9/10/2020	63 - 68 ft	**10**
		21A-AE100R4-090921-1	Normal	9/9/2021	63 - 68 ft	**9.5**
Former Tank Farm	AE100R-5	16A-AE100R5-061516-1	Normal	6/15/2016	88 - 93 ft	**5.0**
		17A-AE100R5-100417-1	Normal	10/4/2017	88.68 - 93.68 ft	**9.9**
Former Tank Farm	AE100R-6	16A-AE100R6-061516-1	Normal	6/15/2016	108.5 - 113.5 ft	**5.7**
		17A-AE100R6-100417-1	Normal	10/4/2017	109.18 - 114.18 ft	**12**
		18A-AE100R6-091918-1	Normal	9/19/2018	108.5 - 113.5 ft	**14**
		19A-AE100R6-092319-1	Normal	9/23/2019	108.5 - 113.5 ft	**12**
		20A-AE100R6-091020-1	Normal	9/10/2020	108.5 - 113.5 ft	**10**
		21A-AE100R6-090921-1	Normal	9/9/2021	108.5 - 113.5 ft	**8.1**
Transect A	AE101D	16A-AE101D-061516-1	Normal	6/15/2016	20 - 25 ft	0.20 U
		16A-AE101D-061516-2	Duplicate	6/15/2016	20 - 25 ft	0.20 U
		17A-AE101D-100217-1	Normal	10/2/2017	20 - 25 ft	0.20 U
		18A-AE101D-092618-1	Normal	9/26/2018	20 - 25 ft	**0.32**
		19A-AE101D-093019-1	Normal	9/30/2019	20 - 25 ft	0.20 U
		20A-AE101D-091820-1	Normal	9/18/2020	20 - 25 ft	**0.31**
		21A-AE101D-090721-1	Normal	9/7/2021	20 - 25 ft	0.30 U
Transect A	AE101R-1	16A-AE101R1-061616-1	Normal	6/16/2016	30.5 - 35.5 ft	0.20 U
		17A-AE101R1-101117-1	Normal	10/11/2017	30.5 - 35.5 ft	**0.92**
Transect A	AE101R-2	16A-AE101R2-061616-1	Normal	6/16/2016	55 - 60 ft	**3.3**
		17A-AE101R2-101117-1	Normal	10/11/2017	55 - 60 ft	**6.7**
		18A-AE101R2-092018-1	Normal	9/20/2018	55 - 60 ft	**6.8**
		19A-AE101R2-092519-1	Normal	9/25/2019	55 - 60 ft	**5.2**
		20A-AE101R2-092320-1	Normal	9/23/2020	55 - 60 ft	**5.8**
		21A-AE101R2-091021-1	Normal	9/10/2021	55 - 60 ft	**6.5**
Transect A	AE101R-3	16A-AE101R3-061616-1	Normal	6/16/2016	80 - 85 ft	**2.6**
		17A-AE101R3-101117-1	Normal	10/11/2017	80 - 85 ft	**5.4**
		18A-AE101R3-092018-1	Normal	9/20/2018	80 - 85 ft	**4.6**
		18A-AE101R3-092018-2	Duplicate	9/20/2018	80 - 85 ft	**4.5**
		19A-AE101R3-092519-1	Normal	9/25/2019	80 - 85 ft	**3.5 J**
		20A-AE101R3-092320-1	Normal	9/23/2020	80 - 85 ft	**2.7**
		21A-AE101R3-091021-1	Normal	9/10/2021	80 - 85 ft	**2.7**

Table 5-3
Summary of 2016 - 2021 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
Transect A	AE101R-5	16A-AE101R5-061616-1	Normal	6/16/2016	175 - 180 ft	**9.0**
		17A-AE101R5-101917-1	Normal	10/19/2017	175 - 180 ft	**17**
		18A-AE101R5-092618-1	Normal	9/26/2018	175 - 180 ft	**17**
		19A-AE101R5-092519-1	Normal	9/25/2019	175 - 180 ft	**16**
		20A-AE101R5-092420-1	Normal	9/24/2020	175 - 180 ft	**15**
		21A-AE101R5-091621-1	Normal	9/16/2021	175 - 180 ft	**18**
Transect A	AE101R-6	16A-AE101R6-061716-1	Normal	6/17/2016	227 - 232 ft	**2.8**
		17A-AE101R6-101917-1	Normal	10/19/2017	227 - 232 ft	**6.8**
		18A-AE101R6-092618-1	Normal	9/26/2018	227 - 232 ft	**8.5**
		19A-AE101R6-093019-1	Normal	9/30/2019	227 - 232 ft	**11**
		20A-AE101R6-092420-1	Normal	9/24/2020	227 - 232 ft	**9.6**
		21A-AE101R6-091621-1	Normal	9/16/2021	227 - 232 ft	**9.2**
Transect A	AE101S	16A-AE101S-061716-1	Normal	6/17/2016	10 - 15 ft	0.20 U
		17A-AE101S-100217-1	Normal	10/2/2017	10 - 15 ft	0.20 U
		18A-AE101S-092618-1	Normal	9/26/2018	10 - 15 ft	0.20 U
		19A-AE101S-093019-1	Normal	9/30/2019	10 - 15 ft	0.20 U
		20A-AE101S-091820-1	Normal	9/18/2020	10 - 15 ft	**0.23**
		21A-AE101S-090721-1	Normal	9/7/2021	10 - 15 ft	**0.38**
Transect A	AE102D	16A-AE102D-061316-1	Normal	6/13/2016	33 - 38 ft	**4.7**
		17A-AE102D-100217-1	Normal	10/2/2017	33 - 38 ft	**6.2**
		18A-AE102D-100118-1	Normal	10/1/2018	33 - 38 ft	**6.7**
		19A-AE102D-092519-1	Normal	9/25/2019	33 - 38 ft	**5.4**
		20A-AE102D-090920-1	Normal	9/9/2020	33 - 38 ft	**4.7**
		21A-AE102D-091521-1	Normal	9/15/2021	33 - 38 ft	**5.3**
Transect A	AE102M	16A-AE102M-061316-1	Normal	6/13/2016	23 - 28 ft	0.20 U
		17A-AE102M-100217-1	Normal	10/2/2017	23 - 28 ft	**0.73**
		18A-AE102M-100118-1	Normal	10/1/2018	23 - 28 ft	**0.76**
		19A-AE102M-092519-1	Normal	9/25/2019	23 - 28 ft	**0.76**
		19A-AE102M-092519-2	Duplicate	9/25/2019	23 - 28 ft	**0.78**
		20A-AE102M-090920-1	Normal	9/9/2020	23 - 28 ft	**0.62**
		20A-AE102M-090920-2	Duplicate	9/9/2020	23 - 28 ft	**0.58**
		21A-AE102M-091521-1	Normal	9/15/2021	23 - 28 ft	**0.73**
Transect A	AE102RR-2	16A-AE102RR2-061416-1	Normal	6/14/2016	75 - 80 ft	**2.8**
		17A-AE102RR2-100317-1	Normal	10/3/2017	75 - 80 ft	**6.1**
		18A-AE102RR2-091918-1	Normal	9/19/2018	75 - 80 ft	**6.4**
		18A-AE102RR2-091918-2	Duplicate	9/19/2018	75 - 80 ft	**6.3**
		19A-AE102RR2-092419-1	Normal	9/24/2019	75 - 80 ft	**6.0**
		20A-AE102RR2-090920-1	Normal	9/9/2020	75 - 80 ft	**6.2**
		21A-AE102RR2-090721-1	Normal	9/7/2021	75 - 80 ft	**5.9**
Transect A	AE102RR-4	16A-AE102RR4-061416-1	Normal	6/14/2016	125 - 130 ft	**4.4**
		17A-AE102RR4-100317-1	Normal	10/3/2017	125 - 130 ft	**5.7**
		18A-AE102RR4-091918-1	Normal	9/19/2018	125 - 130 ft	**6.8**
		19A-AE102RR4-092419-1	Normal	9/24/2019	125 - 130 ft	**6.0**
		20A-AE102RR4-090920-1	Normal	9/9/2020	125 - 130 ft	**5.2**
		21A-AE102RR4-090721-1	Normal	9/7/2021	125 - 130 ft	**8.1**
Transect A	AE102RR-5	16A-AE102RR5-061416-1	Normal	6/14/2016	141 - 146 ft	**10**
		17A-AE102RR5-100317-1	Normal	10/3/2017	141 - 146 ft	**14**
Transect A	AE102RR-6	16A-AE102RR6-061416-1	Normal	6/14/2016	153 - 158 ft	**10**
		17A-AE102RR6-100317-1	Normal	10/3/2017	153 - 158 ft	**22**
		18A-AE102RR6-091918-1	Normal	9/19/2018	153 - 158 ft	**23**
		19A-AE102RR6-092419-1	Normal	9/24/2019	153 - 158 ft	**26**
		20A-AE102RR6-090920-1	Normal	9/9/2020	153 - 158 ft	**25**
		21A-AE102RR6-090721-1	Normal	9/7/2021	153 - 158 ft	**25**

Table 5-3
Summary of 2016 - 2021 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
Transect A	AE103D	16A-AE103D-061316-1	Normal	6/13/2016	35 - 40 ft	0.20 U
		17A-AE103D-100317-1	Normal	10/3/2017	35 - 40 ft	**0.84**
		18A-AE103D-092418-1	Normal	9/24/2018	35 - 40 ft	**0.82**
		18A-AE103D-092418-2	Duplicate	9/24/2018	35 - 40 ft	**0.72**
		19A-AE103D-091919-1	Normal	9/19/2019	35 - 40 ft	**0.82**
		20A-AE103D-091020-1	Normal	9/10/2020	35 - 40 ft	**0.78**
		21A-AE103D-091421-1	Normal	9/14/2021	35 - 40 ft	**0.68**
Transect A	AE103R-1	16A-AE103R1-061516-1	Normal	6/15/2016	48 - 53 ft	**16**
		17A-AE103R1-100217-1	Normal	10/2/2017	48 - 53 ft	**9.0**
		18A-AE103R1-092518-1	Normal	9/25/2018	48 - 53 ft	**8.7**
		19A-AE103R1-091819-1	Normal	9/18/2019	48 - 53 ft	**8.0**
		20A-AE103R1-091020-1	Normal	9/10/2020	48 - 53 ft	**4.2**
		21A-AE103R1-090921-1	Normal	9/9/2021	48 - 53 ft	**9.4**
Transect A	AE103R-2	16A-AE103R2-061516-1	Normal	6/15/2016	62 - 67 ft	**23**
		17A-AE103R2-100217-1	Normal	10/2/2017	62 - 67 ft	**18**
Transect A	AE103R-3	16A-AE103R3-061516-1	Normal	6/15/2016	70 - 76 ft	**21**
		17A-AE103R3-100217-1	Normal	10/2/2017	70 - 76 ft	**24**
Transect A	AE103R-4	16A-AE103R4-061516-1	Normal	6/15/2016	98 - 105 ft	**34**
		17A-AE103R4-100217-1	Normal	10/2/2017	98 - 105 ft	**46**
		18A-AE103R4-092518-1	Normal	9/25/2018	98 - 105 ft	**45**
		19A-AE103R4-091819-1	Normal	9/18/2019	98 - 105 ft	**43**
		20A-AE103R4-091020-1	Normal	9/10/2020	98 - 105 ft	**38**
		21A-AE103R4-090921-1	Normal	9/9/2021	98 - 105 ft	**41**
Transect A	AE103R-5	16A-AE103R5-061516-1	Normal	6/15/2016	122 - 128 ft	**34**
		17A-AE103R5-100217-1	Normal	10/2/2017	122 - 128 ft	**47**
		18A-AE103R5-092518-1	Normal	9/25/2018	122 - 128 ft	**48**
		19A-AE103R5-091819-1	Normal	9/18/2019	122 - 128 ft	**36**
		20A-AE103R5-091020-1	Normal	9/10/2020	122 - 128 ft	**37**
		21A-AE103R5-090921-1	Normal	9/9/2021	122 - 128 ft	**38**
Transect A	AE103R-6	16A-AE103R6-061516-1	Normal	6/15/2016	138 - 144 ft	**18**
		17A-AE103R6-100217-1	Normal	10/2/2017	138 - 144 ft	**30**
Transect A	AE103R-7	16A-AE103R7-061516-1	Normal	6/15/2016	162.5 - 168 ft	**17**
		17A-AE103R7-100217-1	Normal	10/2/2017	162.5 - 168 ft	**26**
Transect A	AE103S	16A-AE103S-061516-1	Normal	6/15/2016	15 - 20 ft	**0.36**
		17A-AE103S-100317-1	Normal	10/3/2017	15 - 20 ft	**0.70**
Transect A	AE104D	16A-AE104D-061316-1	Normal	6/13/2016	35 - 40 ft	0.20 U
		17A-AE104D-101017-1	Normal	10/10/2017	35 - 40 ft	**0.31**
		18A-AE104D-092618-1	Normal	9/26/2018	35 - 40 ft	**0.37**
		19A-AE104D-092019-1	Normal	9/20/2019	35 - 40 ft	**0.42**
		20A-AE104D-091620-1	Normal	9/16/2020	35 - 40 ft	**0.34**
		21A-AE104D-092221-1	Normal	9/22/2021	35 - 40 ft	**0.34**
Transect A	AE104R-1	16A-AE104R1-061416-1	Normal	6/14/2016	48 - 54 ft	**7.2**
		17A-AE104R1-100317-1	Normal	10/3/2017	48 - 54 ft	**13**
		18A-AE104R1-092618-1	Normal	9/26/2018	48 - 54 ft	**12**
		19A-AE104R1-091819-1	Normal	9/18/2019	48 - 54 ft	**9.0**
		20A-AE104R1-091120-1	Normal	9/11/2020	48 - 54 ft	**10**
		21A-AE104R1-090221-1	Normal	9/2/2021	48 - 54 ft	**14**
Transect A	AE104R-3	16A-AE104R3-061416-1	Normal	6/14/2016	97 - 102 ft	**17**
		17A-AE104R3-100317-1	Normal	10/3/2017	97 - 102 ft	**17**
		18A-AE104R3-092618-1	Normal	9/26/2018	97 - 102 ft	**16**
		19A-AE104R3-091819-1	Normal	9/18/2019	97 - 102 ft	**14**
		20A-AE104R3-091120-1	Normal	9/11/2020	97 - 102 ft	**11**
		21A-AE104R3-090221-1	Normal	9/2/2021	97 - 102 ft	**14**

Table 5-3
Summary of 2016 - 2021 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
Transect A	AE104R-4	16A-AE104R4-061416-1	Normal	6/14/2016	128 - 133 ft	**11**
		17A-AE104R4-100317-1	Normal	10/3/2017	128 - 133 ft	**26**
		18A-AE104R4-092618-1	Normal	9/26/2018	128 - 133 ft	**19**
		19A-AE104R4-091819-1	Normal	9/18/2019	128 - 133 ft	**19**
		20A-AE104R4-091120-1	Normal	9/11/2020	128 - 133 ft	**17**
		21A-AE104R4-090221-1	Normal	9/2/2021	128 - 133 ft	**22**
Transect A	AE104R-5	16A-AE104R5-061416-1	Normal	6/14/2016	156 - 162 ft	**17**
		17A-AE104R5-100317-1	Normal	10/3/2017	156 - 162 ft	**22**
Transect A	AE104R-6	16A-AE104R6-061416-1	Normal	6/14/2016	168 - 174 ft	**10**
		17A-AE104R6-100317-1	Normal	10/3/2017	168 - 174 ft	**24**
		18A-AE104R6-092618-1	Normal	9/26/2018	168 - 174 ft	**24**
		19A-AE104R6-091819-1	Normal	9/18/2019	168 - 174 ft	**20**
		20A-AE104R6-091120-1	Normal	9/11/2020	168 - 174 ft	**21**
		21A-AE104R6-090221-1	Normal	9/2/2021	168 - 174 ft	**21**
Transect A	AE104S	16A-AE104S-061316-1	Normal	6/13/2016	15 - 20 ft	0.20 U
		17A-AE104S-101017-1	Normal	10/10/2017	15 - 20 ft	**0.35**
Transect A	AE109D	16A-AE109D-062116-1	Normal	6/21/2016	18 - 23 ft	0.20 U
		16A-AE109D-062116-2	Duplicate	6/21/2016	18 - 23 ft	0.20 U
		17A-AE109D-101317-1	Normal	10/13/2017	18 - 23 ft	**0.31**
		18A-AE109D-092618-1	Normal	9/26/2018	18 - 23 ft	**0.22**
		19A-AE109D-092019-1	Normal	9/20/2019	18 - 23 ft	**0.37**
		20A-AE109D-091620-1	Normal	9/16/2020	18 - 23 ft	**0.42**
		21A-AE109D-090721-1	Normal	9/7/2021	18 - 23 ft	**0.55**
Transect A	AE109R-2	18A-AE109R2-100218-1	Normal	10/2/2018	66 - 76 ft	**4.0**
		19A-AE109R2-091819-1	Normal	9/18/2019	66 - 76 ft	**3.6**
		20A-AE109R2-091620-1	Normal	9/16/2020	66 - 76 ft	**5.6**
		21A-AE109R2-090221-1	Normal	9/2/2021	66 - 76 ft	**6.4**
		21A-AE109R2-090221-2	Duplicate	9/2/2021	66 - 76 ft	**6.8**
Transect A	AE109R-5	16A-AE109R5-061616-1	Normal	6/16/2016	183 - 189 ft	**4.8**
		17A-AE109R5-101017-1	Normal	10/10/2017	183 - 189 ft	**3.0**
		18A-AE109R5-100218-1	Normal	10/2/2018	183 - 189 ft	**2.1**
		19A-AE109R5-091819-1	Normal	9/18/2019	183 - 189 ft	**1.4**
		20A-AE109R5-091620-1	Normal	9/16/2020	183 - 189 ft	**1.7**
Transect A	AE109R-6	16A-AE109R6-061616-1	Normal	6/16/2016	196 - 201 ft	**0.82**
		17A-AE109R6-101017-1	Normal	10/10/2017	196 - 201 ft	**1.4**
Transect A	AE109R-7	16A-AE109R7-061616-1	Normal	6/16/2016	204 - 214 ft	**6.5**
		17A-AE109R7-101017-1	Normal	10/10/2017	204 - 214 ft	**1.6**
		18A-AE109R7-100218-1	Normal	10/2/2018	204 - 214 ft	**1.4**
		19A-AE109R7-091819-1	Normal	9/18/2019	204 - 214 ft	**1.5**
		19A-AE109R7-091819-2	Duplicate	9/18/2019	204 - 214 ft	**1.6**
		20A-AE109R7-091620-1	Normal	9/16/2020	204 - 214 ft	**1.5**
		20A-AE109R7-091620-2	Duplicate	9/16/2020	204 - 214 ft	**1.4**
		21A-AE109R7-090221-1	Normal	9/2/2021	204 - 214 ft	**1.5**
Transect A	AE110R-6	16A-AE110R6-061716-1	Normal	6/17/2016	190 - 200 ft	**8.0 J**
		17A-AE110R6-101117-1	Normal	10/11/2017	190 - 200 ft	**1.4**
		18A-AE110R6-092518-1	Normal	9/25/2018	190 - 200 ft	**1.4**
		19A-AE110R6-091319-1	Normal	9/13/2019	190 - 200 ft	**1.3**
		20A-AE110R6-091620-1	Normal	9/16/2020	190 - 200 ft	**1.3**
		21A-AE110R6-090221-1	Normal	9/2/2021	190 - 200 ft	**1.4**
Transect A	AE110R-7	16A-AE110R7-061716-1	Normal	6/17/2016	224 - 234 ft	**3.8 J**
		16A-AE110R7-061716-2	Duplicate	6/17/2016	224 - 234 ft	**12 J**
		17A-AE110R7-101117-1	Normal	10/11/2017	224 - 234 ft	**0.78**

Table 5-3
Summary of 2016 - 2021 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
Transect B	AE105D	16A-AE105D-062216-1	Normal	6/22/2016	73 - 78 ft	**1.4**
		17A-AE105D-101217-1	Normal	10/12/2017	73 - 78 ft	**1.3**
		18A-AE105D-100318-1	Normal	10/3/2018	73 - 78 ft	**2.0**
		19A-AE105D-091619-1	Normal	9/16/2019	73 - 78 ft	**1.4**
		20A-AE105D-091720-1	Normal	9/17/2020	73 - 78 ft	**0.82**
		21A-AE105D-091721-1	Normal	9/17/2021	73 - 78 ft	**0.67**
Transect B	AE105R-2	16A-AE105R2-062016-1	Normal	6/20/2016	98 - 103 ft	**3.6**
		17A-AE105R2-101217-1	Normal	10/12/2017	98 - 103 ft	**6.1 J**
		18A-AE105R2-100318-1	Normal	10/3/2018	98 - 103 ft	**5.8**
		19A-AE105R2-091619-1	Normal	9/16/2019	98 - 103 ft	**5.9**
		20A-AE105R2-091720-1	Normal	9/17/2020	98 - 103 ft	**5.1**
		21A-AE105R2-091321-1	Normal	9/13/2021	98 - 103 ft	**5.3**
Transect B	AE105R-4	17A-AE105R4-101217-1	Normal	10/12/2017	125 - 130 ft	**5.9**
		18A-AE105R4-100318-1	Normal	10/3/2018	125 - 130 ft	**6.3**
		19A-AE105R4-091619-1	Normal	9/16/2019	125 - 130 ft	**5.3**
		20A-AE105R4-091720-1	Normal	9/17/2020	125 - 130 ft	**5.3**
		21A-AE105R4-091321-1	Normal	9/13/2021	125 - 130 ft	**5.5**
Transect B	AE105S	16A-AE105S-062216-1	Normal	6/22/2016	35 - 40 ft	**1.1**
		17A-AE105S-101217-1	Normal	10/12/2017	35 - 40 ft	**0.44**
Transect B	AE106R-5	17A-AE106R5-101217-1	Normal	10/12/2017	164 - 169 ft	**0.40**
		18A-AE106R5-100318-1	Normal	10/3/2018	164 - 169 ft	**0.37**
		19A-AE106R5-091619-1	Normal	9/16/2019	164 - 169 ft	**0.27**
		20A-AE106R5-091720-1	Normal	9/17/2020	164 - 169 ft	**0.40**
		21A-AE106R5-091321-1	Normal	9/13/2021	164 - 169 ft	**0.40**
Transect C	STM-8D	16A-STM8D-063016-1	Normal	6/30/2016	34.7 - 39.7 ft	**0.35**
		17A-STM8D-101117-1	Normal	10/11/2017	34.7 - 39.7 ft	**0.78**
		18A-STM8D-092818-1	Normal	9/28/2018	34.7 - 39.7 ft	**0.76**
		19A-STM8D-092619-1	Normal	9/26/2019	34.7 - 39.7 ft	**0.44**
		20A-STM8D-092320-1	Normal	9/23/2020	34.7 - 39.7 ft	**0.45**
		21A-STM8D-090821-1	Normal	9/8/2021	34.7 - 39.7 ft	**0.41**
Transect C	STM-8M	16A-STM8M-062116-1	Normal	6/21/2016	19.5 - 24.5 ft	0.20 U
		17A-STM8M-101117-1	Normal	10/11/2017	19.5 - 24.5 ft	**0.65**
Transect C	STM-8R	16A-STM8R-063016-1	Normal	6/30/2016	46.5 - 51.5 ft	**0.40**
		17A-STM8R-101117-1	Normal	10/11/2017	46.5 - 51.5 ft	**0.82**
		18A-STM8R-092818-1	Normal	9/28/2018	46.5 - 51.5 ft	**0.81**
		19A-STM8R-092619-1	Normal	9/26/2019	46.5 - 51.5 ft	0.20 U
		20A-STM8R-092320-1	Normal	9/23/2020	46.5 - 51.5 ft	0.20 U
		21A-STM8R-090821-1	Normal	9/8/2021	46.5 - 51.5 ft	**0.53**
Transect C	STM-8R1	16A-STM8R1-062816-1	Normal	6/28/2016	85 - 90 ft	0.20 U
		17A-STM8R1-101717-1	Normal	10/17/2017	85 - 90 ft	**0.29**
		17A-STM8R1-101717-2	Duplicate	10/17/2017	85 - 90 ft	**0.29**
		18A-STM8R1-100218-1	Normal	10/2/2018	85 - 90 ft	**0.40**
		19A-STM8R1-092619-1	Normal	9/26/2019	85 - 90 ft	**0.28**
		20A-STM8R1-092320-1	Normal	9/23/2020	85 - 90 ft	**0.32**
		21A-STM8R1-091621-1	Normal	9/16/2021	85 - 90 ft	**0.36**
		21A-STM8R1-091621-2	Duplicate	9/16/2021	85 - 90 ft	**0.38**
Transect C	STM-8S	16A-STM8S-062116-1	Normal	6/21/2016	1 - 11 ft	0.20 U
		17A-STM8S-101117-1	Normal	10/11/2017	1 - 11 ft	0.20 U

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					Building 1 Tank F											
Location ID:					AE23R	AE23R	AE23R	AE23R	AE23R	AE23R	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-1
Sample ID:					16B-AE23R-062716-1	17A-AE23R-101317-1	18A-AE23R-091918-1	19A-AE23R-092319-1	20A-AE23R-091420-1	21A-AE23R-090321-1	16B-AE26R1-062316-1	17A-AE26R1-100417-1	18A-AE26R1-091818-1	19A-AE26R1-092319-1	20A-AE26R1-091420-1	21A-AE26R1-090121-1
Sample Date:					6/27/2016	10/13/2017	9/19/2018	9/23/2019	9/14/2020	9/3/2021	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	9/1/2021
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval:					44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	5.05 U	5.00 U	5.00 U	0.47 U	0.47 U	0.47 U	5.21 U	5.05 U	4.85 U	0.47 U	0.47 U	0.49 U
Acenaphthene	20	NE	10000	100000	5.05 U	5.00 U	5.00 U	0.47 U	0.47 U	0.47 U	5.21 U	5.05 U	4.85 U	0.47 U	0.47 U	0.49 U
Acenaphthylene	30	10000	40	100000	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	0.09 UJ	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	0.10 U
Anthracene	60	NE	30	600	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	0.10 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	5.05 U	5.00 U	5.00 U	0.19 U	0.19 U	0.19 U	5.21 U	5.05 U	4.85 U	0.19 U	0.19 U	0.20 U
Benzo(b)Fluoranthene	1	NE	400	4000	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	0.10 U
Benzo(g,h,i)Perylene	50	NE	20	500	5.05 U	5.00 U	5.00 U	0.02 U	0.02 U	0.02 U	5.21 U	5.05 U	4.85 U	0.02 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	0.10 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	101 U	100 U	100 U	190 U	200 U	190 U	104 U	101 U	97.1 U	190 U	190 U	190 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	101 U	100 U	100 U	190 U	200 U	190 U	104 U	101 U	97.1 U	190 U	190 U	190 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	101 U	100 U	100 UJ	190 UJ	200 U	190 U	104 U	101 U	97.1 UJ	190 UJ	190 UJ	190 U
Chrysene	**2**	NE	70	700	5.05 U	5.00 U	5.00 U	0.05 U	0.05 U	0.05 U	5.21 U	5.05 U	4.85 U	0.05 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	5.05 U	5.00 U	5.00 U	0.02 U	0.02 U	0.02 U	5.21 U	5.05 U	4.85 U	0.02 U	0.02 U	0.02 U
Fluoranthene	90	NE	200	2000	5.05 U	5.00 U	5.00 U	0.47 U	0.47 U	0.47 U	5.21 U	5.05 U	4.85 U	0.47 U	0.47 U	0.49 U
Fluorene	30	NE	40	400	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	0.10 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	0.10 U
Naphthalene	140	700	20000	100000	5.05 U	5.00 U	5.00 U	**1.1**	**0.71 J**	**1.0**	5.21 UJ	5.05 U	4.85 U	0.47 U	0.47 U	0.49 U
Phenanthrene	40	NE	10000	100000	5.05 U	5.00 U	5.00 U	0.47 U	0.47 U	0.47 U	5.21 U	5.05 U	4.85 U	0.47 U	0.47 U	0.49 U
Pyrene	60	NE	20	600	5.05 U	5.00 U	5.00 U	0.07 U	0.07 U	0.07 U	5.21 U	5.05 U	4.85 U	0.07 U	0.07 U	0.07 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	2000 U	100 U	50.0 U	1.0 U	20 U	20 U	5.00 U	5.00 U	1.00 U	1.0 U	5.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	**107000 J+**	**65800 J+**	**51800 J+**	**70000**	**57000**	**64000**	**179 J+**	375 U	**339 J+**	**360**	**740**	**340**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	10000 U	2500 U	1250 U	100 U	2000 U	2000 U	25.0 U	125 U	25.0 U	100 U	500 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	10000 U	2500 U	1250 U	100 U	2000 U	2000 U	25.0 U	125 U	25.0 U	100 U	500 U	100 U
Ethylbenzene	700	20000	5000	100000	2000 U	100 U	50.0 U	1.0 U	**37**	**36**	5.00 U	5.00 U	1.00 U	1.0 U	5.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	2000 U	100 U	50.0 U	1.0 U	20 U	20 U	5.00 U	5.00 UJ	1.00 U	1.0 U	5.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	4000 U	200 U	100 U	**33**	40 U	40 U	10.0 U	10.0 U	2.00 U	2.0 U	10 U	2.0 U
Naphthalene	140	700	20000	100000	2000 U	100 U	50.0 U	5.0 U	100 U	100 U	5.00 UJ	5.00 U	1.00 U	5.0 U	25 U	5.0 U
o-Xylene	10000	3000	5000	NE	2000 U	100 U	50.0 U	**12**	20 U	20 U	5.00 U	5.00 U	1.00 U	1.0 U	5.0 U	1.0 U
Toluene	**1000**	50000	40000	100000	**3320**	**4540**	**4060**	**4000**	**3900**	**3800**	**17.3**	5.00 U	1.00 U	1.0 U	5.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	4000 U	200 U	50.0 U	**45**	40 U	40 U	10 U	5.00 U	2.00 U	2.0 U	5.0 U	2 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					Building 1 Tank F											
				Location ID:	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6
				Sample ID:	16B-AE28R2-062316-1	17A-AE28R2-100417-1	18A-AE28R2-091818-1	19A-AE28R2-092319-1	20A-AE28R2-091420-1	21A-AE28R2-090121-1	16B-AE29R6-062816-1	17A-AE29R6-101717-1	18A-AE29R6-091818-1	19A-AE29R6-092419-1	20A-AE29R6-092220-1	21A-AE29R6-091421-1
				Sample Date:	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	9/1/2021	6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	9/14/2021
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	5.21 U	4.90 U	5.10 U	0.47 U	0.47 U	0.47 U	5.10 U	4.85 U	4.85 U	0.47 U	0.47 U	0.47 U
Acenaphthene	20	NE	10000	100000	5.21 U	4.90 U	5.10 U	0.47 U	0.47 U	0.47 U	5.10 U	4.85 U	4.85 U	0.47 U	0.47 U	0.47 U
Acenaphthylene	30	10000	40	100000	5.21 U	4.90 U	5.10 U	0.09 U	0.09 U	0.09 UJ	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	0.09 U
Anthracene	60	NE	30	600	5.21 U	4.90 U	5.10 U	0.09 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	5.21 U	4.90 U	5.10 U	0.09 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	5.21 U	4.90 U	5.10 U	0.19 U	0.19 U	0.19 U	5.10 U	4.85 U	4.85 U	0.19 U	0.19 UJ	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	5.21 U	4.90 U	5.10 U	0.09 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(g,h,i)Perylene	50	NE	20	500	5.21 U	4.90 U	5.10 U	0.02 U	0.02 U	0.02 U	5.10 U	4.85 U	4.85 U	0.02 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	5.21 U	4.90 U	5.10 U	0.09 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	104 U	98.0 U	102 U	190 U	200 U	190 U	102 U	97.1 U	97.1 U	190 U	200 U	190 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	104 U	98.0 U	102 U	190 U	200 U	190 U	102 U	97.1 U	97.1 U	190 U	200 U	190 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	104 U	98.0 U	102 UJ	190 UJ	200 UJ	190 U	102 U	97.1 U	97.1 UJ	190 U	200 U	190 U
Chrysene	**2**	NE	70	700	5.21 U	4.90 U	5.10 U	0.05 U	0.05 U	0.05 U	5.10 U	4.85 U	4.85 U	0.05 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	5.21 U	4.90 U	5.10 U	0.02 U	0.02 U	0.02 U	5.10 U	4.85 U	4.85 U	0.02 U	0.02 U	0.02 U
Fluoranthene	90	NE	200	2000	5.21 U	4.90 U	5.10 U	0.47 U	0.47 U	0.47 U	5.10 U	4.85 U	4.85 U	0.47 U	0.47 U	0.47 U
Fluorene	30	NE	40	400	5.21 U	4.90 U	5.10 U	0.09 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	5.21 U	4.90 U	5.10 U	0.09 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 UJ	0.09 U
Naphthalene	140	700	20000	100000	5.21 U	4.90 U	5.10 U	**0.87**	**0.65 J**	**0.93**	5.10 U	4.85 U	4.85 U	0.47 U	0.47 U	0.47 U
Phenanthrene	40	NE	10000	100000	5.21 U	4.90 U	5.10 U	0.47 U	0.47 U	0.47 U	5.10 U	4.85 U	4.85 U	0.47 U	0.47 U	0.47 U
Pyrene	60	NE	20	600	5.21 U	4.90 U	5.10 U	0.07 U	0.07 U	0.07 U	5.10 U	4.85 U	4.85 U	0.07 U	0.07 U	0.07 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	5.00 U	20.0 U	1.00 U	5.0 U	20 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	**4950 J+**	**7920 J+**	**2690 J+**	**11000**	**9500**	**11000**	75.0 U	**233 J+**	**162 J+**	**190**	**200**	**170**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**48.8**	500 U	**51.6**	100 U	2000 U	100 U	25.0 U	25.0 U	25.0 U	100 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	25.0 U	500 U	25.0 U	100 U	2000 U	100 U	25.0 U	25.0 U	25.0 U	100 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	5.00 U	20.0 U	**5.99**	5.0 U	20 U	**5.6**	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	5.00 UJ	20.0 UJ	1.00 U	5.0 U	20 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	10.0 U	40.0 U	**7.52**	10 U	40 U	**5.9**	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U
Naphthalene	140	700	20000	100000	5.00 U	20.0 U	**1.56**	5.0 U	100 U	5.0 U	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	5.00 UJ	20.0 U	1.00 U	1.0 U	20 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Toluene	**1000**	50000	40000	100000	**14.4**	20.0 U	**13.4**	10 U	20 U	**11**	**7.06**	**2.21**	1.00 U	1.0 U	1.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	10 U	40.0 U	**7.52**	10 U	40 U	**5.9**	10 U	2.00 U	2.00 U	2.0 U	2.0 U	2 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					EPL														
Location ID:					AE03	AE03	AE03	AE03	AE03	AE03	AE03	AE03	AE03	AE03	AE04	AE04	AE04	AE04	AE04
Sample ID:					16A-AE03-062816-1	16A-AE03-062816-2	17A-AE03-100917-1	18A-AE03-092418-1	18A-AE03-092418-2	19A-AE03-091219-1	19A-AE03-091219-2	20A-AE3-092320-1	20A-AE3-092320-2	21A-AE3-091521-1	16A-AE04-061316-1	17A-AE04-100917-1	18A-AE04-092518-1	18A-AE04-092518-2	19A-AE04-091219-1
Sample Date:					6/28/2016	6/28/2016	10/9/2017	9/24/2018	9/24/2018	9/12/2019	9/12/2019	9/23/2020	9/23/2020	9/15/2021	6/13/2016	10/9/2017	9/25/2018	9/25/2018	9/12/2019
Sample Type:					N	FD	N	N	FD	N	FD	N	FD	N	N	N	N	FD	N
Depth Interval:					3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):															
EPH (ug/l)																			
2-Methylnaphthalene	10	2000	20000	100000	5.15 UJ	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	**3.3**	**3.2**	**3.5**	**3.2**	**3.5**	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U
Acenaphthene	20	NE	10000	100000	5.15 U	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U
Acenaphthylene	30	10000	40	100000	5.15 U	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	R	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U
Anthracene	60	NE	30	600	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	5.15 U	5.10 U	4.85 UJ	**10.1 J-**	**11.0 J-**	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	5.10 U	4.90 U	4.81 U	4.85 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	5.15 U	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U
Benzo(g,h,i)Perylene	50	NE	20	500	5.15 U	5.10 U	4.85 UJ	**9.36 J-**	**11.3 J-**	0.02 U	0.02 U	0.02 U	0.02 U	**0.03 J-**	5.10 U	4.90 U	4.81 U	4.85 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	103 U	102 U	97.1 U	97.1 U	97.1 U	190 U	190 U	190 U	190 U	190 U	102 U	98.0 U	96.2 U	97.1 U	190 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	103 U	102 U	97.1 U	97.1 U	97.1 U	190 U	190 U	190 U	190 U	190 U	102 U	98.0 U	96.2 U	97.1 U	190 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	**105**	**173**	97.1 U	97.1 UJ	97.1 UJ	190 U	190 U	190 U	190 U	190 U	102 U	98.0 U	96.2 U	97.1 U	190 U
Chrysene	**2**	NE	70	700	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	5.10 U	4.90 U	4.81 U	4.85 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	5.15 U	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	0.02 U	0.02 U	0.02 U	0.02 U	**0.03**	5.10 U	4.90 U	4.81 U	4.85 U	0.02 U
Fluoranthene	90	NE	200	2000	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U
Fluorene	30	NE	40	400	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	5.15 U	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U
Naphthalene	140	700	20000	100000	5.15 UJ	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	**5.1**	**5.0**	**5.8**	**5.4**	**4.3**	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U
Phenanthrene	40	NE	10000	100000	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U
Pyrene	60	NE	20	600	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	5.10 U	4.90 U	4.81 U	4.85 U	0.07 U
VPH (ug/l)																			
Benzene	5	1000	10000	100000	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	75.0 U	75.0 U	75.0 UJ	**83.2 J**	**82.3 J**	100 U	100 U	100 U	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**212 J+**	**230**	**363 J+**	**398**	**379**	**240**	**240**	**280**	**260**	**250**	**89.6**	**55.3**	**137**	**141**	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	**186**	**164**	**332 J-**	**195**	**172**	**340**	**300**	**540**	**630**	**620**	**61.7**	**45.8**	**56.5**	**52.6**	100 U
Ethylbenzene	700	20000	5000	100000	5.00 U	5.00 U	**1.53**	**1.19**	**1.01**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	**1.00**	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	5.00 U	5.00 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 UJ	1.00 U	1.00 U	1.0 U
mp-xylene	10000	3000	5000	NE	10.0 U	10.0 U	**2.33**	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.00 U	2.0 U
Naphthalene	140	700	20000	100000	**8.62**	**8.94**	**13.7**	**12.8**	**12.6**	**7.9**	**8.3**	**7.2**	**9.4**	**8.9**	5.00 U	1.00 U	**1.72**	1.00 U	5.0 U
o-Xylene	10000	3000	5000	NE	5.00 U	5.00 U	**3.98**	1.00 U	1.00 U	**1.4**	**1.3**	**2.1**	**2.1**	**1.6**	5.00 U	**1.10**	1.00 U	1.00 U	1.0 U
Toluene	**1000**	50000	40000	100000	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	10 U	10 U	**6.31**	2.00 U	2.00 U	**1.4**	**1.3**	**2.1**	**2.1**	**1.6**	10 U	**1.10**	2.00 U	2.00 U	2.0 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					EPL												
Location ID:					AE04	AE04	AE04	AE04	GZA-102S	GZA-102S	GZA-102S	GZA-102S	GZA-105D	GZA-105D	GZA-105D	GZA-105D	GZA-105D
Sample ID:					19A-AE04-091219-2	20A-AE4-092320-1	20A-AE4-092320-2	21A-AE04-091521-1	18A-GZA102S-092418-1	19A-GZA102S-091319-1	20A-GZA102S-092320-1	21A-GZA102S-091621-1	16A-GZA105D-061516-1	17A-GZA-105D-101917-1	18A-GZA105D-092518-1	19A-GZA105D-091819-1	20A-GZA105D-092420-1
Sample Date:					9/12/2019	9/23/2020	9/23/2020	9/15/2021	9/24/2018	9/13/2019	9/23/2020	9/16/2021	6/15/2016	10/19/2017	9/25/2018	9/18/2019	9/24/2020
Sample Type:					FD	N	FD	N	N	N	N	N	N	N	N	N	N
Depth Interval:					3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	1.7 - 10.7 ft	1.7 - 10.7 ft	1.7 - 10.7 ft	2.5 - 11.5 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):													
EPH (ug/l)																	
2-Methylnaphthalene	10	2000	20000	100000	0.47 U	0.47 U	0.47 U	0.47 U	5.00 U	0.47 U	0.47 U	0.47 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U
Acenaphthene	20	NE	10000	100000	0.47 U	0.47 U	0.47 U	0.47 U	5.00 U	0.47 U	0.47 U	0.47 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U
Acenaphthylene	30	10000	40	100000	**0.12**	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U
Anthracene	60	NE	30	600	0.09 U	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	0.09 U	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	0.19 U	0.19 U	0.19 U	0.19 U	5.00 U	0.19 U	0.19 U	0.19 U	5.15 U	4.95 U	4.81 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	0.09 U	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U
Benzo(g,h,i)Perylene	50	NE	20	500	0.02 U	0.02 U	0.02 U	0.02 U	5.00 U	0.02 U	0.02 U	0.02 U	5.15 U	4.95 U	4.81 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	0.09 U	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	190 U	200 U	200 U	200 U	100 U	190 U	190 U	200 U	103 U	**1060**	96.2 U	200 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	190 U	200 U	200 U	200 U	100 U	190 U	190 U	200 U	103 U	99.0 U	96.2 U	200 U	200 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	190 U	200 U	200 U	200 U	100 U	190 U	190 U	200 U	103 U	99.0 U	96.2 U	200 U	200 U
Chrysene	**2**	NE	70	700	0.05 U	0.05 U	0.05 U	0.05 U	5.00 U	0.05 U	0.05 U	0.05 U	5.15 U	4.95 U	4.81 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	0.02 U	0.02 U	0.02 U	0.02 U	5.00 U	0.02 U	0.02 U	0.02 U	5.15 U	**86.3**	4.81 U	0.02 U	0.02 U
Fluoranthene	90	NE	200	2000	0.47 U	0.47 U	0.47 U	0.47 U	5.00 U	0.47 U	0.47 U	0.47 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U
Fluorene	30	NE	40	400	0.09 U	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	0.09 U	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	5.15 U	**43.8**	4.81 U	0.09 U	0.09 U
Naphthalene	140	700	20000	100000	0.47 U	0.47 U	0.47 U	0.47 U	5.00 U	0.47 U	0.47 U	0.47 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U
Phenanthrene	40	NE	10000	100000	0.47 U	0.47 U	0.47 U	0.47 U	5.00 U	0.47 U	0.47 U	0.47 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U
Pyrene	60	NE	20	600	0.07 U	0.07 U	0.07 U	0.07 U	5.00 U	0.07 U	0.07 U	0.07 U	5.15 U	4.95 U	4.81 U	0.07 U	0.07 U
VPH (ug/l)																	
Benzene	5	1000	10000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	100 U	100 U	100 U	100 U	75.0 U	100 U	100 U	100 U	**402 J+**	**785 J+**	**224 J+**	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	100 U	100 U	100 U	100 U	25.0 U	100 U	100 U	100 U	**59.3**	**38.5**	**28.8**	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	100 U	**130**	**130**	100 U	25.0 U	100 U	100 U	100 U	**55.9**	**34.9**	25.0 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	**1.5**	1.0 U	**2.2**	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.00 U	2.0 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U
Naphthalene	140	700	20000	100000	5.0 U	5.0 U	5.0 U	5.0 U	1.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	**1.7**	1.0 U	1.0 U	1.0 U	1.00 U	**1.2**	1.0 U	1.0 U	5.00 U	**1.59**	1.00 U	**1.4**	1.0 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	**1.7**	2.0 U	2.0 U	2 U	2.00 U	**1.2**	2.0 U	2 U	10 U	**1.59**	2.00 U	**1.4**	2.0 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					EPL												
Location ID:					GZA-105D	GZA-105D	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	PZ-2S	PZ-2S	PZ-2S	PZ-2S
Sample ID:					21A-GZA105D-091521-1	21A-GZA105D-091521-2	16A-GZA105S-061516-1	17A-GZA105S-100917-1	17A-GZA105S-100917-2	18A-GZA105S-092518-1	19A-GZA105S-091819-1	20A-GZA105S-092420-1	21A-GZA105S-091521-1	18A-PZ2S-092418-1	19A-PZ2S-093019-1	20A-PZ2S-092520-1	21A-PZ2S-092121-1
Sample Date:					9/15/2021	9/15/2021	6/15/2016	10/9/2017	10/9/2017	9/25/2018	9/18/2019	9/24/2020	9/15/2021	9/24/2018	9/30/2019	9/25/2020	9/21/2021
Sample Type:					N	FD	N	N	FD	N	N	N	N	N	N	N	N
Depth Interval:					16 - 26 ft	16 - 26 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	3.55 - 8.55 ft	3.55 - 8.55 ft	3.55 - 8.55 ft	3.5 - 8.5 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):													
EPH (ug/l)																	
2-Methylnaphthalene	10	2000	20000	100000	0.48 U	0.48 U	5.10 UJ	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U	0.48 U	4.85 UJ	0.49 U	0.49 U	**0.51**
Acenaphthene	20	NE	10000	100000	0.48 U	0.48 U	5.10 UJ	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U	0.48 U	4.85 UJ	0.49 U	0.49 U	0.47 U
Acenaphthylene	30	10000	40	100000	R	R	5.10 UJ	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	R	4.85 UJ	0.10 U	0.10 U	0.09 U
Anthracene	60	NE	30	600	0.09 U	0.09 U	5.10 U	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.09 U	4.85 UJ	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	0.10 U	0.10 U	5.10 U	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.10 U	4.85 UJ	0.10 U	0.10 U	**0.14**
Benzo(a)Pyrene	**0.2**	NE	500	5000	0.19 U	0.19 U	5.10 U	4.81 U	4.85 U	4.85 U	0.19 U	0.19 U	0.19 U	**11.0 J-**	0.19 U	0.20 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	0.10 U	0.10 U	5.10 UJ	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.10 U	4.85 UJ	0.10 U	0.10 U	**0.19 J**
Benzo(g,h,i)Perylene	50	NE	20	500	**0.02 J-**	0.02 UJ	5.10 U	4.81 U	4.85 U	4.85 U	0.02 U	0.02 U	0.02 UJ	**10.9 J-**	0.02 UJ	**0.06**	**0.17**
Benzo(k)Fluoranthene	1	NE	100	1000	0.10 U	0.10 U	5.10 U	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.10 U	4.85 UJ	0.10 U	0.10 U	**0.18**
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	200 U	200 U	102 UJ	96.2 U	97.1 U	97.1 U	200 U	200 U	200 U	97.1 U	200 U	200 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	200 U	200 U	102 U	96.2 U	97.1 U	97.1 U	200 U	200 U	200 U	97.1 U	200 U	200 U	200 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	200 U	200 U	102 U	96.2 U	97.1 U	97.1 U	200 U	200 U	200 U	97.1 UJ	200 UJ	**690**	**3000**
Chrysene	**2**	NE	70	700	0.05 U	0.05 U	5.10 U	4.81 U	4.85 U	4.85 U	0.05 U	0.05 U	0.05 U	4.85 UJ	0.05 U	**0.06**	**0.19**
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	0.02 U	0.02 U	5.10 U	4.81 U	4.85 U	4.85 U	0.02 U	0.02 U	0.02 U	4.85 UJ	0.02 UJ	0.02 U	**0.03 J**
Fluoranthene	90	NE	200	2000	0.48 U	0.48 U	5.10 U	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U	0.48 U	4.85 UJ	0.49 U	0.49 U	0.47 U
Fluorene	30	NE	40	400	0.10 U	0.10 U	5.10 U	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.10 U	4.85 UJ	0.10 U	0.10 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	0.10 U	0.10 U	5.10 U	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.10 U	4.85 UJ	0.10 U	0.10 U	**0.20**
Naphthalene	140	700	20000	100000	0.48 U	0.48 U	5.10 UJ	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U	0.48 U	4.85 UJ	0.49 U	0.49 U	**1.9**
Phenanthrene	40	NE	10000	100000	0.48 U	0.48 U	5.10 U	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U	0.48 U	4.85 UJ	0.49 U	0.49 U	0.47 U
Pyrene	60	NE	20	600	0.07 U	0.07 U	5.10 U	4.81 U	4.85 U	4.85 U	0.07 U	0.07 U	0.07 U	4.85 UJ	0.07 U	**0.14**	**0.36**
VPH (ug/l)																	
Benzene	5	1000	10000	100000	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U	100 U	100 U	100 U	75.0 U	100 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	100 U	100 U	**106 J+**	**127**	**124**	**161**	100 U	100 U	100 U	**159 J-**	**100**	100 U	**120**
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	100 U	100 U	**77.9**	**127**	**125**	**112**	**150**	**220**	**130**	**107**	**160**	**220**	**330**
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	**1.8**	**2.3**	**1.5**	1.00 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	5.00 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U	2.00 U	2.0 U	2.0 U	2.0 U
Naphthalene	140	700	20000	100000	5.0 U	5.0 U	5.00 U	**1.08**	**1.18**	1.00 U	5.0 U	5.0 U	5.0 U	**1.10**	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	5.00 U	**3.00**	**2.88**	1.00 U	1.0 U	**1.3**	1.0 U	**4.40**	**2.0**	**2.1**	**2.3**
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	2 U	2 U	10 U	**3.00**	**2.88**	2.00 U	2.0 U	**1.3**	2 U	**4.40**	**2.0**	**2.1**	**2.3**

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					EPL													
Location ID:					TRC-101	TRC-101	TRC-101	TRC-101	TRC-102	TRC-102	TRC-102	TRC-102	TRC-102	TRC-102	TRC-102	TRC-103	TRC-103
Sample ID:					18A-TRC101-092418-1	19A-TRC101-091919-1	20A-TRC101-092320-1	21A-TRC101-091421-1	16A-TRC102-062716-1	16A-TRC102-062716-2	17A-TRC102-100217-1	18A-TRC102-092418-1	19A-TRC102-092019-1	20A-TRC102-092320-1	21A-TRC102-090721-1	18A-TRC103-092418-1	19A-TRC103-091919-1
Sample Date:					9/24/2018	9/19/2019	9/23/2020	9/14/2021	6/27/2016	6/27/2016	10/2/2017	9/24/2018	9/20/2019	9/23/2020	9/7/2021	9/24/2018	9/19/2019
Sample Type:					N	N	N	N	N	FD	N	N	N	N	N	N	N
Depth Interval:					1.5 - 10.5 ft	1.5 - 10.5 ft	1.5 - 10.5 ft	1.5 - 10.5 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	1.25 - 11.25 ft	1.25 - 11.25 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):													
EPH (ug/l)																	
2-Methylnaphthalene	10	2000	20000	100000	4.85 UJ	**0.62**	**0.52**	**0.86**	5.15 U	5.15 U	5.00 U	4.90 UJ	0.47 U	0.47 U	0.47 U	4.90 U	0.47 U
Acenaphthene	20	NE	10000	100000	4.85 UJ	0.47 U	0.48 U	0.49 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.47 U	0.47 U	0.47 U	4.90 U	0.47 U
Acenaphthylene	30	10000	40	100000	4.85 UJ	0.09 U	0.10 U	R	5.15 U	5.15 U	5.00 U	4.90 UJ	**0.21**	0.09 U	0.09 UJ	4.90 U	0.09 U
Anthracene	60	NE	30	600	4.85 UJ	0.09 U	0.09 U	0.09 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 U	0.09 U	4.90 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	4.85 UJ	0.09 U	**0.10**	0.10 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 U	0.09 U	4.90 U	0.09 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	**11.1 J-**	0.19 U	0.19 U	0.19 U	5.15 U	5.15 U	5.00 U	**9.13 J-**	0.19 U	0.19 U	0.19 U	4.90 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	4.85 UJ	0.09 U	**0.20**	0.10 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 U	0.09 U	4.90 U	0.09 U
Benzo(g,h,i)Perylene	50	NE	20	500	**11.0 J-**	**0.03**	**0.16**	**0.03 J-**	5.15 U	5.15 U	5.00 U	**8.90 J-**	0.02 U	0.02 U	0.02 U	4.90 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	4.85 UJ	0.09 U	**0.13**	0.10 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 UJ	0.09 U	4.90 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	97.1 U	200 U	200 U	200 U	103 U	103 U	100 U	98.0 U	200 U	190 U	190 U	98.0 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	97.1 U	200 U	200 U	200 U	103 U	103 U	100 U	98.0 U	200 U	190 U	190 U	98.0 U	200 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	97.1 UJ	200 U	**1100**	200 U	103 U	103 U	100 U	98.0 UJ	200 U	190 U	190 U	98.0 U	200 U
Chrysene	**2**	NE	70	700	4.85 UJ	0.05 U	**0.16**	0.05 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.05 U	0.05 U	0.05 U	4.90 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	4.85 UJ	0.02 U	**0.03**	**0.03**	5.15 U	5.15 U	5.00 U	4.90 UJ	0.02 UJ	0.02 U	0.02 U	4.90 U	0.02 UJ
Fluoranthene	90	NE	200	2000	4.85 UJ	0.47 U	0.48 U	0.49 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.47 U	0.47 U	0.47 U	4.90 U	0.47 U
Fluorene	30	NE	40	400	4.85 UJ	0.09 U	0.10 U	0.10 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 U	0.09 U	4.90 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	4.85 UJ	0.09 UJ	**0.17**	0.10 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 U	0.09 U	4.90 U	0.09 U
Naphthalene	140	700	20000	100000	4.85 UJ	0.47 U	0.48 U	0.49 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.47 U	0.47 U	0.47 U	4.90 U	0.47 U
Phenanthrene	40	NE	10000	100000	4.85 UJ	0.47 U	0.48 U	0.49 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.47 U	0.47 U	0.47 U	4.90 U	0.47 U
Pyrene	60	NE	20	600	4.85 UJ	**0.09**	**0.26**	0.07 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.07 U	0.07 U	0.07 U	4.90 U	0.07 U
VPH (ug/l)																	
Benzene	5	1000	10000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	75.0 U	100 U	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U	100 U	100 U	100 U	75.0 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**272**	**220**	**210**	**240**	**33.7**	**31.6**	**43.0**	**47.6**	100 U	100 U	100 U	**65.7**	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	**131**	**280**	**420**	**520**	25.0 U	25.0 U	**41.5**	25.0 U	100 U	100 U	100 U	**36.0**	100 U
Ethylbenzene	700	20000	5000	100000	**1.15**	1.0 U	1.0 U	**5.8**	5.00 U	5.00 U	1.00 U	1.00 U	**1.1**	**1.5**	1.0 U	1.00 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.00 U	2.0 U	2.0 U	2.0 U	10.0 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U	2.00 U	2.0 U
Naphthalene	140	700	20000	100000	**1.59**	5.0 U	5.0 U	5.0 U	5.00 U	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U	5.0 U	1.00 U	5.0 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.0 U	**1.4**	**1.3**	5.00 U	5.00 U	**1.18**	1.00 U	**2.4**	**2.7**	1.0 U	**1.61**	1.0 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	2.00 U	2.0 U	**1.4**	**1.3**	10 U	10 U	**1.18**	2.00 U	**2.4**	**2.7**	2 U	**1.61**	2.0 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					EPL		Former Tank Farm				Transect A					
Location ID:					TRC-103	TRC-103	AE100R-1	AE100R-1	AE100R-1	AE100R-1	AE102M	AE102M	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6
Sample ID:					20A-TRC103-092320-1	21A-TRC103-090721-1	18A-AE100R1-091918-1	19A-AE100R1-092319-1	20A-AE100R1-091020-1	21A-AE100R1-090921-1	16A-AE102M-061316-1	17A-AE102M-100217-1	16A-AE102RR6-061416-1	17A-AE102RR6-100317-1	18A-AE102RR6-091918-1	19A-AE102RR6-092419-1
Sample Date:					9/23/2020	9/7/2021	9/19/2018	9/23/2019	9/10/2020	9/9/2021	6/13/2016	10/2/2017	6/14/2016	10/3/2017	9/19/2018	9/24/2019
Sample Type:					N	N	N	N	N	N	Normal	Normal	N	N	N	N
Depth Interval:					1.25 - 11.25 ft	1.25 - 11.25 ft	18 - 24 ft	18 - 24 ft	18 - 24 ft	18 - 24 ft	23 - 28 ft	23 - 28 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	0.47 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.47 U
Acenaphthene	20	NE	10000	100000	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	0.47 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.47 U
Acenaphthylene	30	10000	40	100000	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.09 U
Anthracene	60	NE	30	600	0.09 U	0.09 U	4.90 U	0.09 U	0.09 U	0.09 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.09 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	0.19 U	0.19 U	4.90 U	0.20 U	0.19 U	0.19 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.09 U
Benzo(g,h,i)Perylene	50	NE	20	500	0.02 U	0.02 U	4.90 U	0.02 U	0.02 U	0.02 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	200 U	200 U	98.0 U	190 U	200 U	190 U	104 U	98.0 U	102 U	98.0 U	105 U	190 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	200 U	200 U	98.0 U	190 U	200 U	190 U	104 U	98.0 U	102 U	98.0 U	105 U	190 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	200 U	200 U	98.0 UJ	190 UJ	200 U	190 U	104 U	98.0 U	102 U	98.0 U	105 UJ	190 U
Chrysene	**2**	NE	70	700	0.05 U	0.05 U	4.90 U	0.05 U	0.05 U	0.05 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	0.02 U	0.02 U	4.90 U	0.02 U	0.02 U	0.02 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.02 U
Fluoranthene	90	NE	200	2000	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	0.47 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.47 U
Fluorene	30	NE	40	400	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.09 U
Naphthalene	140	700	20000	100000	0.47 U	0.47 UJ	4.90 U	**1.7**	**0.76**	0.47 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.47 U
Phenanthrene	40	NE	10000	100000	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	0.47 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.47 U
Pyrene	60	NE	20	600	0.07 U	0.07 U	4.90 U	0.07 U	0.07 U	0.07 U	5.21 U	4.90 U	5.10 U	4.90 U	5.26 U	0.07 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U	1.00 U	5.00 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	100 U	100 U	**393 J+**	100 U	100 U	100 U	**87.8 J+**	75.0 U	**1350**	**1860 J+**	**2250 J+**	**2400**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	100 U	100 U	**123**	**100**	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U	125 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	100 U	100 U	25.0 U	100 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U	125 U	100 U
Ethylbenzene	700	20000	5000	100000	**1.9**	**1.7**	**7.84**	**4.4**	**2.8**	**1.9**	5.00 U	1.00 U	5.00 U	1.00 U	5.00 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 UJ	5.00 U	1.00 U	5.00 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	2.00 U	2.0 U	2.0 U	2.0 U	10.0 U	2.00 U	10.0 U	2.00 U	10.0 U	2.0 U
Naphthalene	140	700	20000	100000	5.0 U	5.0 UJ	**1.74**	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	5.00 U	1.00 U	5.00 U	5.0 U
o-Xylene	10000	3000	5000	NE	**2.7**	1.0 U	**2.49**	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U	1.00 U	5.00 U	1.0 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	**3.23**	**1.3**	**2.4**	1.0 U	5.00 U	1.00 U	5.00 U	1.00 U	5.00 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	**2.7**	2 U	**2.49**	2.0 U	2.0 U	2 U	10 U	2.00 U	10 U	2.00 U	5.00 U	2.0 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					Transect A											
Location ID:					AE102RR-6	AE102RR-6	AE103D	AE103D	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE104R-4	AE104R-4
Sample ID:					20A-AE102RR6-090920-1	21A-AE102RR6-090721-1	16A-AE103D-061316-1	17A-AE103D-100317-1	16A-AE103R1-061516-1	17A-AE103R1-100217-1	18A-AE103R1-092518-1	19A-AE103R1-091819-1	20A-AE103R1-091020-1	21A-AE103R1-090921-1	16A-AE104R4-061416-1	17A-AE104R4-100317-1
Sample Date:					9/9/2020	9/7/2021	6/13/2016	10/3/2017	6/15/2016	10/2/2017	9/25/2018	9/18/2019	9/10/2020	9/9/2021	6/14/2016	10/3/2017
Sample Type:					N	N	Normal	Normal	N	N	N	N	N	N	N	N
Depth Interval:					153 - 158 ft	153 - 158 ft	35 - 40 ft	35 - 40 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	128 - 133 ft	128 - 133 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	0.47 U	0.49 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.47 U	0.48 U	0.47 U	5.26 U	5.00 U
Acenaphthene	20	NE	10000	100000	0.47 U	0.49 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.47 U	0.48 U	0.47 U	5.26 U	5.00 U
Acenaphthylene	30	10000	40	100000	0.09 U	0.10 UJ	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	0.09 U	5.26 U	5.00 U
Anthracene	60	NE	30	600	0.09 U	0.09 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.09 U	0.09 U	0.09 U	5.26 U	5.00 U
Benzo(a)Anthracene	**1**	NE	1000	10000	0.09 U	0.10 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	0.09 U	5.26 U	5.00 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	0.19 U	0.20 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.19 U	0.19 U	0.19 U	5.26 U	5.00 U
Benzo(b)Fluoranthene	1	NE	400	4000	0.09 U	0.10 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	**0.11**	5.26 U	5.00 U
Benzo(g,h,i)Perylene	50	NE	20	500	0.02 U	0.02 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.02 U	0.02 U	**0.08**	5.26 U	5.00 U
Benzo(k)Fluoranthene	1	NE	100	1000	0.09 U	0.10 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	**0.12**	5.26 U	5.00 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	200 U	190 U	103 U	99.0 U	102 U	98.0 U	97.1 U	200 U	200 U	200 U	105 U	100 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	200 U	190 U	103 U	99.0 UJ	102 U	98.0 U	97.1 U	200 U	200 U	200 U	105 U	100 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	200 U	190 U	103 U	99.0 UJ	102 U	98.0 U	97.1 U	200 U	200 U	200 U	105 U	100 U
Chrysene	**2**	NE	70	700	0.05 U	0.05 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.05 U	0.05 U	**0.12**	5.26 U	5.00 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	0.02 U	0.02 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.02 U	0.02 U	0.02 U	5.26 U	5.00 U
Fluoranthene	90	NE	200	2000	0.47 U	0.49 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.47 U	0.48 U	0.47 U	5.26 U	5.00 U
Fluorene	30	NE	40	400	0.09 U	0.10 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	0.09 U	5.26 U	5.00 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	0.09 U	0.10 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	**0.11 J+**	5.26 U	5.00 U
Naphthalene	140	700	20000	100000	0.47 U	0.49 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.47 U	0.48 U	0.47 U	5.26 U	5.00 U
Phenanthrene	40	NE	10000	100000	0.47 U	0.49 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.47 U	0.48 U	0.47 U	5.26 U	5.00 U
Pyrene	60	NE	20	600	0.07 U	0.07 U	5.15 U	4.95 U	5.10 U	4.90 U	4.85 U	0.07 U	0.07 U	**0.25**	5.26 U	5.00 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	5.0 U	1.0 U	5.00 U	1.00 U	20.0 U	1.00 U	1.00 U	1.0 U	5.0 U	1.0 U	10.0 U	1.00 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	**1900**	**2500**	**79.6 J+**	75.0 U	**1150 J+**	**1040 J+**	**811 J+**	**800**	**640**	**880**	**2020**	**1560 J+**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	500 U	100 U	25.0 U	25.0 U	100 U	25.0 U	25.0 U	100 U	500 U	100 U	50.0 U	25.0 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	500 U	100 U	25.0 U	25.0 U	100 U	25.0 U	25.0 U	100 U	500 U	100 U	50.0 U	25.0 U
Ethylbenzene	700	20000	5000	100000	5.0 U	**1.2**	5.00 U	1.00 U	20.0 U	1.00 U	1.00 U	1.0 U	5.0 U	1.0 U	10.0 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	5.0 U	1.0 U	5.00 U	1.00 U	20.0 U	1.00 UJ	1.00 U	1.0 U	5.0 U	1.0 U	10.0 U	1.00 U
mp-xylene	10000	3000	5000	NE	10 U	2.0 U	10.0 U	2.00 U	40.0 U	2.00 U	2.00 U	2.0 U	10 U	2.0 U	20.0 U	2.00 U
Naphthalene	140	700	20000	100000	25 U	5.0 U	5.00 U	1.00 U	20.0 U	1.00 U	1.00 U	5.0 U	25 U	5.0 U	10.0 U	1.00 U
o-Xylene	10000	3000	5000	NE	5.0 U	1.0 U	5.00 U	1.00 U	20.0 U	1.00 U	1.00 U	1.0 U	5.0 U	1.0 U	10.0 U	1.00 U
Toluene	**1000**	50000	40000	100000	5.0 U	1.0 U	5.00 U	1.00 U	20.0 U	1.00 U	1.00 U	1.0 U	5.0 U	1.0 U	10.0 U	1.00 U
Total Xylenes_VPH	NE	NE	NE	NE	5.0 U	2 U	10 U	2.00 U	40 U	2.00 U	2.00 U	2.0 U	5.0 U	2 U	20 U	2.00 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					Transect A											
				Location ID:	AE104R-4	AE104R-4	AE104R-4	AE104R-4	AE109R-5	AE109R-5	AE109R-5	AE109R-5	AE109R-5	AE109R-5	EMW-11R2	EMW-11R2
				Sample ID:	18A-AE104R4-092618-1	19A-AE104R4-091819-1	20A-AE104R4-091120-1	21A-AE104R4-090221-1	16A-AE109R5-061616-1	17A-AE109R5-101017-1	18A-AE109R5-100218-1	19A-AE109R5-091819-1	20A-AE109R5-091620-1	21A-AE109R5-090221-1	16A-EMW11R2-062116-1	17A-EMW11R2-101017-1
				Sample Date:	9/26/2018	9/18/2019	9/11/2020	9/2/2021	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	9/2/2021	6/21/2016	10/10/2017
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	128 - 133 ft	128 - 133 ft	128 - 133 ft	128 - 133 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	104 - 114 ft	102.63 - 112.63 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	5.00 U	0.47 U	0.47 U	0.48 U	5.15 U	4.90 U	4.85 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U
Acenaphthene	20	NE	10000	100000	5.00 U	0.47 U	0.47 U	0.48 U	5.15 U	4.90 U	4.85 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U
Acenaphthylene	30	10000	40	100000	5.00 U	0.09 U	0.09 U	0.10 UJ	5.15 U	4.90 U	4.85 U	0.09 U	0.09 U	0.09 UJ	5.10 U	4.90 U
Anthracene	60	NE	30	600	5.00 U	0.09 U	0.09 U	0.09 U	5.15 U	4.90 U	4.85 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U
Benzo(a)Anthracene	**1**	NE	1000	10000	5.00 U	0.09 U	0.09 U	0.10 U	5.15 U	4.90 U	4.85 U	**0.13**	0.09 U	0.09 U	5.10 U	4.90 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	5.00 U	0.19 U	0.19 U	0.19 U	5.15 U	4.90 U	4.85 U	0.19 U	0.19 U	0.19 U	5.10 U	4.90 U
Benzo(b)Fluoranthene	1	NE	400	4000	5.00 U	0.09 U	0.09 U	0.10 U	5.15 U	4.90 U	4.85 U	**0.19**	0.09 U	0.09 U	5.10 U	4.90 U
Benzo(g,h,i)Perylene	50	NE	20	500	5.00 U	0.02 U	0.02 U	0.02 U	5.15 U	4.90 U	4.85 U	**0.12**	0.02 U	0.02 U	5.10 U	4.90 U
Benzo(k)Fluoranthene	1	NE	100	1000	5.00 U	0.09 U	0.09 U	0.10 U	5.15 U	4.90 U	4.85 U	**0.14**	0.09 U	0.09 U	5.10 U	4.90 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	100 U	200 U	200 U	200 U	103 U	**332**	97.1 U	190 U	200 U	190 U	102 U	**248**
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	100 U	200 U	200 U	200 U	103 U	98.0 U	97.1 U	190 U	200 U	190 U	102 U	98.0 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	100 UJ	200 U	200 U	200 U	103 U	98.0 U	97.1 U	190 U	200 U	190 U	102 U	98.0 U
Chrysene	**2**	NE	70	700	5.00 U	0.05 U	0.05 U	0.05 U	5.15 U	4.90 U	4.85 U	**0.18**	0.05 U	0.05 U	5.10 U	4.90 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	5.00 U	0.02 U	0.02 U	0.02 U	5.15 U	4.90 U	4.85 U	**0.03**	0.02 U	0.02 U	5.10 U	4.90 U
Fluoranthene	90	NE	200	2000	5.00 U	0.47 U	0.47 U	0.48 U	5.15 U	4.90 U	4.85 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U
Fluorene	30	NE	40	400	5.00 U	0.09 U	0.09 U	0.10 U	5.15 U	4.90 U	4.85 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	5.00 U	0.09 U	0.09 U	0.10 U	5.15 U	4.90 U	4.85 U	**0.14**	0.09 U	0.09 U	5.10 U	4.90 U
Naphthalene	140	700	20000	100000	5.00 U	0.47 U	0.47 U	0.48 U	5.15 U	4.90 U	4.85 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U
Phenanthrene	40	NE	10000	100000	5.00 U	0.47 U	0.47 U	0.48 U	5.15 U	4.90 U	4.85 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U
Pyrene	60	NE	20	600	5.00 U	0.07 U	0.07 U	0.07 U	5.15 U	4.90 U	4.85 U	**0.26**	0.07 U	0.07 U	5.10 U	4.90 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	R	1.0 U	5.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	50.0 U	10.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	**2080 J**	**2200**	**1500**	**1600**	**324 J+**	**283 J+**	**329 J+**	**240**	**250**	**160**	**5020 J+**	**3830 J+**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	R	100 U	500 U	100 U	**28.9**	25.0 U	25.0 U	100 U	100 U	100 U	250 U	250 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	R	100 U	500 U	100 U	25.0 U	25.0 U	25.0 U	100 U	100 U	100 U	250 U	250 U
Ethylbenzene	700	20000	5000	100000	R	1.0 U	5.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	50.0 U	10.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	R	1.0 U	5.0 U	1.0 U	5.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	50.0 U	10.0 UJ
mp-xylene	10000	3000	5000	NE	R	2.0 U	10 U	2.0 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U	100 U	20.0 U
Naphthalene	140	700	20000	100000	R	5.0 U	25 U	5.0 U	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U	5.0 U	50.0 U	10.0 U
o-Xylene	10000	3000	5000	NE	R	1.0 U	5.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	50.0 U	10.0 U
Toluene	**1000**	50000	40000	100000	R	**3.4**	5.0 U	1.0 U	**12.1**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	50.0 U	10.0 U
Total Xylenes_VPH	NE	NE	NE	NE	U	2.0 U	5.0 U	2 U	10 U	2.00 U	2.00 U	2.0 U	2.0 U	2 U	100 U	20.0 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					Transect A				Downgradient Wetland		Transect B					
Location ID:					EMW-11R2	EMW-11R2	EMW-11R2	EMW-11R2	GZA-14	GZA-14	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2
Sample ID:					18A-EMW11R2-092418-1	19A-EMW11R2-091719-1	20A-EMW11R2-092120-1	21A-EMW11R2-090821-1	16A-GZA14-063016-1	17A-GZA14-102017-1	16A-AE105R2-062016-1	17A-AE105R2-101217-1	18A-AE105R2-100318-1	19A-AE105R2-091619-1	20A-AE105R2-091720-1	21A-AE105R2-091321-1
Sample Date:					9/24/2018	9/17/2019	9/21/2020	9/8/2021	6/30/2016	10/20/2017	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021
Sample Type:					N	N	N	N	Normal	Normal	N	N	N	N	N	N
Depth Interval:					104 - 114 ft	104 - 114 ft	104 - 114 ft	104 - 114 ft	39 - 49 ft	39 - 49 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	4.90 UJ	0.47 U	0.47 U	0.47 U	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.47 U	0.47 U	0.47 U
Acenaphthene	20	NE	10000	100000	4.90 UJ	0.47 U	0.47 U	0.47 U	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.47 U	0.47 U	0.47 U
Acenaphthylene	30	10000	40	100000	4.90 UJ	0.09 UJ	0.09 U	0.09 U	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.09 U	0.09 U	0.09 U
Anthracene	60	NE	30	600	4.90 UJ	0.09 U	0.09 U	0.09 U	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	4.90 UJ	0.09 U	0.09 U	0.09 U	5.20	4.90 U	5.15 U	4.95 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	**13.6 J-**	0.19 U	0.19 U	0.19 U	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.19 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	4.90 UJ	0.09 U	0.09 U	**0.14**	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(g,h,i)Perylene	50	NE	20	500	**13.6 J-**	0.02 U	0.02 U	**0.10 J**	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.02 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	4.90 UJ	0.09 U	0.09 U	**0.12**	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.09 U	0.09 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	98.0 U	190 U	200 U	190 U	103 U	**129**	103 U	99.0 U	97.1 U	190 U	200 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	98.0 U	190 U	200 U	190 U	103 U	98.0 U	103 U	99.0 U	97.1 UJ	190 U	200 U	200 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	98.0 UJ	190 U	200 U	190 U	103 U	98.0 U	103 U	99.0 U	97.1 UJ	190 U	200 U	200 U
Chrysene	**2**	NE	70	700	4.90 UJ	0.05 U	0.05 U	**0.11 J**	**6.70**	4.90 U	5.15 U	4.95 U	4.85 U	0.05 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	4.90 UJ	0.02 U	0.02 U	0.02 U	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.02 U	0.02 U	0.02 U
Fluoranthene	90	NE	200	2000	4.90 UJ	0.47 U	0.47 U	0.47 U	9.30	4.90 U	5.15 U	4.95 U	4.85 U	0.47 U	0.47 U	0.47 U
Fluorene	30	NE	40	400	4.90 UJ	0.09 U	0.09 U	0.09 U	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.09 U	0.09 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	4.90 UJ	0.09 U	0.09 U	**0.13 J**	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.09 U	0.09 U	0.09 U
Naphthalene	140	700	20000	100000	4.90 UJ	0.47 U	0.47 U	0.47 UJ	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.47 U	0.47 U	0.47 U
Phenanthrene	40	NE	10000	100000	4.90 UJ	0.47 U	0.47 U	0.47 U	5.15 U	4.90 U	5.15 U	4.95 U	4.85 U	0.47 U	0.47 U	0.47 U
Pyrene	60	NE	20	600	4.90 UJ	0.07 U	0.07 U	**0.15 J**	**11.4**	**5.53**	5.15 U	4.95 U	4.85 U	0.07 U	0.07 U	0.07 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	1.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	37500 U	**4000**	**3600**	**3100**	75.0 UJ	75.0 U	**106 J+**	**90.8 J+**	75.0 U	100 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	12500 U	200 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	100 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	12500 U	200 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	100 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	1.00 U	2.0 U	**2.1**	**1.7**	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 U	2.0 U	1.0 U	1.0 U	**5.70**	**8.41**	5.00 U	**2.48**	**1.97**	**2.4**	**3.0 J**	**2.7**
mp-xylene	10000	3000	5000	NE	2.00 U	4.0 U	2.0 U	2.0 U	10.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U
Naphthalene	140	700	20000	100000	1.00 U	10 U	5.0 U	5.0 UJ	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	1.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Toluene	**1000**	50000	40000	100000	1.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	2.00 U	4.0 U	2.0 U	2 U	10 U	2.00 U	10 U	2.00 U	2.00 U	2.0 U	2.0 U	2 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					Transect B											
Location ID:					AE105R-4	AE105R-4	AE105R-4	AE105R-4	AE105R-4	AE105S	AE105S	AE106D	AE106D	AE106R-3	AE106R-3	AE106R-3
Sample ID:					17A-AE105R4-101217-1	18A-AE105R4-100318-1	19A-AE105R4-091619-1	20A-AE105R4-091720-1	21A-AE105R4-091321-1	16A-AE105S-062216-1	17A-AE105S-101217-1	16A-AE106D-062016-1	17A-AE106D-101217-1	16A-AE106R3-062016-1	17A-AE106R3-101217-1	18A-AE106R3-100318-1
Sample Date:					10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021	6/22/2016	10/12/2017	6/20/2016	10/12/2017	6/20/2016	10/12/2017	10/3/2018
Sample Type:					N	N	N	N	N	Normal	Normal	Normal	Normal	N	N	N
Depth Interval:					125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	35 - 40 ft	35 - 40 ft	34 - 39 ft	34 - 39 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	4.95 U	4.85 U	0.47 U	0.47 U	0.48 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Acenaphthene	20	NE	10000	100000	**5.04**	4.85 U	0.47 U	0.47 U	0.48 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Acenaphthylene	30	10000	40	100000	4.95 U	4.85 U	0.09 U	0.09 U	0.10 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Anthracene	60	NE	30	600	4.95 U	4.85 U	0.09 U	0.09 U	0.09 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Benzo(a)Anthracene	**1**	NE	1000	10000	4.95 U	4.85 U	0.09 U	0.09 U	0.10 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	4.95 U	4.85 U	0.19 U	0.19 U	0.19 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Benzo(b)Fluoranthene	1	NE	400	4000	4.95 U	4.85 U	0.09 U	0.09 U	0.10 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Benzo(g,h,i)Perylene	50	NE	20	500	4.95 U	4.85 U	0.02 U	0.02 U	0.02 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Benzo(k)Fluoranthene	1	NE	100	1000	4.95 U	4.85 U	0.09 U	0.09 U	0.10 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	**108**	97.1 U	190 U	200 U	200 U	102 U	99.0 U	103 U	98.0 U	104 U	100 U	99.0 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	99.0 U	97.1 UJ	190 U	200 U	200 U	102 U	99.0 U	103 U	98.0 U	104 U	100 U	99.0 UJ
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	99.0 U	97.1 UJ	190 U	200 U	200 U	102 U	99.0 U	103 U	98.0 U	104 U	100 U	99.0 UJ
Chrysene	**2**	NE	70	700	4.95 U	4.85 U	0.05 U	0.05 U	0.05 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	4.95 U	4.85 U	0.02 U	0.02 U	0.02 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Fluoranthene	90	NE	200	2000	4.95 U	4.85 U	0.47 U	0.47 U	0.48 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Fluorene	30	NE	40	400	4.95 U	4.85 U	0.09 U	0.09 U	0.10 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	4.95 U	4.85 U	0.09 U	0.09 U	0.10 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Naphthalene	140	700	20000	100000	4.95 U	4.85 U	0.47 U	0.47 U	0.48 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Phenanthrene	40	NE	10000	100000	4.95 U	4.85 U	0.47 U	0.47 U	0.48 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
Pyrene	60	NE	20	600	4.95 U	4.85 U	0.07 U	0.07 U	0.07 U	5.10 U	4.95 U	5.15 U	4.90 U	5.21 U	5.00 U	4.95 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	**92.1 J+**	**83.6 J+**	100 U	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	25.0 U	25.0 U	100 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	25.0 U	25.0 U	100 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	**2.42**	**2.35**	**2.6**	**3.4 J**	**3.0**	5.00 U	**2.49**	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U
mp-xylene	10000	3000	5000	NE	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U	10.0 U	2.00 U	10.0 U	2.00 U	10.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	1.00 U	1.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U	1.00 U	**7.30**	1.00 U	1.00 U
Total Xylenes_VPH	NE	NE	NE	NE	2.00 U	2.00 U	2.0 U	2.0 U	2 U	10 U	2.00 U	10 U	2.00 U	10 U	2.00 U	2.00 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					Transect B								Transect B 1/2			
Location ID:					AE106R-3	AE106R-3	AE106R-3	AE106R-5	AE106R-5	AE106R-5	AE106R-5	AE106R-5	AE112R-6	AE112R-6	AE112R-6	AE112R-6
Sample ID:					19A-AE106R3-091619-1	20A-AE106R3-091720-1	21A-AE106R3-091321-1	17A-AE106R5-101217-1	18A-AE106R5-100318-1	19A-AE106R5-091619-1	20A-AE106R5-091720-1	21A-AE106R5-091321-1	16B-AE112R6-062116-1	17A-AE112R6-101717-1	18A-AE112R6-092618-1	18A-AE112R6-092618-2
Sample Date:					9/16/2019	9/17/2020	9/13/2021	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021	6/21/2016	10/17/2017	9/26/2018	9/26/2018
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	FD
Depth Interval:					84 - 88 ft	84 - 88 ft	84 - 88 ft	164 - 169 ft	164 - 169 ft	164 - 169 ft	164 - 169 ft	164 - 169 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	0.47 U	0.47 U	0.47 U	5.00 U	4.90 U	0.47 U	0.47 U	0.47 U	5.15 U	4.85 U	4.95 U	5.00 U
Acenaphthene	20	NE	10000	100000	0.47 U	0.47 U	0.47 U	5.00 U	4.90 U	0.47 U	0.47 U	0.47 U	5.15 U	4.85 U	4.95 U	5.00 U
Acenaphthylene	30	10000	40	100000	0.09 UJ	0.09 U	0.09 U	5.00 U	4.90 U	0.09 UJ	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U
Anthracene	60	NE	30	600	0.09 U	0.09 U	0.09 U	5.00 U	4.90 U	0.09 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U
Benzo(a)Anthracene	**1**	NE	1000	10000	0.09 U	0.09 U	0.09 U	5.00 U	4.90 U	0.09 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	0.19 U	0.19 U	0.19 U	5.00 U	4.90 U	0.19 U	0.19 U	0.19 U	5.15 U	4.85 U	4.95 U	5.00 U
Benzo(b)Fluoranthene	1	NE	400	4000	0.09 U	0.09 U	0.09 U	5.00 U	4.90 U	0.09 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U
Benzo(g,h,i)Perylene	50	NE	20	500	0.02 U	0.02 U	0.02 U	5.00 U	4.90 U	0.02 U	0.02 U	0.02 U	5.15 U	4.85 U	4.95 U	5.00 U
Benzo(k)Fluoranthene	1	NE	100	1000	0.09 U	0.09 U	0.09 U	5.00 U	4.90 U	0.09 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	190 U	200 U	200 U	100 U	**220**	190 U	200 U	200 U	103 U	**102**	99.0 U	100 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	190 U	200 U	200 U	100 U	98.0 UJ	190 U	200 U	200 U	103 U	97.1 U	99.0 UJ	100 UJ
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	190 U	200 U	200 U	100 U	98.0 UJ	190 U	200 U	200 U	103 U	97.1 U	99.0 UJ	100 UJ
Chrysene	**2**	NE	70	700	0.05 U	0.05 U	0.05 U	5.00 U	4.90 U	0.05 U	0.05 U	0.05 U	5.15 U	4.85 U	4.95 U	5.00 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	0.02 U	0.02 U	0.02 U	5.00 U	4.90 U	0.02 U	0.02 U	0.02 U	5.15 U	4.85 U	4.95 U	5.00 U
Fluoranthene	90	NE	200	2000	0.47 U	0.47 U	0.47 U	5.00 U	4.90 U	0.47 U	0.47 U	0.47 U	5.15 U	4.85 U	4.95 U	5.00 U
Fluorene	30	NE	40	400	0.09 U	0.09 U	0.09 U	5.00 U	4.90 U	0.09 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	0.09 U	0.09 U	0.09 U	5.00 U	4.90 U	0.09 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U
Naphthalene	140	700	20000	100000	0.47 U	0.47 U	0.47 U	5.00 U	4.90 U	0.47 U	0.47 U	0.47 U	5.15 U	4.85 U	4.95 U	5.00 U
Phenanthrene	40	NE	10000	100000	0.47 U	0.47 U	0.47 U	5.00 U	4.90 U	0.47 U	0.47 U	0.47 U	5.15 U	4.85 U	4.95 U	5.00 U
Pyrene	60	NE	20	600	0.07 U	0.07 U	0.07 U	5.00 U	4.90 U	0.07 U	0.07 U	0.07 U	5.15 U	4.85 U	4.95 U	5.00 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	100 U	100 U	100 U	75.0 U	75.0 U	100 U	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	100 U	100 U	100 U	25.0 U	25.0 U	100 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	100 U	100 U	100 U	25.0 U	25.0 U	100 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	5.0 U	5.0 U	5.0 U	1.00 U	1.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**23.5**	**15.2**	**3.55 J**	**4.90 J**
Total Xylenes_VPH	NE	NE	NE	NE	2.0 U	2.0 U	2 U	2.00 U	2.00 U	2.0 U	2.0 U	2 U	10 U	2.00 U	2.00 U	2.00 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-4
Summary of 2016 - 2021 Groundwater Analytical Results for Petroleum Hydrocarbons

Location Group:					Transect B 1/2			Transect C							
Location ID:					AE112R-6	AE112R-6	AE112R-6	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1
Sample ID:					19A-AE112R6-091319-1	20A-AE112R6-091120-1	21A-AE112R6-091621-1	16A-STM8R1-062816-1	17A-STM8R1-101717-1	17A-STM8R1-101717-2	18A-STM8R1-100218-1	19A-STM8R1-092619-1	20A-STM8R1-092320-1	21A-STM8R1-091621-1	21A-STM8R1-091621-2
Sample Date:					9/13/2019	9/11/2020	9/16/2021	6/28/2016	10/17/2017	10/17/2017	10/2/2018	9/26/2019	9/23/2020	9/16/2021	9/16/2021
Sample Type:					N	N	N	N	N	FD	N	N	N	N	FD
Depth Interval:					153 - 163 ft	153 - 163 ft	153 - 163 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):											
EPH (ug/l)															
2-Methylnaphthalene	10	2000	20000	100000	0.47 U	0.47 U	0.47 U	4.85 U	4.95 U	4.85 U	4.85 U	0.48 U	0.49 U	0.47 U	0.49 U
Acenaphthene	20	NE	10000	100000	0.47 U	0.47 U	0.47 U	4.85 U	4.95 U	4.85 U	4.85 U	0.48 U	0.49 U	0.47 U	0.49 U
Acenaphthylene	30	10000	40	100000	0.09 U	0.09 U	0.09 UJ	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U	0.09 UJ	0.10 UJ
Anthracene	60	NE	30	600	0.09 U	0.09 U	0.09 U	4.85 U	4.95 U	4.85 U	4.85 U	0.09 U	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	0.09 U	0.09 U	0.09 U	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U	0.09 U	0.10 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	0.19 U	0.19 U	0.19 UJ	4.85 U	4.95 U	4.85 U	4.85 U	0.19 U	0.19 U	0.19 UJ	0.19 UJ
Benzo(b)Fluoranthene	1	NE	400	4000	0.09 U	0.09 U	0.09 U	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U	0.09 U	0.10 U
Benzo(g,h,i)Perylene	50	NE	20	500	0.02 U	0.02 U	0.02 U	4.85 U	4.95 U	4.85 U	4.85 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	0.09 U	0.09 U	0.09 U	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U	0.09 U	0.10 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	200 U	200 U	200 U	97.1 U	**115**	**119**	97.1 U	190 U	190 U	200 U	240 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	200 U	200 U	200 U	97.1 U	99.0 U	97.1 U	97.1 U	190 U	190 U	200 U	250 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	200 U	200 U	200 U	97.1 U	99.0 U	97.1 U	97.1 U	190 UJ	190 U	200 U	250 U
Chrysene	**2**	NE	70	700	0.05 U	0.05 U	0.05 U	4.85 U	4.95 U	4.85 U	4.85 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	0.02 U	0.02 U	0.02 U	4.85 U	4.95 U	4.85 U	4.85 U	0.02 U	0.02 U	0.02 U	0.02 U
Fluoranthene	90	NE	200	2000	0.47 U	0.47 U	0.47 U	4.85 U	4.95 U	4.85 U	4.85 U	0.48 U	0.49 U	0.47 U	0.49 U
Fluorene	30	NE	40	400	0.09 U	0.09 U	0.09 U	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U	0.09 U	0.10 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	0.09 U	0.09 U	0.09 U	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U	0.09 U	0.10 U
Naphthalene	140	700	20000	100000	0.47 U	0.47 U	0.47 U	4.85 U	4.95 U	4.85 U	4.85 U	0.48 U	0.49 U	0.47 U	0.49 U
Phenanthrene	40	NE	10000	100000	0.47 U	0.47 U	0.47 U	4.85 U	4.95 U	4.85 U	4.85 U	0.48 U	0.49 U	0.47 U	0.49 U
Pyrene	60	NE	20	600	0.07 U	0.07 U	0.07 U	4.85 U	4.95 U	4.85 U	4.85 U	0.07 U	0.07 U	0.07 U	0.07 U
VPH (ug/l)															
Benzene	5	1000	10000	100000	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	100 U	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U	100 U	100 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	100 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U	100 U	100 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	100 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U	100 U	100 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U
Naphthalene	140	700	20000	100000	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	1.00 U	1.00 U	5.0 U	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	**1000**	50000	40000	100000	**1.7**	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	2.0 U	2.0 U	2 U	10 U	2.00 U	2.00 U	2.00 U	2.0 U	2.0 U	2 U	2 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 5-5
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
AE03	Ethylbenzene	10	7	-38	-38	11	Downward Trend	17	Downward Trend
AE03	Naphthalene	10	10	-37	-37	11	Downward Trend	17	Downward Trend
AE03	Calculated VPH	9	9	-6	-6	10	Not Significant	14	Not Significant
AE04	Calculated VPH	9	8	-22	-22	10	Downward Trend	14	Downward Trend
AE100R-1	Ethylbenzene	8	7	-16	-16	8	Downward Trend	12	Downward Trend
AE100R-1	Toluene	8	6	-22	-22	8	Downward Trend	12	Downward Trend
AE100R-1	Xylenes (Total)	8	4	-15	-15	8	Downward Trend	12	Downward Trend
AE100R-1	Naphthalene	8	6	-16	-16	8	Downward Trend	12	Downward Trend
AE100R-1	Calculated VPH	4	4	-6	-6	4	Downward Trend	6	Downward Trend
AE100R-2	Toluene	5	3	-2	-2	6	Not Significant	8	Not Significant
AE105D	Methyl Tert-Butyl Ether	8	5	21	21	8	Upward Trend	12	Upward Trend
AE105R-1	Methyl Tert-Butyl Ether	8	4	2	2	8	Not Significant	12	Not Significant
AE105R-2	Methyl Tert-Butyl Ether	8	5	7	7	8	Not Significant	12	Not Significant
AE105R-2 (1)	Calculated VPH	6	6	-5	-5	7	Not Significant	9	Not Significant
AE105R-4	Methyl Tert-Butyl Ether	8	5	5	5	8	Not Significant	12	Not Significant
AE105R-4 (1)	Calculated VPH	5	5	-6	-6	6	Downward Trend	8	Not Significant
AE105R-5	Methyl Tert-Butyl Ether	7	4	8	8	7	Upward Trend	11	Not Significant
AE105S	Methyl Tert-Butyl Ether	8	5	15	15	8	Upward Trend	12	Upward Trend
AE106R-1	Toluene	8	3	-18	-18	8	Downward Trend	12	Downward Trend
AE106R-3	Toluene	8	3	-14	-14	8	Downward Trend	12	Downward Trend
AE106S	Methyl Tert-Butyl Ether	8	8	-28	-28	8	Downward Trend	12	Downward Trend
AE108R-1	Toluene	8	7	-23	-23	8	Downward Trend	12	Downward Trend
AE108R-5	Toluene	8	3	-16	-16	8	Downward Trend	12	Downward Trend
AE110R-6	Toluene	6	3	-10	-10	7	Downward Trend	9	Downward Trend
AE111R-1	Toluene	7	3	-13	-13	7	Downward Trend	11	Downward Trend
AE111R-2	Toluene	4	4	-6	-6	4	Downward Trend	6	Downward Trend
AE111R-3	Toluene	7	6	-15	-15	7	Downward Trend	11	Downward Trend
AE111R-4	Toluene	4	4	-6	-6	4	Downward Trend	6	Downward Trend
AE111R-5	Toluene	7	5	-14	-14	7	Downward Trend	11	Downward Trend
AE111R-6	Toluene	7	3	-9	-9	7	Downward Trend	11	Not Significant
AE111R-7	Toluene	4	4	-4	-4	4	Downward Trend	6	Not Significant
AE112R-2	Toluene	4	3	-6	-6	4	Downward Trend	6	Downward Trend
AE112R-3	Toluene	7	4	-16	-16	7	Downward Trend	11	Downward Trend
AE112R-4	Toluene	4	4	-6	-6	4	Downward Trend	6	Downward Trend
AE112R-6	Toluene	7	6	-21	-21	7	Downward Trend	11	Downward Trend
AE112R-6 (1)	Calculated VPH	6	4	-1	-1	7	Not Significant	9	Not Significant
AE112R-7	Toluene	4	3	-6	-6	4	Downward Trend	6	Downward Trend
AE23R	Toluene	10	8	14	14	11	Upward Trend	17	Not Significant
AE29R-6	Toluene	8	4	-16	-16	8	Downward Trend	12	Downward Trend
GZA-101R	Toluene	23	8	-151	-4.004	0.8416	Downward Trend	1.282	Downward Trend
GZA-105D	Calculated VPH	6	4	-7	-7	7	Downward Trend	9	Not Significant
GZA-105R	Toluene	32	3	-16	-0.2460	0.8416	Not Significant	1.282	Not Significant

Table 5-5
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
GZA-105S	Calculated VPH	12	9	-21	-1.383	0.8416	Downward Trend	1.282	Downward Trend
GZA-14	Methyl Tert-Butyl Ether	8	6	-4	-4	8	Not Significant	12	Not Significant
GZA-14A	Methyl Tert-Butyl Ether	8	6	-22	-22	8	Downward Trend	12	Downward Trend
MW-4	Methyl Tert-Butyl Ether	10	10	5	5	11	Not Significant	17	Not Significant
MW-4A	Methyl Tert-Butyl Ether	8	6	2	2	8	Not Significant	12	Not Significant
PS-1D	Methyl Tert-Butyl Ether	17	17	-66	-2.682	0.8416	Downward Trend	1.282	Downward Trend
PS-1M	Methyl Tert-Butyl Ether	6	5	-3	-3	7	Not Significant	9	Not Significant
PS-1S	Methyl Tert-Butyl Ether	10	9	2	2	11	Not Significant	17	Not Significant
PS-2D	Methyl Tert-Butyl Ether	9	4	-17	-17	10	Downward Trend	14	Downward Trend
PS-4	Methyl Tert-Butyl Ether	4	3	-2	-2	4	Not Significant	6	Not Significant
PS-5D	Methyl Tert-Butyl Ether	12	11	-22	-1.447	0.8416	Downward Trend	1.282	Downward Trend
PS-5S	Methyl Tert-Butyl Ether	6	6	-5	-5	7	Not Significant	9	Not Significant
PZ-2S	Calculated VPH	5	5	4	4	6	Not Significant	8	Not Significant
STM-8D	Methyl Tert-Butyl Ether	15	11	16	0.7457	0.8416	Not Significant	1.282	Not Significant
STM-8M	Methyl Tert-Butyl Ether	10	3	10	10	11	Not Significant	17	Not Significant
STM-8R	Methyl Tert-Butyl Ether	16	7	5	0.1942	0.8416	Not Significant	1.282	Not Significant
TRC-101	Calculated VPH	8	5	19	19	8	Upward Trend	12	Upward Trend
TRC-102	Calculated VPH	12	7	-47	-3.182	0.8416	Downward Trend	1.282	Downward Trend
TRC-103	Calculated VPH	7	3	-6	-6	7	Not Significant	11	Not Significant
TRC-301R-1	Methyl Tert-Butyl Ether	5	5	-6	-6	6	Downward Trend	8	Not Significant
TRC-301R-2	Methyl Tert-Butyl Ether	8	5	17	17	8	Upward Trend	12	Upward Trend
TRC-301R-3	Methyl Tert-Butyl Ether	5	4	3	3	6	Not Significant	8	Not Significant
TRC-301R-4	Methyl Tert-Butyl Ether	8	8	12	12	8	Upward Trend	12	Upward Trend

Notes:
Datasets presented for wells that were included in the sampling program in September 2021.
Field duplicates assigned the maximum value for the purposes of the trend test.
The detection limit was used for non-detect concentrations for the purposes of the trend test.
Trend test results were interpreted using a confidence level of 80% and 90%. If the absolute value of the statistic is equal to or greater than the critical value, a significant trend is concluded. The direction of the trend is determined by the sign of the statistic with positive statistics indicating an upward trend and negative statistics indicating a downward trend.
* When sample size > 10, the normal approximation is used and calculated per box 4-9 in Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S. When the normal approximation is used, the critical value is the standard normal distribution.
When S is 0, no critical value is calculated and a conclusion of no trend is made.
NA = The Mann-Kendall trend test was not performed because there were less than 4 samples.
ND = The Mann-Kendall trend test was not performed because there were less than 3 detected concentrations.
- Analyte results not available for location.
(1) Calculated VPH results are likely false positives due to interference from CVOC concentrations

Table 5-6
2020 and 2021 Groundwater PIANO Analytical Results Summary

					Building 1			Former Tank F	Former Tank Farm	Eastern Parking Lot					Transect A			
Location ID:					AE23R	AE26R-1	AE28R-2	AE29R-6	AE100R-1	AE03	GZA-105S	GZA-105D	GZA-105R	TRC-101	AE102RR-6	AE102RR-6	AE103R-1	AE103R-1
Sample ID:					21A-AE23R-090321-1	21A-AE26R1-090121-1	21A-AE28R2-090121-1	21A-AE29R6-091421-1	21A-AE100R1-090921-1	20A-AE3-092320-1	21A-GZA105S-091521-1	21A-GZA105D-091521-1	21A-GZA105R-091421-1	20A-TRC101-092320-1	20A-AE102RR6-090920-1	21A-AE102RR6-090721-1	20A-AE103R1-091020-1	21A-AE103R1-090921-1
Sample Date:					9/3/2021	9/1/2021	9/1/2021	9/14/2021	9/9/2021	9/23/2020	9/15/2021	9/15/2021	9/14/2021	9/23/2020	9/9/2020	9/7/2021	9/10/2020	9/9/2021
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval:					44.75 - 54.75 ft	50 - 56 ft	75 - 85 ft	140 - 146 ft	18 - 24 ft	3 - 13 ft	4 - 14 ft	16 - 26 ft	34.5 - 36.5 ft	1.5 - 10.5 ft	153 - 158 ft	153 - 158 ft	48 - 53 ft	48 - 53 ft
Lab Name:					ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE
Analyte	**GW-1**	**GW-2**	**GW-3**	**UCL**														
1,1,4-Trimethylcyclohexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,1-Dimethylcyclopentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,2,3,4-Tetramethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**7.04**	2.00 U	2.00 U	10.0 U	**4.25**	2.00 U	10.0 U	2.00 U	2.00 U
1,2,3,5-Tetramethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,2,3-Trimethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,2,4,5-Tetramethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**12.2**	2.00 U	2.00 U	10.0 U	**13.8**	2.00 U	10.0 U	2.00 U	2.00 U
1,2,4-Triethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	**11.3**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,2-Dichloroethane	5	5	20000	100000	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,2-Diethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	**2.58**	**4.86**	2.00 U	2.00 U	10.0 U	**6.29**	2.00 U	10.0 U	2.00 U	2.00 U
1,2-Dimethyl-3-Ethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,2-Dimethyl-4-Ethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,2-Dimethylcyclohexane (cis)	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**1.56 J**	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,2-Dimethylcyclohexane (trans)	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**0.825 J**	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,3,5-Triethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,3-Diethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	**5.47**	**12.4**	2.00 U	2.00 U	10.0 U	**13.3**	2.00 U	10.0 U	2.00 U	2.00 U
1,3-Dimethyl-2-Ethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**3.65**	2.00 U	2.00 U	10.0 U	**3.61**	2.00 U	10.0 U	2.00 U	2.00 U
1,3-Dimethyl-4-Ethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,3-Dimethyl-5-Ethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**13.9**	2.00 U	2.00 U	10.0 U	**12.6**	2.00 U	10.0 U	2.00 U	2.00 U
1,3-Dimethyl-5-tert-Butylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,3-Dimethylcyclopentane (cis)	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,3-DMCP (trans)/2-Methyl-1-hexene	NE	NE	NE	NE	--	--	--	--	--	4.00 U	--	--	--	4.00 U	4.00 U	--	4.00 U	-
1,4-Dimethyl-2-Ethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1,4-Dimethylcyclohexane (trans)	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1-Decene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1-Heptene/1,2-DMCP (trans)	NE	NE	NE	NE	80.0 U	4.00 U	20.0 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	20.0 U	4.00 U	4.00 U	20.0 U	4.00 U	4.00 U
1-Hexene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1-Methyl-2-Ethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1-Methyl-2-Isopropylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**2.50**	2.00 U	2.00 U	10.0 U	**3.22**	2.00 U	10.0 U	2.00 U	2.00 U
1-Methyl-2-N-Propylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	**2.47**	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1-Methyl-3-Ethylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1-Methyl-3-Isopropylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1-Methyl-3-N-Propylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
1-Methyl-4-N-Propylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**1.68 J**	2.00 U	2.00 U	10.0 U	**1.86 J**	2.00 U	10.0 U	2.00 U	2.00 U
1-Methylnaphthalene	NE	NE	NE	NE	100 U	5.00 U	25.0 U	5.00 U	5.00 U	**3.75 J**	5.00 U	5.00 U	25.0 U	**1.56 J**	5.00 U	25.0 U	5.00 U	5.00 U
1-Nonene	NE	NE	NE	NE	100 U	5.00 U	25.0 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U
1-Octene	NE	NE	NE	NE	100 U	5.00 U	25.0 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U
1-Pentene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,2,3-Trimethylbutane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,2,3-Trimethylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,2,4-TRIMETHYLPENTANE	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,2-Dimethylbutane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,2-Dimethylhexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,2-Dimethylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,3,3-Trimethylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,3,4-Trimethylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,3-Dimethylbutane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,3-Dimethylheptane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,3-Dimethylhexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,3-Dimethylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,4-Dimethylhexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,4-Dimethylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,5-Dimethylheptane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2,5-Dimethylhexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2-Ethylthiophene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2-Methyl-1-Butene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2-Methyl-2-pentene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2-Methylheptane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2-Methylhexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2-Methylnaphthalene	10	2000	20000	100000	100 U	5.00 U	25.0 U	5.00 U	5.00 U	**3.22 J**	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U
2-Methylnonane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2-Methyloctane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2-Methylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2-Methylthiophene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
2-Nonene	NE	NE	NE	NE	100 U	5.00 U	25.0 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U
2-Phenylbutane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**5.25**	2.00 U	2.00 U	10.0 U	**5.19**	2.00 U	10.0 U	2.00 U	2.00 U
3,3-Diethylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3,3-Dimethylheptane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3,3-Dimethyloctane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	**1.33 J**	2.00 U	10.0 U	2.00 U	2.00 U
3,3-Dimethylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3,4-Dimethylheptane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3,5-Dimethylheptane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3-Ethylhexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U

Table 5-6
2020 and 2021 Groundwater PIANO Analytical Results Summary

					Building 1			Former Tank F	Former Tank Farm	Eastern Parking Lot					Transect A			
Location ID:					AE23R	AE26R-1	AE28R-2	AE29R-6	AE100R-1	AE03	GZA-105S	GZA-105D	GZA-105R	TRC-101	AE102RR-6	AE102RR-6	AE103R-1	AE103R-1
Sample ID:					21A-AE23R-090321-1	21A-AE26R1-090121-1	21A-AE28R2-090121-1	21A-AE29R6-091421-1	21A-AE100R1-090921-1	20A-AE3-092320-1	21A-GZA105S-091521-1	21A-GZA105D-091521-1	21A-GZA105R-091421-1	20A-TRC101-092320-1	20A-AE102RR6-090920-1	21A-AE102RR6-090721-1	20A-AE103R1-091020-1	21A-AE103R1-090921-1
Sample Date:					9/3/2021	9/1/2021	9/1/2021	9/14/2021	9/9/2021	9/23/2020	9/15/2021	9/15/2021	9/14/2021	9/23/2020	9/9/2020	9/7/2021	9/10/2020	9/9/2021
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval:					44.75 - 54.75 ft	50 - 56 ft	75 - 85 ft	140 - 146 ft	18 - 24 ft	3 - 13 ft	4 - 14 ft	16 - 26 ft	34.5 - 36.5 ft	1.5 - 10.5 ft	153 - 158 ft	153 - 158 ft	48 - 53 ft	48 - 53 ft
Lab Name:					ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE
Analyte	**GW-1**	**GW-2**	**GW-3**	**UCL**														
3-Ethylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3-Methyl-1-butene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3-Methylheptane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 UJ	10.0 U	2.00 UJ	2.00 U
3-Methylhexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3-Methylnonane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3-Methyloctane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3-Methylpentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
3-Methylthiophene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
4-ETHYL TOLUENE	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
4-Methyl-1-pentene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
4-Methylheptane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
4-Methyloctane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Benzene	5	1000	10000	100000	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Benzothiophene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
cis-2-Heptene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
cis-2-Hexene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
cis-2-Octene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
cis-2-Pentene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
cis-3-Nonene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Cyclohexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	**2.11**	**0.947 J**	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Cyclopentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Cymene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Diisopropyl Ether	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 UJ	10.0 U	2.00 UJ	2.00 U
Ethylbenzene	700	20000	5000	100000	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**0.500 J**	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Ethylcyclopentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
HEPTANE	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
HEXANE	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Hexylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Indane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	**5.86**	**6.07**	**2.50**	2.00 U	10.0 U	**2.17**	2.00 U	10.0 U	2.00 U	2.00 U
Indene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**0.450 J**	2.00 U	2.00 U	10.0 U	**0.488 J**	2.00 U	10.0 U	2.00 U	2.00 U
Isobutylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**5.61**	2.00 U	2.00 U	10.0 U	**5.94**	2.00 U	10.0 U	2.00 U	2.00 U
Isobutylcyclohexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Isopentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Isoprene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Isopropylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**3.57**	2.00 U	2.00 U	10.0 U	**2.38**	2.00 UJ	10.0 U	2.00 UJ	2.00 U
Isopropylcyclohexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Isopropylcyclopentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Methyl tert-butyl ether	70	50000	50000	100000	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Methylcyclohexane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**1.45 J**	2.00 U	2.00 U	10.0 U	**0.438 J**	2.00 U	10.0 U	2.00 U	2.00 U
Methylcyclopentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**0.764 J**	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
MMT	NE	NE	NE	NE	100 U	5.00 U	25.0 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U
mp-xylene	10000	3000	5000	NE	80.0 U	4.00 U	20.0 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	20.0 U	4.00 U	4.00 U	20.0 U	4.00 U	4.00 U
Naphthalene	140	700	20000	100000	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**5.42**	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
N-Butylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**3.97**	2.00 U	2.00 U	10.0 U	**4.09**	2.00 U	10.0 U	2.00 U	2.00 U
N-DECANE	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
N-DODECANE	NE	NE	NE	NE	100 U	5.00 U	25.0 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	25.0 U	5.00 UJ	5.00 UJ	25.0 U	5.00 UJ	5.00 U
n-Nonane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
n-Pentane	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	10.0 U	2.00 UJ	2.00 UJ	10.0 U	2.00 UJ	2.00 U
N-Pentylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
N-Propylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	**8.82**	2.00 U	2.00 U	10.0 U	**8.46**	2.00 U	10.0 U	2.00 U	2.00 U
N-TETRADECANE	NE	NE	NE	NE	100 U	5.00 U	25.0 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U
OCTANE	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
o-Xylene	10000	3000	5000	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Pentadecane	NE	NE	NE	NE	100 U	5.00 U	25.0 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 UJ	25.0 U	5.00 UJ	5.00 U
Styrene	100	100	6000	60000	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
TERT-BUTYL ALCOHOL	NE	NE	NE	NE	500 U	25.0 U	125 U	25.0 U	25.0 U	25.0 UJ	25.0 U	25.0 U	125 U	25.0 UJ	25.0 UJ	125 U	25.0 UJ	25.0 U
Tert-Butylbenzene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	**4.67**	**4.46**	2.00 U	2.00 U	10.0 U	**8.17**	2.00 U	10.0 U	2.00 U	2.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Thiophene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Toluene	1000	50000	40000	100000	**3540**	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
trans-2-Heptene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
trans-2-Hexene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
trans-2-Pentene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
trans-3-Heptene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
trans-3-Nonene	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Tridecane	NE	NE	NE	NE	100 U	5.00 U	25.0 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U	25.0 U	5.00 U	5.00 U
UNDECANE	NE	NE	NE	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U	10.0 U	2.00 U	2.00 U
Xylenes (Total)	10000	3000	5000	NE	40.0 U	2.00 U	10.0 U	2.00 U	2.00 U	4.00 U	2.00 U	2.00 U	10.0 U	4.00 U	4.00 U	10.0 U	4.00 U	2.00 U

Table 5-6
2020 and 2021 Groundwater PIANO Analytical Results Summary

					Transect A				
					Location ID:	**AE104R-4**	**AE104R-4**	**AE109R-5**	**EMW-11R2**	**EMW-11R2**
					Sample ID:	**20A-AE104R4-091120-1**	**21A-AE104R4-090221-1**	**21A-AE109R5-090221-1**	**20A-EMW11R2-092120-1**	**21A-EMW11R2-090821-1**
					Sample Date:	**9/11/2020**	**9/2/2021**	**9/2/2021**	**9/21/2020**	**9/8/2021**
					Sample Type:	**N**	**N**	**N**	**N**	**N**
					Depth Interval:	**128 - 133 ft**	**128 - 133 ft**	**183 - 189 ft**	**104 - 114 ft**	**104 - 114 ft**
					Lab Name:	**ALPWE**	**ALPWE**	**ALPWE**	**ALPWE**	**ALPWE**
Analyte	**GW-1**	**GW-2**	**GW-3**	**UCL**						
1,1,4-Trimethylcyclohexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,1-Dimethylcyclopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2,3,4-Tetramethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2,3,5-Tetramethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2,3-Trimethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2,4,5-Tetramethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2,4-Triethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2-Dibromoethane	0.02	2	50000	100000	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2-Dichloroethane	5	5	20000	100000	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2-Diethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2-Dimethyl-3-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2-Dimethyl-4-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2-Dimethylcyclohexane (cis)	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,2-Dimethylcyclohexane (trans)	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,3,5-Triethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,3-Diethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,3-Dimethyl-2-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,3-Dimethyl-4-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,3-Dimethyl-5-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,3-Dimethyl-5-tert-Butylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,3-Dimethylcyclopentane (cis)	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,3-DMCP (trans)/2-Methyl-1-hexene	NE	NE	NE	NE	4.00 U	--	--	4.00 U	--
1,4-Dimethyl-2-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1,4-Dimethylcyclohexane (trans)	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1-Decene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1-Heptene/1,2-DMCP (trans)	NE	NE	NE	NE	4.00 U	4.00 U	4.00 U	4.00 U	20.0 U
1-Hexene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1-Methyl-2-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1-Methyl-2-Isopropylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1-Methyl-2-N-Propylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1-Methyl-3-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1-Methyl-3-Isopropylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1-Methyl-3-N-Propylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1-Methyl-4-N-Propylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
1-Methylnaphthalene	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U
1-Nonene	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U
1-Octene	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U
1-Pentene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,2,3-Trimethylbutane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,2,3-Trimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,2,4-TRIMETHYLPENTANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,2-Dimethylbutane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,2-Dimethylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,2-Dimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,3,3-Trimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,3,4-Trimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,3-Dimethylbutane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,3-Dimethylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,3-Dimethylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,3-Dimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,4-Dimethylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,4-Dimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,5-Dimethylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2,5-Dimethylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2-Ethylthiophene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2-Methyl-1-Butene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2-Methyl-2-pentene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2-Methylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2-Methylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2-Methylnaphthalene	10	2000	20000	100000	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U
2-Methylnonane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2-Methyloctane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2-Methylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2-Methylthiophene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
2-Nonene	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U
2-Phenylbutane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3,3-Diethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3,3-Dimethylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3,3-Dimethyloctane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3,3-Dimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3,4-Dimethylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3,5-Dimethylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3-Ethylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U

Table 5-6
2020 and 2021 Groundwater PIANO Analytical Results Summary

					Transect A				
				Location ID:	AE104R-4	AE104R-4	AE109R-5	EMW-11R2	EMW-11R2
				Sample ID:	20A-AE104R4-091120-1	21A-AE104R4-090221-1	21A-AE109R5-090221-1	20A-EMW11R2-092120-1	21A-EMW11R2-090821-1
				Sample Date:	9/11/2020	9/2/2021	9/2/2021	9/21/2020	9/8/2021
				Sample Type:	N	N	N	N	N
				Depth Interval:	128 - 133 ft	128 - 133 ft	183 - 189 ft	104 - 114 ft	104 - 114 ft
				Lab Name:	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE
Analyte	**GW-1**	**GW-2**	**GW-3**	**UCL**					
3-Ethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3-Methyl-1-butene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3-Methylheptane	NE	NE	NE	NE	2.00 UJ	2.00 U	2.00 U	2.00 U	10.0 U
3-Methylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3-Methylnonane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3-Methyloctane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3-Methylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
3-Methylthiophene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
4-ETHYL TOLUENE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
4-Methyl-1-pentene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
4-Methylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
4-Methyloctane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Benzene	5	1000	10000	100000	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Benzothiophene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
cis-2-Heptene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
cis-2-Hexene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
cis-2-Octene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
cis-2-Pentene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
cis-3-Nonene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Cyclohexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Cyclopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Cymene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Diisopropyl Ether	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	2.00 UJ	2.00 U	2.00 U	2.00 U	10.0 U
Ethylbenzene	700	20000	5000	100000	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Ethylcyclopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
HEPTANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
HEXANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Hexylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Indane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Indene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Isobutylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Isobutylcyclohexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Isopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Isoprene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Isopropylbenzene	NE	NE	NE	NE	2.00 UJ	2.00 U	2.00 U	2.00 U	10.0 U
Isopropylcyclohexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Isopropylcyclopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Methyl tert-butyl ether	70	50000	50000	100000	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Methylcyclohexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Methylcyclopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
MMT	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U
mp-xylene	10000	3000	5000	NE	4.00 U	4.00 U	4.00 U	4.00 U	20.0 U
Naphthalene	140	700	20000	100000	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
N-Butylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
N-DECANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
N-DODECANE	NE	NE	NE	NE	5.00 UJ	5.00 U	5.00 U	5.00 UJ	25.0 U
n-Nonane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
n-Pentane	NE	NE	NE	NE	2.00 UJ	2.00 U	2.00 U	2.00 UJ	10.0 U
N-Pentylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
N-Propylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
N-TETRADECANE	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U
OCTANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
o-Xylene	10000	3000	5000	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Pentadecane	NE	NE	NE	NE	5.00 UJ	5.00 U	5.00 U	5.00 U	25.0 U
Styrene	100	100	6000	60000	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
TERT-BUTYL ALCOHOL	NE	NE	NE	NE	25.0 UJ	25.0 U	25.0 U	25.0 UJ	125 U
Tert-Butylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Thiophene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Toluene	1000	50000	40000	100000	**0.347 J**	2.00 U	2.00 U	**0.720 J**	10.0 U
trans-2-Heptene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
trans-2-Hexene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
trans-2-Pentene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
trans-3-Heptene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
trans-3-Nonene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Tridecane	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U
UNDECANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U
Xylenes (Total)	10000	3000	5000	NE	4.00 U	2.00 U	2.00 U	4.00 U	10.0 U

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Building 1 Tank F													
Location ID:					AE23R	AE23R	AE23R	AE23R	AE23R	AE23R	AE23S	AE23S	AE23S	AE24	AE24	AE24	AE24	AE24
Sample ID:					16B-AE23R-062716-1	17A-AE23R-101317-1	18A-AE23R-091918-1	19A-AE23R-092319-1	20A-AE23R-091420-1	21A-AE23R-090321-1	16A-AE23S-062716-1	17A-AE23S-100517-1	21A-AE23S-090321-1	16A-AE24-062316-1	17A-AE24-101917-1	17A-AE24-101917-2	18A-AE24-092518-1	19A-AE24-092319-1	20A-AE24-091420-1
Sample Date:					06/27/2016	10/13/2017	09/19/2018	09/23/2019	09/14/2020	09/03/2021	06/27/2016	10/05/2017	09/03/2021	06/23/2016	10/19/2017	10/19/2017	09/25/2018	09/23/2019	09/14/2020
Depth Interval:					44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 UJ	1.0 U	200 U	5.00 U	5.00 U	10.0 UJ	50 U	5.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	2000 U	**1520**	5000 U	**1200**	**1000**	**1500**	1.0 U	1.00 UJ	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	1000 U	250 U	2500 U	R	500 U	500 U	0.5 U	0.50 U	0.50 U	100 U	2.50 U	2.50 U	5.00 U	R	2.5 U
1,1,2-Trichloroethane	**5**	900	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	2000 U	**965**	5000 U	**800**	**730**	**900**	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	70 U	5.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	2000 U	**645**	5000 U	**580**	**640**	**660**	1.0 U	1.00 U	1.0 U	200 U	5.00 UJ	5.00 UJ	10.0 U	50 U	5.0 U
1,1-Dichloropropene	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 UJ	100 U	5.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	0.50 U	200 U	5.00 U	5.00 U	10.0 U	50 U	2.5 U
1,2,4-Trichlorobenzene	70	200	50000	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	70 U	5.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	3000 U	500 U	5000 U	500 U	500 U	500 UJ	1.0 U	1.00 U	1.0 UJ	200 U	5.00 U	5.00 U	10.0 U	56 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	4000 U	1000 U	10000 UJ	R	500 U	500 U	2.0 U	2.00 UJ	0.50 U	400 UJ	10.0 U	10.0 U	20.0 U	R	2.5 U
1,2-Dibromoethane	0.02	2	50000	100000	1000 U	250 U	2500 U	500 U	500 U	500 U	0.5 U	0.50 U	0.50 U	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	2000 U	500 U	5000 U	600 U	600 U	600 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
1,2-Dichloroethane	5	5	20000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	0.60 U	200 U	5.00 U	5.00 U	10.0 U	50 U	3.0 U
1,2-Dichloropropane	5	3	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	50 U	3.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	60 U	5.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U
1,3-Dichloropropane	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
1,4-Dichlorobenzene	5	60	8000	80000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	10000 U	100000 UJ	40000 U	100000 U	100000 U	20.0 U	20.0 U	100 U	4000 U	100 U	100 U	200 UJ	4000 U	500 U
2,2-Dichloropropane	NE	NE	NE	NE	2000 U	500 U	5000 UJ	1000 U	1000 U	1000 U	1.0 U	1.00 U	1.0 U	200 UJ	5.00 U	5.00 U	10.0 U	100 U	5.0 U
2-Butanone	4000	50000	50000	100000	20000 U	1000 U	10000 U	R	5000 U	5000 U	10.0 U	2.00 U	5.0 U	2000 U	10.0 UJ	10.0 UJ	20.0 U	R	25 U
2-Chlorotoluene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
2-Hexanone	NE	NE	NE	NE	20000 U	1000 U	10000 UJ	R	5000 U	5000 U	10.0 U	2.00 U	5.0 U	2000 UJ	10.0 U	10.0 U	20.0 UJ	R	25 U
2-Phenylbutane	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 UJ	1.0 U	1.00 U	1.0 UJ	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
4-Chlorotoluene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	20000 U	1000 U	10000 U	R	5000 U	5000 U	10.0 U	2.00 U	5.0 U	2000 UJ	10.0 U	10.0 U	20.0 UJ	R	25 U
Acetone	6300	50000	50000	100000	20000 UJ	5000 U	50000 UJ	R	6300 U	6300 U	10.0 UJ	10.0 U	25 U	2000 UJ	50.0 U	50.0 U	100 U	R	130 U
Benzene	5	1000	10000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	0.70 U	200 U	5.00 U	5.00 U	10.0 U	50 U	3.5 U
Bromobenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	62 U	5.0 U
Bromochloromethane	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	83 U	5.0 U
Bromodichloromethane	3	6	50000	100000	1000 U	250 U	2500 U	500 U	500 U	500 U	0.5 U	0.50 U	0.50 U	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U
Bromoform	4	700	50000	100000	2000 U	500 U	5000 UJ	500 UJ	500 U	500 U	1.0 U	1.00 UJ	1.0 U	200 U	5.00 U	5.00 U	10.0 UJ	50 U	4.0 U
Bromomethane	10	7	800	8000	4000 UJ	1000 UJ	10000 UJ	R	500 U	500 U	2.0 U	2.00 U	1.0 U	400 U	10.0 UJ	10.0 UJ	20.0 U	R	5.0 U
Carbon Disulfide	NE	NE	NE	NE	4000 U	1000 U	10000 U	810 U	810 U	810 U	2.0 U	2.00 UJ	5.0 U	400 U	10.0 U	10.0 U	20.0 U	500 U	25 U
Carbon tetrachloride	5	2	5000	50000	2000 U	500 U	5000 UJ	500 U	500 U	500 U	1.0 U	1.00 UJ	1.0 U	200 U	5.00 U	5.00 U	10.0 U	50 U	2.5 U
Chlorobenzene	100	200	1000	10000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Chloroethane	NE	NE	NE	NE	4000 UJ	1000 U	10000 U	1000 U	1000 UJ	1000 U	2.0 U	2.00 U	1.0 U	400 U	10.0 U	10.0 U	20.0 U	100 U	5.0 UJ
Chloroform	70	50	20000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U
chloromethane	NE	NE	NE	NE	4000 UJ	1000 UJ	10000 U	500 U	500 U	500 U	2.0 U	2.00 U	1.0 U	400 UJ	10.0 U	10.0 U	20.0 U	100 U	5.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	**29.5**	**21.6**	**2.1**	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	1000 U	250 U	2500 U	500 U	500 U	500 U	0.5 U	0.50 U	0.40 U	100 UJ	2.50 U	2.50 U	5.00 U	50 U	2.5 U
Cymene	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 UJ	1.0 U	1.00 U	1.0 UJ	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Dibromochloromethane	2	20	50000	100000	1000 U	250 U	2500 UJ	500 U	500 U	500 U	0.5 U	0.50 UJ	0.50 U	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U
Dibromomethane	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	4000 UJ	1000 U	10000 U	500 U	500 U	500 U	2.0 U	2.00 U	1.0 U	400 U	10.0 U	10.0 U	20.0 U	100 U	5.0 U
Diethyl Ether	NE	NE	NE	NE	2000 UJ	500 U	5000 U	1000 U	1000 UJ	1000 U	1.0 UJ	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Diisopropyl Ether	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 UJ	1000 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	1.0 U	1.00 U	1.0 U	200 UJ	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Ethylbenzene	700	20000	5000	100000	2000 U	500 U	5000 U	700 U	700 U	700 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	1.0 U	1.00 UJ	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	1000 U	250 U	2500 U	500 U	500 U	500 U	0.5 U	0.50 U	0.40 U	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U
Isopropylbenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 UJ	1.0 U	1.00 U	1.0 UJ	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 UJ	5.00 U	5.00 U	10.0 U	70 U	5.0 U
Methylene Chloride	5	2000	50000	100000	4000 UJ	1000 U	10000 U	500 U	1000 U	5000 U	2.0 UJ	2.00 UJ	1.0 U	400 U	10.0 U	10.0 U	20.0 U	50 U	5.0 U
mp-xylene	10000	3000	5000	NE	4000 U	1000 U	10000 U	1000 U	1000 U	1000 U	2.0 U	2.00 U	1.0 U	400 U	10.0 U	10.0 U	20.0 U	100 U	5.0 U
Naphthalene	140	700	20000	100000	2000 U	500 U	10000 U	500 U	1000 U	1000 UJ	1.0 U	1.00 U	1.0 UJ	200 U	5.00 U	5.00 U	20.0 U	100 U	5.0 U
N-Butylbenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
N-Propylbenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	660 U	660 U	660 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
o-Xylene	10000	3000	5000	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Styrene	100	100	6000	60000	2000 U	500 U	5000 U	500 U	500 U	500 UJ	1.0 U	1.00 U	1.0 UJ	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Tert-Butylbenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	690 U	690 U	690 UJ	1.0 U	1.00 U	1.0 UJ	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**51400**	**67300**	**48400**	**100000**	**54000**	**56000 J+**	**11.0**	**10.4**	**260 J+**	**7660**	**164**	**157**	**733**	**5500**	**680**
Tetrahydrofuran	NE	NE	NE	NE	4000 U	1000 U	10000 U	R	2500 U	2500 U	2.0 U	2.00 U	2.5 U	400 U	10.0 U	10.0 U	20.0 U	R	13 U
Toluene	**1000**	50000	40000	100000	**3280**	**4660**	5000 U	**4200**	**3300**	**3600**	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	**1.3**	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	80 U	5.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	1000 U	250 U	2500 U	500 U	500 U	500 U	0.5 U	0.50 U	0.40 U	100 UJ	2.50 U	2.50 U	5.00 U	50 U	2.5 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**125000**	**179000**	**163000**	**240000**	**130000**	**150000**	**2.6**	**2.68**	**17**	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U
Trichlorofluoromethane	NE	NE	NE	NE	2000 U	500 U	5000 UJ	1000 U	1000 U	1000 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U
Vinyl chloride	**2**	**2**	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	1.0 U	1.00 U	1.0 U	200 U	5.00 U	5.00 U	10.0 U	50 U	2.5 U
Xylenes (Total)	10000	3000	5000	NE	4000 U	1000 U	10000 U	1000 U	1000 U	1000 U	2.0 U	2.0 U	1 U	400 U	10 U	10 U	20 U	100 U	5.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R = rejected

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Building 1 Tank F													
Location ID:					AE24	AE25D	AE25R	AE25S	AE26D	AE26D	AE26D	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-2	AE26R-2
Sample ID:					21A-AE24-090321-1	21A-AE25D-090321-1	21A-AE25R-090321-1	21A-AE25S-090321-1	16A-AE26D-062316-1	17A-AE26D-100517-1	21A-AE26D-090321-1	16B-AE26R1-062316-1	17A-AE26R1-100417-1	18A-AE26R1-091818-1	19A-AE26R1-092319-1	20A-AE26R1-091420-1	21A-AE26R1-090121-1	16B-AE26R2-062316-1	17A-AE26R2-100417-1
Sample Date:					09/03/2021	09/03/2021	09/03/2021	09/03/2021	06/23/2016	10/05/2017	09/03/2021	06/23/2016	10/04/2017	09/18/2018	09/23/2019	09/14/2020	09/01/2021	06/23/2016	10/04/2017
Depth Interval:					7.25 - 17.25 ft	34.5 - 39.5 ft	45 - 62 ft	20 - 30 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	72 - 78 ft	72 - 78 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	1.0 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	2.5 U	5.00 U	2.50 U	2.5 U	2.5 U	1.0 U	2.5 U	2.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	2.0 U	1.0 U	**2.3**	1.0 U	1.0 U	1.00 U	1.0 U	**15.8**	**25.1**	**29.3**	**22**	**36**	**30**	**23.2**	**31.2**
1,1-Dichloroethene	**7**	**80**	30000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	**5.40 J**	**3.7**	**6.7**	**3.7**	5.0 U	5.00 U
1,1-Dichloropropene	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	2.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	5.0 U	10.0 U	5.00 U	2.5 U	2.5 U	1.0 U	5.0 U	5.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	2.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.0 UJ	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	5.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	1.0 U	0.50 U	0.50 U	0.50 U	2.0 U	2.00 UJ	0.50 U	10.0 U	20.0 UJ	10.0 U	R	2.5 UJ	1.0 U	10.0 U	10.0 UJ
1,2-Dibromoethane	0.02	2	50000	100000	1.0 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	2.5 U	5.00 U	2.50 U	2.5 U	2.5 U	1.0 U	2.5 U	2.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,2-Dichloroethane	5	5	20000	100000	1.2 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	5.0 U	10.0 U	5.00 U	3.0 U	3.0 U	1.2 U	5.0 U	5.00 U
1,2-Dichloropropane	5	3	50000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	3.0 U	3.0 U	2.0 U	5.0 U	5.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,3-Dichloropropane	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,4-Dichlorobenzene	5	60	8000	80000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	200 U	100 U	100 U	100 U	20.0 U	20.0 U	100 U	NS	200 U	100 UJ	200 U	500 U	200 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 UJ	R	5.0 U	5.0 U	2.0 U	5.0 U	5.00 UJ
2-Butanone	4000	50000	50000	100000	10 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	50.0 U	20.0 U	10.0 U	R	25 U	10 U	50.0 U	10.0 U
2-Chlorotoluene	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
2-Hexanone	NE	NE	NE	NE	10 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	50.0 U	20.0 U	10.0 U	25 U	25 U	10 U	50.0 U	10.0 U
2-Phenylbutane	NE	NE	NE	NE	2.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.0 UJ	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	5.00 U
4-Chlorotoluene	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	10 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	50.0 U	20.0 U	10.0 U	25 U	25 U	10 U	50.0 U	10.0 U
Acetone	6300	50000	50000	100000	50 U	25 U	25 U	25 U	10.0 U	10.0 U	25 U	50.0 U	100 U	50.0 UJ	R	130 UJ	50 U	50.0 U	50.0 U
Benzene	5	1000	10000	100000	1.4 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	5.0 U	10.0 U	5.00 U	3.5 U	3.5 U	1.4 U	5.0 U	5.00 U
Bromobenzene	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
Bromochloromethane	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
Bromodichloromethane	3	6	50000	100000	1.0 U	**1.2**	0.50 U	**0.87**	0.5 U	0.50 U	**1.3**	2.5 U	5.00 U	2.50 U	2.5 U	2.5 U	1.0 U	2.5 U	2.50 U
Bromoform	4	700	50000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	5.0 U	10.0 UJ	5.00 U	R	4.0 U	2.0 U	5.0 U	5.00 UJ
Bromomethane	10	7	800	8000	2.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	10.0 U	20.0 U	10.0 UJ	5.0 U	5.0 UJ	2.0 U	10.0 U	10.0 U
Carbon Disulfide	NE	NE	NE	NE	10 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	5.0 U	10.0 U	20.0 U	10.0 U	25 U	25 U	10 U	10.0 U	10.0 U
Carbon tetrachloride	5	2	5000	50000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	5.0 U	10.0 U	5.00 U	2.5 U	2.5 U	2.0 U	5.0 U	5.00 U
Chlorobenzene	100	200	1000	10000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
Chloroethane	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	10.0 U	20.0 U	10.0 UJ	5.0 U	5.0 UJ	2.0 U	10.0 U	10.0 U
Chloroform	70	50	20000	100000	2.0 U	**1.5**	1.0 U	**1.1**	1.0 U	1.00 U	**1.6**	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
chloromethane	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	10.0 U	20.0 U	10.0 U	5.0 U	5.0 U	2.0 U	10.0 UJ	10.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	2.0 U	1.0 U	**17**	1.0 U	1.0 U	1.00 U	1.0 U	**22.8**	**152**	**248 J-**	**260**	**230**	**78**	**33.6**	**131**
cis-1,3-Dichloropropene	NE	NE	NE	NE	1.0 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	2.5 U	5.00 U	2.50 UJ	2.5 U	2.5 U	1.0 U	2.5 U	2.50 U
Cymene	NE	NE	NE	NE	2.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.0 UJ	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	5.00 U
Dibromochloromethane	2	20	50000	100000	1.0 U	**0.55**	0.50 U	0.50 U	0.5 U	0.50 UJ	**0.58**	2.5 U	5.00 U	2.50 U	2.5 U	2.5 U	1.0 U	2.5 U	2.50 U
Dibromomethane	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	10.0 U	20.0 UJ	10.0 U	5.0 U	5.0 U	2.0 U	10.0 U	10.0 UJ
Diethyl Ether	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
Diisopropyl Ether	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	5.0 U	10.0 UJ	5.00 U	5.0 U	5.0 U	2.0 U	5.0 UJ	5.00 UJ
Ethylbenzene	700	20000	5000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 UJ	5.0 U	10.0 U	5.00 UJ	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	1.0 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 UJ	2.5 U	5.00 UJ	2.50 U	2.5 U	2.5 U	1.0 U	2.5 U	2.50 UJ
Isopropylbenzene	NE	NE	NE	NE	2.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.0 UJ	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	5.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	5.0 U	10.0 UJ	5.00 U	5.0 U	5.0 U	2.0 U	5.0 UJ	5.00 UJ
Methylene Chloride	5	2000	50000	100000	2.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	10.0 U	20.0 U	10.0 UJ	5.0 U	5.0 UJ	2.0 U	10.0 U	10.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	10.0 U	20.0 U	10.0 U	5.0 U	5.0 U	2.0 U	10.0 U	10.0 U
Naphthalene	140	700	20000	100000	2.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.0 UJ	5.0 UJ	10.0 U	10.0 UJ	5.0 U	5.0 U	2.0 UJ	5.0 U	5.00 U
N-Butylbenzene	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
N-Propylbenzene	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
o-Xylene	10000	3000	5000	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 UJ	5.00 U
Styrene	100	100	6000	60000	2.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.0 UJ	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	5.00 U
Tert-Butylbenzene	NE	NE	NE	NE	2.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.0 UJ	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	5.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 UJ	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 UJ
Tetrachloroethene	**5**	**50**	**30000**	100000	**350 J+**	**1.0 J+**	**1.6 J+**	**2.8 J+**	**1.2**	**1.79**	**2.6 J+**	**131**	**179 J**	**316 J-**	**270**	**870**	**340 J+**	**44.2**	5.00 U
Tetrahydrofuran	NE	NE	NE	NE	5.0 U	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.5 U	10.0 U	20.0 U	10.0 U	13 U	13 U	5.0 U	10.0 U	10.0 U
Toluene	**1000**	50000	40000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	**20.7**	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	**12.6**	**19**	**21**	**20**	5.0 U	5.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	1.0 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.40 U	2.5 U	5.00 UJ	2.50 UJ	2.5 U	2.5 U	1.0 U	2.5 UJ	2.50 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	2.0 U	1.0 U	**13**	1.0 U	1.0 U	1.00 U	1.0 U	**236**	**478**	**719**	**500**	**1400**	**600**	**109**	**110**
Trichlorofluoromethane	NE	NE	NE	NE	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	5.00 U
Vinyl chloride	**2**	**2**	50000	100000	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 UJ	10.0 U	5.00 UJ	2.5 U	**2.5**	**130**	5.0 U	5.00 U
Xylenes (Total)	10000	3000	5000	NE	2 U	1 U	1 U	1 U	2.0 U	2.0 U	1 U	10 U	20 U	10 U	5.0 U	5.0 U	2 U	10 U	10 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Building 1 Tank F												
Location ID:					AE26R-2	AE26R-2	AE26R-2	AE26R-2	AE26R-3	AE26R-3	AE26R-3	AE26R-4	AE26R-4	AE26R-4	AE26R-5	AE26R-5	AE26R-5	AE26R-5
Sample ID:					18A-AE26R2-091818-1	19A-AE26R2-092319-1	20A-AE26R2-091420-1	21A-AE26R2-090121-1	16B-AE26R3-062316-1	17A-AE26R3-100417-1	21A-AE26R3-090121-1	16B-AE26R4-062316-1	17A-AE26R4-100417-1	21A-AE26R4-090121-1	16B-AE26R5-062316-1	17A-AE26R5-100417-1	18A-AE26R5-091818-1	19A-AE26R5-092319-1
Sample Date:					09/18/2018	09/23/2019	09/14/2020	09/01/2021	06/23/2016	10/04/2017	09/01/2021	06/23/2016	10/04/2017	09/01/2021	06/23/2016	10/04/2017	09/18/2018	09/23/2019
Depth Interval:					72 - 78 ft	72 - 78 ft	72 - 78 ft	72 - 78 ft	81 - 88 ft	81 - 88 ft	81 - 88 ft	104 - 114 ft	104 - 114 ft	104 - 114 ft	123 - 132 ft	123 - 132 ft	123 - 132 ft	123 - 132 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	1.0 U	1.0 U	0.50 U	2.5 U	2.50 U	0.50 U	5.0 U	5.00 U	1.0 U	10.0 U	25.0 U	2.50 U	R
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U
1,1-Dichloroethane	**70**	2000	20000	100000	**30.7**	**20**	**24**	**25**	**21.8**	**27.6**	**24**	**21.5**	**24.9**	**26**	**43.0**	**50.5**	**42.9**	**38**
1,1-Dichloroethene	**7**	**80**	30000	100000	**4.94 J**	**2.4**	**3.1**	**2.9**	5.0 U	5.00 U	**2.9**	10.0 U	10.0 U	**6.0**	20.0 U	50.0 U	**12.4 J**	10 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	0.50 U	5.0 U	5.00 U	0.50 U	10.0 U	10.0 U	1.0 U	20.0 U	50.0 U	5.00 U	10 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 UJ	5.0 U	5.00 U	1.0 UJ	10.0 U	10.0 U	2.0 UJ	20.0 U	50.0 U	5.00 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	R	1.0 UJ	0.50 U	10.0 U	10.0 UJ	0.50 U	20.0 U	20.0 UJ	1.0 U	40.0 U	100 UJ	10.0 U	R
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	1.0 U	1.0 U	0.50 U	2.5 U	2.50 U	0.50 U	5.0 U	5.00 U	1.0 U	10.0 U	25.0 U	2.50 U	10 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	1.2 U	1.2 U	0.60 U	5.0 U	5.00 U	0.60 U	10.0 U	10.0 U	1.2 U	20.0 U	50.0 U	5.00 U	10 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	80 U	200 U	100 U	100 U	100 U	100 U	200 U	200 U	200 U	NS	1000 U	100 U	800 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 UJ	2.0 U	20.0 U	50.0 UJ	5.00 U	20 U
2-Butanone	4000	50000	50000	100000	2.00 U	R	10 U	5.0 U	50.0 U	10.0 U	5.0 U	100 U	20.0 U	10 U	200 U	100 U	10.0 U	R
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
2-Hexanone	NE	NE	NE	NE	2.00 U	10 U	10 U	5.0 U	50.0 U	10.0 U	5.0 U	100 U	20.0 U	10 U	200 U	100 U	10.0 U	R
2-Phenylbutane	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 UJ	5.0 U	5.00 U	1.0 UJ	10.0 U	10.0 U	2.0 UJ	20.0 U	50.0 U	5.00 U	20 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	10 U	10 U	5.0 U	50.0 U	10.0 U	5.0 U	100 U	20.0 U	10 U	200 U	100 U	10.0 U	R
Acetone	6300	50000	50000	100000	10.0 UJ	R	50 UJ	25 U	50.0 U	50.0 U	25 UJ	100 U	100 U	50 UJ	200 U	500 U	50.0 UJ	R
Benzene	5	1000	10000	100000	1.00 U	1.4 U	1.4 U	0.70 U	5.0 U	5.00 U	0.70 U	10.0 U	10.0 U	1.4 U	20.0 U	50.0 U	5.00 U	10 U
Bromobenzene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
Bromodichloromethane	3	6	50000	100000	0.50 U	1.0 U	1.0 U	0.50 U	2.5 U	2.50 U	0.50 U	5.0 U	5.00 U	1.0 U	10.0 U	25.0 U	2.50 U	10 U
Bromoform	4	700	50000	100000	1.00 U	R	2.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	10.0 U	10.0 UJ	2.0 U	20.0 U	50.0 UJ	5.00 U	10 U
Bromomethane	10	7	800	8000	2.00 UJ	2.0 U	2.0 UJ	1.0 U	10.0 U	10.0 U	1.0 U	20.0 U	20.0 U	2.0 U	40.0 U	100 U	10.0 UJ	R
Carbon Disulfide	NE	NE	NE	NE	2.00 U	10 U	10 U	5.0 U	10.0 U	10.0 UJ	5.0 U	20.0 U	20.0 U	10 U	40.0 U	100 U	10.0 U	100 U
Carbon tetrachloride	5	2	5000	50000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U
Chlorobenzene	100	200	1000	10000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
Chloroethane	NE	NE	NE	NE	2.00 UJ	2.0 U	2.0 UJ	1.0 U	10.0 U	10.0 U	1.0 U	20.0 U	20.0 U	2.0 U	40.0 U	100 U	10.0 UJ	20 U
Chloroform	70	50	20000	100000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
chloromethane	NE	NE	NE	NE	2.00 U	2.0 U	2.0 U	1.0 U	10.0 UJ	10.0 U	1.0 U	20.0 UJ	20.0 U	2.0 U	40.0 U	100 U	10.0 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**153**	**130**	**130**	**70**	**43.3**	**158**	**73**	**69.2**	**440**	**430**	**111**	**310**	**466**	**510**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	1.0 U	1.0 U	0.40 U	2.5 U	2.50 U	0.40 U	5.0 U	5.00 U	1.0 U	10.0 U	25.0 U	2.50 U	10 U
Cymene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 UJ	5.0 U	5.00 U	1.0 UJ	10.0 U	10.0 U	2.0 UJ	20.0 U	50.0 U	5.00 U	20 U
Dibromochloromethane	2	20	50000	100000	0.50 U	1.0 U	1.0 U	0.50 U	2.5 U	2.50 UJ	0.50 U	5.0 U	5.00 U	1.0 U	10.0 U	25.0 U	2.50 U	10 U
Dibromomethane	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	2.0 U	2.0 U	1.0 U	10.0 U	10.0 U	1.0 U	20.0 U	20.0 UJ	2.0 U	40.0 U	100 UJ	10.0 U	20 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 UJ	5.00 U	1.0 U	10.0 UJ	10.0 UJ	2.0 U	20.0 U	50.0 UJ	5.00 U	20 U
Ethylbenzene	700	20000	5000	100000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 UJ	2.0 U	2.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 UJ	20 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	1.0 U	1.0 U	0.40 U	2.5 U	2.50 U	0.40 U	5.0 U	5.00 UJ	1.0 U	10.0 U	25.0 UJ	2.50 U	10 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 UJ	5.0 U	5.00 U	1.0 UJ	10.0 U	10.0 U	2.0 UJ	20.0 U	50.0 U	5.00 U	20 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 U	2.0 U	2.0 U	1.0 U	5.0 UJ	5.00 U	1.0 U	10.0 UJ	10.0 UJ	2.0 U	20.0 U	50.0 UJ	5.00 U	20 U
Methylene Chloride	5	2000	50000	100000	2.00 UJ	2.0 U	2.0 UJ	1.0 U	10.0 U	10.0 UJ	1.0 U	20.0 U	20.0 U	2.0 U	40.0 U	100 U	10.0 UJ	10 U
mp-xylene	10000	3000	5000	NE	2.00 U	2.0 U	2.0 U	1.0 U	10.0 U	10.0 U	1.0 U	20.0 U	20.0 U	2.0 U	40.0 U	100 U	10.0 U	20 U
Naphthalene	140	700	20000	100000	2.00 U	2.0 U	2.0 U	1.0 UJ	5.0 U	5.00 U	1.0 UJ	10.0 U	10.0 U	2.0 UJ	20.0 UJ	50.0 U	10.0 U	20 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
o-Xylene	10000	3000	5000	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 UJ	5.00 U	1.0 U	10.0 UJ	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
Styrene	100	100	6000	60000	1.00 U	2.0 U	2.0 U	1.0 UJ	5.0 U	5.00 U	1.0 UJ	10.0 U	10.0 U	2.0 UJ	20.0 U	50.0 U	5.00 U	20 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 UJ	5.0 U	5.00 U	1.0 UJ	10.0 U	10.0 U	2.0 UJ	20.0 U	50.0 U	5.00 U	20 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 UJ	2.0 U	20.0 U	50.0 UJ	5.00 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**2.63**	**9.3**	**7.0 J+**	1.0 UJ	**23.6**	5.00 U	**3.4 J+**	**322**	**188 J**	**440 J+**	**1130**	**965 J**	**952**	**1000**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	2.5 U	10.0 U	10.0 U	2.5 U	20.0 U	20.0 U	5.0 U	40.0 U	100 U	10.0 U	R
Toluene	**1000**	50000	40000	100000	1.00 U	2.0 U	2.0 U	1.0 U	**6.8**	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**7.23**	**6.6**	**11**	**6.2**	5.0 U	**7.80**	**11**	10.0 U	**19.3**	**68**	20.0 U	50.0 U	**18.4**	**37**
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	1.0 U	1.0 U	0.40 U	2.5 UJ	2.50 U	0.40 U	5.0 UJ	5.00 UJ	1.0 U	10.0 U	25.0 UJ	2.50 U	10 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**87.5**	**79**	**60**	**53**	**93.0**	**134**	**63**	**395**	**580**	**530**	**1260**	**2030**	**1970**	**1900**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	2.0 U	2.0 U	1.0 U	5.0 U	5.00 U	1.0 U	10.0 U	10.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U
Vinyl chloride	**2**	**2**	50000	100000	1.00 UJ	2.0 U	2.0 U	**33**	5.0 U	5.00 U	**98**	10.0 U	10.0 U	**140**	20.0 UJ	50.0 U	5.00 UJ	10 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1 U	10 U	10 U	1 U	20 U	20 U	2 U	40 U	100 U	10 U	20 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Building 1 Tank F													
Location ID:					AE26R-5	AE26R-5	AE26S	AE26S	AE26S	AE26S	AE26S	AE26S	AE27R	AE27R	AE27R	AE28R-1	AE28R-1	AE28R-1
Sample ID:					20A-AE26R5-091420-1	21A-AE26R5-090121-1	16A-AE26S-062316-1	17A-AE26S-100517-1	18A-AE26S-092518-1	19A-AE26S-092319-1	20A-AE26S-091420-1	21A-AE26S-090321-1	16B-AE27R-062316-1	17A-AE27R-100517-1	21A-AE27R-090321-1	16B-AE28R1-062316-1	17A-AE28R1-100417-1	18A-AE28R1-091818-1	19A-AE28R1-092319-1
Sample Date:					09/14/2020	09/01/2021	06/23/2016	10/05/2017	09/25/2018	09/23/2019	09/14/2020	09/03/2021	06/23/2016	10/05/2017	09/03/2021	06/23/2016	10/04/2017	09/18/2018	09/23/2019
Depth Interval:					123 - 132 ft	123 - 132 ft	25 - 30 ft	25 - 30 ft	25 - 30 ft	25 - 30 ft	25 - 30 ft	25 - 30 ft	34 - 46 ft	50 - 60 ft	50.5 - 60.5 ft	45 - 51 ft	45 - 51 ft	45 - 51 ft	45 - 51 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	10 U	5.0 U	1.0 U	5.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 UJ	2.0 U	50.0 U	200 U	500 U	50 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	20 U	10 U	1.0 U	5.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 UJ	2.0 U	50.0 U	200 U	500 U	100 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	10 U	5.0 U	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	2.50 U	1.0 U	25.0 U	100 U	250 U	R
1,1,2-Trichloroethane	**5**	900	50000	100000	10 U	5.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	50 U
1,1-Dichloroethane	**70**	2000	20000	100000	**42**	**44**	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	**100**
1,1-Dichloroethene	**7**	**80**	30000	100000	**14**	**11**	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	50 U
1,1-Dichloropropene	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	10 U	7.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	50 U
1,2,3-Trichloropropane	NE	NE	NE	NE	10 U	5.0 U	1.0 U	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U	10.0 U	5.00 U	1.0 U	50.0 U	200 U	500 U	50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 UJ	5.00 U	2.0 U	50.0 U	200 U	500 U	70 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	20 U	10 UJ	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	10.0 U	5.00 U	2.0 UJ	50.0 U	200 U	500 U	56 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	10 UJ	5.0 U	2.0 U	10.0 UJ	2.00 U	R	0.50 UJ	0.50 U	20.0 U	10.0 UJ	1.0 U	100 U	400 UJ	1000 U	R
1,2-Dibromoethane	0.02	2	50000	100000	10 U	5.0 U	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	2.50 U	1.0 U	25.0 U	100 U	250 U	50 U
1,2-Dichlorobenzene	600	8000	2000	80000	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
1,2-Dichloroethane	5	5	20000	100000	10 U	5.0 U	1.0 U	5.00 U	1.00 U	0.60 U	0.60 U	0.60 U	10.0 U	5.00 U	1.2 U	50.0 U	200 U	500 U	50 U
1,2-Dichloropropane	5	3	50000	100000	10 U	5.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	50 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	60 U
1,3-Dichlorobenzene	100	6000	50000	100000	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	50 U
1,3-Dichloropropane	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
1,4-Dichlorobenzene	5	60	8000	80000	10 U	5.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	50 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	1000 U	20.0 U	100 U	20.0 UJ	40 U	100 U	100 U	200 U	100 UJ	200 U	1000 U	4000 U	10000 U	4000 U
2,2-Dichloropropane	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 UJ	500 UJ	100 U
2-Butanone	4000	50000	50000	100000	100 U	50 U	10.0 U	10.0 U	2.00 UJ	R	5.0 U	5.0 U	100 U	10.0 UJ	10 U	500 U	400 U	1000 U	R
2-Chlorotoluene	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
2-Hexanone	NE	NE	NE	NE	100 U	50 U	10.0 U	10.0 U	2.00 UJ	5.0 U	5.0 U	5.0 U	100 U	10.0 U	10 U	500 U	400 U	1000 U	R
2-Phenylbutane	NE	NE	NE	NE	20 U	10 UJ	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	10.0 U	5.00 U	2.0 UJ	50.0 U	200 U	500 U	100 U
4-Chlorotoluene	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
4-Methyl-2-pentanone	350	50000	50000	100000	100 U	50 U	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U	100 U	10.0 U	10 U	500 U	400 U	1000 U	R
Acetone	6300	50000	50000	100000	500 UJ	250 UJ	10.0 U	50.0 U	10.0 U	R	25 UJ	25 U	100 U	**1040**	50 U	500 U	2000 U	5000 U	R
Benzene	5	1000	10000	100000	10 U	5.0 U	1.0 U	5.00 U	1.00 U	0.70 U	0.70 U	0.70 U	10.0 U	5.00 U	1.4 U	50.0 U	200 U	500 U	50 U
Bromobenzene	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	62 U
Bromochloromethane	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	83 U
Bromodichloromethane	3	6	50000	100000	10 U	5.0 U	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	**0.73**	5.0 U	2.50 U	1.0 U	25.0 U	100 U	250 U	50 U
Bromoform	4	700	50000	100000	10 U	5.0 U	1.0 U	5.00 UJ	1.00 U	R	1.0 U	1.0 U	10.0 U	5.00 UJ	2.0 U	50.0 U	200 UJ	500 U	50 U
Bromomethane	10	7	800	8000	10 UJ	7.0 U	2.0 U	10.0 U	2.00 UJ	1.0 U	1.0 UJ	1.0 U	20.0 U	10.0 U	2.0 U	100 U	400 U	1000 U	R
Carbon Disulfide	NE	NE	NE	NE	100 U	50 U	2.0 U	10.0 UJ	2.00 U	5.0 U	5.0 U	5.0 U	20.0 U	10.0 UJ	10 U	100 U	400 U	1000 UJ	500 U
Carbon tetrachloride	5	2	5000	50000	10 U	5.0 U	1.0 U	5.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 UJ	2.0 U	50.0 U	200 U	500 U	50 U
Chlorobenzene	100	200	1000	10000	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
Chloroethane	NE	NE	NE	NE	20 UJ	10 U	2.0 U	10.0 U	2.00 U	1.0 U	1.0 UJ	1.0 U	20.0 U	10.0 U	2.0 U	100 U	400 U	1000 U	100 U
Chloroform	70	50	20000	100000	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	50 U
chloromethane	NE	NE	NE	NE	20 U	10 U	2.0 UJ	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	20.0 UJ	10.0 U	2.0 U	100 UJ	400 U	1000 U	100 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**390**	**340**	**117**	**111**	**63.2**	**57**	**34**	**17**	10.0 U	**393**	**500**	50.0 U	**738**	**1280**	**1900**
cis-1,3-Dichloropropene	NE	NE	NE	NE	10 U	5.0 U	0.5 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	5.0 U	2.50 U	1.0 U	25.0 U	100 U	250 U	50 U
Cymene	NE	NE	NE	NE	20 U	10 UJ	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	10.0 U	5.00 U	2.0 UJ	50.0 U	200 U	500 U	100 U
Dibromochloromethane	2	20	50000	100000	10 U	5.0 U	0.5 U	2.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	2.50 UJ	1.0 U	25.0 U	100 U	250 U	50 U
Dibromomethane	NE	NE	NE	NE	10 U	8.3 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	50 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	20 U	10 U	2.0 U	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	20.0 U	10.0 U	2.0 U	100 U	400 UJ	1000 U	100 U
Diethyl Ether	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
Diisopropyl Ether	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	20 U	10 U	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 UJ	5.00 UJ	2.0 U	50.0 UJ	200 UJ	500 U	100 U
Ethylbenzene	700	20000	5000	100000	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	20 U	10 U	**4.1**	5.00 UJ	**2.04**	**2.2**	**1.4**	1.0 U	10.0 U	5.00 UJ	2.0 U	50.0 U	200 U	500 U	100 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	10 U	5.0 U	0.5 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	5.0 U	2.50 U	1.0 U	25.0 U	100 UJ	250 U	50 U
Isopropylbenzene	NE	NE	NE	NE	20 U	10 UJ	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	10.0 U	5.00 U	2.0 UJ	50.0 U	200 U	500 U	100 U
Methyl tert-butyl ether	NE	NE	NE	100000	20 U	10 U	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 UJ	200 UJ	500 U	70 U
Methylene Chloride	5	2000	50000	100000	20 UJ	50 U	2.0 U	10.0 UJ	2.00 U	1.0 U	1.0 UJ	1.0 U	20.0 U	10.0 UJ	2.0 U	100 U	400 U	1000 U	50 U
mp-xylene	10000	3000	5000	NE	20 U	10 U	2.0 U	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	20.0 U	10.0 U	2.0 U	100 U	400 U	1000 U	100 U
Naphthalene	140	700	20000	100000	20 U	10 UJ	1.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	10.0 UJ	5.00 U	2.0 UJ	50.0 U	200 U	1000 U	100 U
N-Butylbenzene	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
N-Propylbenzene	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
o-Xylene	10000	3000	5000	NE	20 U	10 U	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 UJ	200 U	500 U	100 U
Styrene	100	100	6000	60000	20 U	10 UJ	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	10.0 U	5.00 U	2.0 UJ	50.0 U	200 U	500 U	100 U
Tert-Butylbenzene	NE	NE	NE	NE	20 U	10 UJ	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	10.0 U	5.00 U	2.0 UJ	50.0 U	200 U	500 U	100 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 UJ	500 U	100 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**1300 J+**	**1300 J+**	**56.5**	**41.8**	**31.1**	**29**	**24 J+**	**22 J+**	**364**	**71.0**	2.0 UJ	**1570**	**3600 J**	**5500**	**3500**
Tetrahydrofuran	NE	NE	NE	NE	50 U	25 U	2.0 U	10.0 U	2.00 U	2.5 U	2.5 U	2.5 U	20.0 U	10.0 U	5.0 U	100 U	400 U	1000 U	R
Toluene	**1000**	50000	40000	100000	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**30**	**27**	**4.0**	5.00 U	**2.24**	**2.3**	**1.4**	1.0 U	10.0 U	5.00 U	**3.2**	50.0 U	200 U	500 U	**250**
trans-1,3-Dichloropropene	NE	NE	NE	NE	10 U	5.0 U	0.5 UJ	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	5.0 U	2.50 U	1.0 U	25.0 UJ	100 UJ	250 U	50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**2100**	**1600**	**34.2**	**36.0**	**21.4**	**23**	**13**	**7.5**	**635**	**101**	**2.8**	**1550**	**9930**	**13900**	**10000**
Trichlorofluoromethane	NE	NE	NE	NE	20 U	10 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 U	5.00 U	2.0 U	50.0 U	200 U	500 U	100 U
Vinyl chloride	**2**	**2**	50000	100000	10 U	**32**	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	10.0 UJ	5.00 U	2.0 U	50.0 U	200 U	500 U	**380**
Xylenes (Total)	10000	3000	5000	NE	20 U	10 U	2.0 U	10 U	2.0 U	1.0 U	1.0 U	1 U	20 U	10 U	2 U	100 U	400 U	1000 U	100 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Building 1 Tank F												
Location ID:					AE28R-1	AE28R-1	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-3	AE28R-3	AE28R-3	AE28R-3	AE28R-3
Sample ID:					20A-AE28R1-091420-1	21A-AE28R1-090121-1	16B-AE28R2-062316-1	17A-AE28R2-100417-1	18A-AE28R2-091818-1	19A-AE28R2-092319-1	20A-AE28R2-091420-1	21A-AE28R2-090121-1	16B-AE28R3-062316-1	17A-AE28R3-100417-1	18A-AE28R3-091818-1	19A-AE28R3-092319-1	20A-AE28R3-091420-1	21A-AE28R3-090121-1
Sample Date:					09/14/2020	09/01/2021	06/23/2016	10/04/2017	09/18/2018	09/23/2019	09/14/2020	09/01/2021	06/23/2016	10/04/2017	09/18/2018	09/23/2019	09/14/2020	09/01/2021
Depth Interval:					45 - 51 ft	45 - 51 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	98 - 108 ft	98 - 108 ft	98 - 108 ft	98 - 108 ft	98 - 108 ft	98 - 108 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	50 U	5.0 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	10 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	50 U	5.0 U	250 U	100 U	250 U	R	50 U	50 U	100 U	100 U	50.0 U	R	50 U	10 U
1,1,2-Trichloroethane	**5**	900	50000	100000	50 U	5.0 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	10 U
1,1-Dichloroethane	**70**	2000	20000	100000	**98**	**74**	500 U	200 U	500 U	**160**	**140**	**160**	200 U	200 U	100 U	70 U	**140**	**74**
1,1-Dichloroethene	**7**	**80**	30000	100000	50 U	**25**	500 U	200 U	500 UJ	**50**	50 U	**56**	200 U	200 U	100 U	50 U	50 U	**20**
1,1-Dichloropropene	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	50 U	7.0 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	10 U
1,2,3-Trichloropropane	NE	NE	NE	NE	50 U	5.0 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	10 U
1,2,4-Trichlorobenzene	70	200	50000	NE	70 U	10 U	500 U	200 U	500 U	70 U	70 U	70 U	200 U	200 U	100 U	70 U	70 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	56 U	10 UJ	500 U	200 U	500 U	56 U	56 U	56 UJ	200 U	200 U	100 U	56 U	56 U	20 UJ
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	50 U	5.0 U	1000 U	400 UJ	1000 U	R	50 U	50 U	400 U	400 UJ	200 U	R	50 UJ	10 U
1,2-Dibromoethane	0.02	2	50000	100000	50 U	5.0 U	250 U	100 U	250 U	50 U	50 U	50 U	100 U	100 U	50.0 U	50 U	50 U	10 U
1,2-Dichlorobenzene	600	8000	2000	80000	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
1,2-Dichloroethane	5	5	20000	100000	50 U	5.0 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	10 U
1,2-Dichloropropane	5	3	50000	100000	50 U	5.0 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	10 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	60 U	10 U	500 U	200 U	500 U	60 U	60 U	60 U	200 U	200 U	100 U	60 U	60 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	50 U	10 U	500 U	200 U	500 U	50 U	50 U	100 U	200 U	200 U	100 U	50 U	50 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
1,4-Dichlorobenzene	5	60	8000	80000	50 U	5.0 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	10 U
1,4-Dioxane	**0.3**	6000	50000	100000	10000 U	1000 U	NS	4000 U	10000 U	4000 U	10000 U	10000 U	4000 U	4000 U	2000 U	4000 U	10000 U	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	100 U	10 U	500 U	200 UJ	500 U	100 U	100 U	100 U	200 U	200 UJ	100 UJ	100 U	100 U	20 U
2-Butanone	4000	50000	50000	100000	500 U	50 U	5000 U	400 U	1000 U	R	500 U	500 U	2000 U	400 U	200 U	R	500 U	100 U
2-Chlorotoluene	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
2-Hexanone	NE	NE	NE	NE	500 U	50 U	5000 U	400 U	1000 U	R	500 U	500 U	2000 U	400 U	200 U	R	500 U	100 U
2-Phenylbutane	NE	NE	NE	NE	100 U	10 UJ	500 U	200 U	500 U	100 U	100 U	100 UJ	200 U	200 U	100 U	100 U	100 U	20 UJ
4-Chlorotoluene	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
4-Methyl-2-pentanone	350	50000	50000	100000	500 U	50 U	5000 U	400 U	1000 U	R	500 U	500 U	2000 U	400 U	200 U	R	500 U	100 U
Acetone	6300	50000	50000	100000	2500 U	250 UJ	5000 U	2000 U	5000 UJ	R	2500 U	2500 U	2000 U	2000 U	1000 U	R	2500 UJ	500 U
Benzene	5	1000	10000	100000	50 U	5.0 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	10 U
Bromobenzene	NE	NE	NE	NE	62 U	10 U	500 U	200 U	500 U	62 U	62 U	62 U	200 U	200 U	100 U	62 U	62 U	20 U
Bromochloromethane	NE	NE	NE	NE	83 U	10 U	500 U	200 U	500 U	83 U	83 U	83 U	200 U	200 U	100 U	83 U	83 U	20 U
Bromodichloromethane	3	6	50000	100000	50 U	5.0 U	250 U	100 U	250 U	50 U	50 U	50 U	100 U	100 U	50.0 U	50 U	50 U	10 U
Bromoform	4	700	50000	100000	50 U	5.0 U	500 U	200 UJ	500 U	50 U	50 U	50 U	200 U	200 UJ	100 U	50 UJ	50 U	10 U
Bromomethane	10	7	800	8000	50 U	7.0 U	1000 U	400 U	1000 UJ	R	50 U	50 U	400 U	400 U	200 U	R	50 UJ	10 U
Carbon Disulfide	NE	NE	NE	NE	500 U	50 U	1000 U	400 U	1000 U	500 U	500 U	500 U	400 U	400 U	200 UJ	500 U	500 U	100 U
Carbon tetrachloride	5	2	5000	50000	50 U	5.0 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	10 U
Chlorobenzene	100	200	1000	10000	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
Chloroethane	NE	NE	NE	NE	100 UJ	10 U	1000 U	400 U	1000 UJ	100 U	100 UJ	100 U	400 U	400 U	200 U	100 U	100 UJ	20 U
Chloroform	70	50	20000	100000	50 U	10 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	20 U
chloromethane	NE	NE	NE	NE	100 U	10 U	1000 UJ	400 U	1000 U	100 U	100 U	100 U	400 UJ	400 U	200 U	100 U	100 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**2200**	**2100**	500 U	**298**	500 U	**840**	**1100**	**1600**	200 U	**294**	**462**	**730**	**1500**	**830**
cis-1,3-Dichloropropene	NE	NE	NE	NE	50 U	5.0 U	250 U	100 U	250 U	50 U	50 U	50 U	100 U	100 U	50.0 U	50 U	50 U	10 U
Cymene	NE	NE	NE	NE	100 U	10 UJ	500 U	200 U	500 U	100 U	100 U	100 UJ	200 U	200 U	100 U	100 U	100 U	20 UJ
Dibromochloromethane	2	20	50000	100000	50 U	5.0 U	250 U	100 U	250 U	50 U	50 U	50 U	100 U	100 U	50.0 U	50 U	50 U	10 U
Dibromomethane	NE	NE	NE	NE	50 U	8.3 U	500 U	200 U	500 U	50 U	50 U	50 U	200 U	200 U	100 U	50 U	50 U	10 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	100 U	10 U	1000 U	400 UJ	1000 U	100 U	100 U	100 U	400 U	400 UJ	200 U	100 U	100 U	20 U
Diethyl Ether	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
Diisopropyl Ether	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	100 U	10 U	500 UJ	200 UJ	500 U	100 U	100 U	100 U	200 UJ	200 UJ	100 U	100 U	100 U	20 U
Ethylbenzene	700	20000	5000	100000	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 UJ	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	50 U	5.0 U	250 U	100 UJ	250 U	50 U	50 U	50 U	100 U	100 UJ	50.0 U	50 U	50 U	10 U
Isopropylbenzene	NE	NE	NE	NE	100 U	10 UJ	500 U	200 U	500 U	100 U	100 U	100 UJ	200 U	200 U	100 U	100 U	100 U	20 UJ
Methyl tert-butyl ether	NE	NE	NE	100000	70 U	10 U	500 UJ	200 UJ	500 U	70 U	70 U	70 U	200 UJ	200 UJ	100 U	70 U	70 U	20 U
Methylene Chloride	5	2000	50000	100000	100 U	50 U	1000 U	400 U	1000 UJ	50 U	100 U	500 U	400 U	400 U	200 U	50 U	100 UJ	100 U
mp-xylene	10000	3000	5000	NE	100 U	10 U	1000 U	400 U	1000 U	100 U	100 U	100 U	400 U	400 U	200 U	100 U	100 U	20 U
Naphthalene	140	700	20000	100000	100 U	10 UJ	500 U	200 U	1000 U	100 U	100 U	100 UJ	200 U	200 U	200 U	100 U	100 U	20 UJ
N-Butylbenzene	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
N-Propylbenzene	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
o-Xylene	10000	3000	5000	NE	100 U	10 U	500 UJ	200 U	500 U	100 U	100 U	100 U	200 UJ	200 U	100 U	100 U	100 U	20 U
Styrene	100	100	6000	60000	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 UJ	200 U	200 U	100 U	100 U	100 U	20 UJ
Tert-Butylbenzene	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 UJ	200 U	200 U	100 U	100 U	100 U	20 UJ
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	100 U	10 U	500 U	200 UJ	500 U	100 U	100 U	100 U	200 U	200 UJ	100 U	100 U	100 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**4300 J+**	**3400 J+**	**19700**	**20200 J**	**18300**	**17000**	**15000 J+**	**20000 J+**	**7210**	**5400 J**	**4200**	**3600**	**6900 J+**	**4100 J+**
Tetrahydrofuran	NE	NE	NE	NE	250 U	25 U	1000 U	400 U	1000 U	R	250 U	250 U	400 U	400 U	200 U	R	250 U	50 U
Toluene	**1000**	50000	40000	100000	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**310**	**290**	500 U	200 U	500 U	**140**	**260**	**250**	200 U	200 U	100 U	**120**	**280**	**140**
trans-1,3-Dichloropropene	NE	NE	NE	NE	50 U	5.0 U	250 UJ	100 UJ	250 U	50 U	50 U	50 U	100 UJ	100 UJ	50.0 U	50 U	50 U	10 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**11000**	**6600**	**15700**	**18000**	**19600**	**19000**	**16000**	**19000**	**3690**	**5190**	**6220**	**5100**	**9000**	**3800**
Trichlorofluoromethane	NE	NE	NE	NE	100 U	10 U	500 U	200 U	500 U	100 U	100 U	100 U	200 U	200 U	100 U	100 U	100 U	20 U
Vinyl chloride	**2**	**2**	50000	100000	**540**	**710**	500 U	200 U	500 UJ	**99**	**370**	**180**	200 U	200 U	100 U	50 U	**290**	**340**
Xylenes (Total)	10000	3000	5000	NE	100 U	10 U	1000 U	400 U	1000 U	100 U	100 U	100 U	400 U	400 U	200 U	100 U	100 U	20 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Building 1 Tank F													
Location ID:					AE28R-4	AE28R-4	AE28R-4	AE28R-4	AE28R-4	AE28R-4	AE29R-1	AE29R-1	AE29R-1	AE29R-1	AE29R-1	AE29R-1	AE29R-2	AE29R-2
Sample ID:					16B-AE28R4-062316-1	17A-AE28R4-100517-1	18A-AE28R4-091818-1	19A-AE28R4-092319-1	20A-AE28R4-091420-1	21A-AE28R4-090121-1	16B-AE29R1-062816-1	17A-AE29R1-101717-1	18A-AE29R1-091818-1	19A-AE29R1-092419-1	20A-AE29R1-092220-1	21A-AE29R1-091021-1	16B-AE29R2-062816-1	17A-AE29R2-101717-1
Sample Date:					06/23/2016	10/05/2017	09/18/2018	09/23/2019	09/14/2020	09/01/2021	06/28/2016	10/17/2017	09/18/2018	09/24/2019	09/22/2020	09/10/2021	06/28/2016	10/17/2017
Depth Interval:					132 - 142 ft	132 - 142 ft	132 - 142 ft	132 - 142 ft	132 - 142 ft	132 - 142 ft	37 - 44 ft	37 - 44 ft	37 - 44 ft	37 - 44 ft	37 - 44 ft	37 - 44 ft	47 - 54 ft	47 - 54 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 U	100 UJ	1.00 U	50 U	50 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 U	100 UJ	**3.94**	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	50.0 U	0.50 U	R	50 U	10 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 UJ	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	200 U	100 U	1.00 U	50 U	50 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	**100**	**77.1**	**72**	**78**	**87**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.2**	1.00 U
1,1-Dichloroethene	**7**	**80**	30000	100000	200 U	100 U	**31.0**	50 U	50 U	**26**	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 UJ
1,1-Dichloropropene	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	100 U	1.00 U	50 U	50 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	100 U	1.00 U	50 U	50 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	1.0 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	200 U	100 U	1.00 U	70 U	70 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	100 U	**3.53**	56 U	56 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	400 U	200 UJ	2.00 U	R	50 U	10 U	2.0 U	2.00 U	2.00 U	1.0 U	0.50 U	0.50 U	2.0 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	100 U	50.0 U	0.50 U	50 U	50 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	100 U	1.00 U	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	200 U	100 U	1.00 U	50 U	50 U	10 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	200 U	100 U	1.00 U	50 U	50 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	100 U	**1.94**	60 U	60 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	100 U	1.00 U	50 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	100 U	1.00 U	50 U	50 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	4000 U	2000 U	20.0 U	4000 U	10000 U	2000 U	20.0 U	20.0 U	20.0 U	100 U	100 U	100 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
2-Butanone	4000	50000	50000	100000	2000 U	200 U	2.00 U	R	500 U	100 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
2-Hexanone	NE	NE	NE	NE	2000 U	200 U	2.00 U	R	500 U	100 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	2000 U	200 U	2.00 U	R	500 U	100 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U
Acetone	6300	50000	50000	100000	2000 U	1000 U	10.0 U	R	2500 U	500 U	10.0 U	10.0 U	10.0 U	25 U	25 U	25 UJ	10.0 U	10.0 U
Benzene	5	1000	10000	100000	200 U	100 U	1.00 U	50 U	50 U	10 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U
Bromobenzene	NE	NE	NE	NE	200 U	100 U	1.00 U	62 U	62 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	200 U	100 U	1.00 U	83 U	83 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromodichloromethane	3	6	50000	100000	100 U	50.0 U	0.50 U	50 U	50 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
Bromoform	4	700	50000	100000	200 U	100 UJ	1.00 U	50 UJ	50 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromomethane	10	7	800	8000	400 U	200 U	2.00 U	R	50 U	10 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U
Carbon Disulfide	NE	NE	NE	NE	400 U	200 UJ	2.00 U	500 U	500 U	100 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ
Carbon tetrachloride	5	2	5000	50000	200 U	100 UJ	1.00 U	50 U	50 U	10 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Chlorobenzene	100	200	1000	10000	200 U	100 U	**1.41**	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Chloroethane	NE	NE	NE	NE	400 U	200 U	2.00 U	100 U	100 UJ	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U
Chloroform	70	50	20000	100000	200 U	100 U	1.00 U	50 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
chloromethane	NE	NE	NE	NE	400 UJ	200 U	2.00 U	100 U	100 U	20 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	200 U	**311**	**484**	**540**	**640**	**690**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.5**	1.00 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 U	50.0 U	0.50 U	50 U	50 U	10 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U
Cymene	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Dibromochloromethane	2	20	50000	100000	100 U	50.0 UJ	0.50 U	50 U	50 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
Dibromomethane	NE	NE	NE	NE	200 U	100 U	1.00 U	50 U	50 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	200 U	2.00 UJ	100 U	100 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 UJ	20 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 UJ	20 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 UJ	100 U	1.00 U	100 U	100 U	20 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Ethylbenzene	700	20000	5000	100000	200 U	100 U	**1.11**	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	100 UJ	1.00 U	100 U	100 U	20 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	100 U	50.0 U	0.50 U	50 U	50 U	10 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ
Isopropylbenzene	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	200 UJ	100 U	1.00 U	70 U	70 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Methylene Chloride	5	2000	50000	100000	400 U	200 UJ	2.00 U	50 U	100 U	100 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ
mp-xylene	10000	3000	5000	NE	400 U	200 U	2.00 U	100 U	100 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U
Naphthalene	140	700	20000	100000	200 U	100 U	2.00 U	100 U	100 U	20 UJ	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
N-Butylbenzene	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
o-Xylene	10000	3000	5000	NE	200 UJ	100 U	1.00 U	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Styrene	100	100	6000	60000	200 U	100 U	1.00 U	100 U	100 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	100 U	1.00 U	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**6960**	**6910**	**5110 J-**	**7000**	**5900**	**6200 J+**	1.0 U	1.00 U	1.00 U	1.0 U	**3.6 J+**	1.0 UJ	1.0 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	400 U	200 U	2.00 U	R	250 U	50 U	2.0 U	2.00 U	2.00 UJ	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U
Toluene	**1000**	50000	40000	100000	200 U	100 U	**5.45**	100 U	100 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	100 U	**61.3**	80 U	**120**	**100**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	100 UJ	50.0 U	0.50 U	50 U	50 U	10 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**3730**	**6060**	**5550 J-**	**7300**	**6500**	**6700**	**4.2**	**2.75**	1.00 U	**2.4**	**4.0**	**1.4**	**5.7**	**3.64**
Trichlorofluoromethane	NE	NE	NE	NE	200 U	100 U	1.00 UJ	100 U	100 U	20 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	200 U	100 U	1.00 UJ	50 U	**76**	**130**	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Xylenes (Total)	10000	3000	5000	NE	400 U	200 U	2.0 U	100 U	100 U	20 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Building 1 Tank F													
Location ID:					AE29R-2	AE29R-3	AE29R-3	AE29R-3	AE29R-3	AE29R-3	AE29R-3	AE29R-4	AE29R-4	AE29R-4	AE29R-5	AE29R-5	AE29R-5	AE29R-5
Sample ID:					21A-AE29R2-091021-1	16B-AE29R3-062816-1	17A-AE29R3-101717-1	18A-AE29R3-091818-1	19A-AE29R3-092419-1	20A-AE29R3-092220-1	21A-AE29R3-091021-1	16B-AE29R4-062816-1	17A-AE29R4-101717-1	21A-AE29R4-091021-1	16B-AE29R5-062816-1	17A-AE29R5-101717-1	18A-AE29R5-091818-1	19A-AE29R5-092419-1
Sample Date:					09/10/2021	06/28/2016	10/17/2017	09/18/2018	09/24/2019	09/22/2020	09/10/2021	06/28/2016	10/17/2017	09/10/2021	06/28/2016	10/17/2017	09/18/2018	09/24/2019
Depth Interval:					47 - 54 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	90 - 96 ft	90 - 96 ft	90 - 96 ft	113 - 119 ft	113 - 119 ft	113 - 119 ft	113 - 119 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 UJ	2.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	**3.6**	**10.8**	**3.81**	**6.3**	**5.2**	**2.3**	**2.6**	**10.6**	**18**	**10.1**	**37.2**	**33.1**	**34**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 UJ	**1.2**	**3.53 J**	1.00 U	**1.7**	**1.2**	1.0 UJ	1.0 U	**1.28 J**	**3.1**	**2.4**	**8.45 J**	**6.06**	**7.5**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	5.00 U	1.00 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	2.0 U	2.00 U	2.00 U	0.50 U	0.50 U	0.50 U	2.0 U	2.00 U	0.50 UJ	2.0 U	10.0 U	2.00 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	2.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	5.00 U	1.00 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	20.0 U	**23.3**	20.0 U	10 U	100 U	100 U	20.0 U	20.0 U	100 U	20.0 U	100 U	20.0 U	10 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	10.0 U	2.00 U	**2.89**	5.0 UJ	5.0 U	5.0 U	10.0 U	**2.70**	5.0 U	10.0 U	10.0 U	2.00 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U
Acetone	6300	50000	50000	100000	25 UJ	10.0 U	10.0 U	10.0 U	25 U	25 U	25 UJ	10.0 UJ	10.0 U	25 UJ	10.0 U	50.0 U	10.0 U	25 U
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	5.00 U	1.00 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	2.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	10.0 U	2.00 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	10.0 U	2.00 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 UJ	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	10.0 U	2.00 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 UJ	10.0 U	2.00 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	**5.7**	**47.5**	**21.2**	**36**	**31**	**16**	**4.4**	**46.5**	**98**	**20.7**	**212**	**224**	**190**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	2.50 U	0.50 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	2.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	**2.0 J**	2.0 UJ	2.00 U	1.0 U	2.0 U	10.0 U	2.00 UJ	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ	5.00 U	1.00 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	5.00 U	1.00 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	5.00 U	1.00 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	5.00 UJ	1.00 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.40 U	0.5 U	2.50 U	0.50 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 UJ	2.00 UJ	1.0 U	2.0 U	10.0 U	2.00 U	1.0 UJ
mp-xylene	10000	3000	5000	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	10.0 U	2.00 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	5.00 U	2.00 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 UJ	1.0 U	1.00 U	**5.38**	1.0 U	R	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	5.00 U	**3.17**	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.00 U	2.00 U	2.5 UJ	2.5 U	2.5 U	**3.9**	2.00 U	2.5 U	2.0 U	10.0 U	2.00 U	2.5 UJ
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	**1.12**	1.00 U	1.0 U	**1.0**	1.0 U	1.0 U	**1.00**	**2.6**	1.0 U	**5.95**	**5.25**	**5.8**
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	2.50 U	0.50 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**1.5**	**16.7**	**47.9**	**17.1**	**21**	**8.8**	**3.4**	**4.7**	**5.72**	**3.3**	**20.5**	**22.2**	**13.3**	**41**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 UJ	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 U	1.0 UJ	5.00 U	1.00 UJ	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	5.00 U	1.00 UJ	1.0 U
Xylenes (Total)	10000	3000	5000	NE	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	10 U	2.0 U	1.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Building 1 Tank F													
Location ID:					AE29R-5	AE29R-5	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE2I	AE2R	AE2R	AE2R	GZA-101R	GZA-101R
Sample ID:					20A-AE29R5-092220-1	21A-AE29R5-091021-1	16B-AE29R6-062816-1	17A-AE29R6-101717-1	18A-AE29R6-091818-1	19A-AE29R6-092419-1	20A-AE29R6-092220-1	21A-AE29R6-091421-1	21A-AE2I-091021-1	16A-AE02R-062816-1	17A-AE2R-100517-1	21A-AE2R-091021-1	16A-GZA101R-061416-1	17A-GZA101R-101017-1
Sample Date:					09/22/2020	09/10/2021	06/28/2016	10/17/2017	09/18/2018	09/24/2019	09/22/2020	09/14/2021	09/10/2021	06/28/2016	10/05/2017	09/10/2021	06/14/2016	10/10/2017
Depth Interval:					113 - 119 ft	113 - 119 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	8 - 18 ft	22 - 36 ft	22 - 36 ft	22 - 36 ft	36.5 - 38 ft	36 - 38 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	10.0 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	10.0 UJ
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.5 UJ	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	5.00 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**36**	**29**	**8.3**	**89.0 J**	**60.6**	**56**	**47**	**50**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	**7.5**	**7.0**	**2.0**	**19.6**	**13.3 J**	**13**	**12**	**14**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	1.0 U	1.00 U	5.00 U	5.0 U	1.0 U	1.0 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	10.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	0.50 UJ	2.0 U	2.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ	0.50 UJ	2.0 U	2.00 UJ	0.50 UJ	2.0 UJ	20.0 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	5.00 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	1.0 U	1.00 UJ	5.00 U	3.0 U	1.2 U	1.2 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	10.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	3.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	100 U	NS	**50.8**	100 U	500 U	200 U	200 U	100 U	20.0 U	20.0 U	100 U	20.0 U	200 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 UJ
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 U	10.0 U	2.00 U	10.0 U	25 U	10 U	10 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	20.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	10.0 U	2.00 U	10.0 U	25 U	10 U	10 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	20.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	10.0 U	2.00 U	10.0 U	25 U	10 U	10 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	20.0 U
Acetone	6300	50000	50000	100000	25 U	25 UJ	10.0 U	10.0 U	50.0 UJ	130 U	50 U	50 UJ	25 UJ	10.0 UJ	10.0 U	25 UJ	10.0 U	100 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	1.0 U	1.00 U	5.00 U	3.5 U	1.4 U	1.4 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	10.0 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	5.00 UJ
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	4.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	10.0 UJ
Bromomethane	10	7	800	8000	1.0 U	1.0 U	2.0 U	2.00 UJ	10.0 UJ	5.0 U	2.0 U	2.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	20.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	2.0 U	2.00 U	10.0 U	25 U	10 U	10 U	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	20.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.00 UJ	5.00 U	2.5 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	10.0 UJ
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	1.0 U	2.0 U	2.00 U	10.0 UJ	5.0 U	2.0 U	2.0 UJ	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	20.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	2.0 UJ	2.00 UJ	10.0 U	5.0 U	2.0 U	2.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	20.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**220**	**140**	**27.8**	**325**	**349**	**320**	**320**	**300**	1.0 U	1.0 U	1.00 U	1.0 U	**4.5**	10.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 UJ	5.00 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.5 U	5.00 UJ
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.00 U	10.0 U	5.0 U	2.0 UJ	2.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	20.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	10.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 UJ
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 UJ	5.0 U	2.0 UJ	2.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	10.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	5.00 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 UJ
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	2.0 U	2.00 U	10.0 UJ	5.0 U	2.0 U	2.0 U	1.0 U	2.0 UJ	2.00 UJ	1.0 U	2.0 U	20.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	2.0 U	2.00 U	10.0 U	5.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	20.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 UJ	1.00 U	10.0 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	10.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 UJ
Tetrachloroethene	**5**	**50**	**30000**	100000	R	1.0 UJ	1.0 U	1.00 U	5.00 U	5.0 U	R	2.0 UJ	**4.5 J+**	**6.5**	**9.76**	**4.4 J+**	**441**	**356**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	2.0 U	2.00 U	10.0 U	13 U	5.0 U	5.0 U	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	20.0 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	**7.8**	**1.80**	5.00 U	5.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**6.5**	**5.2**	**1.5**	**23.8 J**	**17.2**	**19**	**19**	**20**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 UJ	5.00 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**33**	**52**	**16.0**	**146**	**90.9**	**85**	**120**	**70**	1.0 U	1.0 U	**1.25**	1.0 U	**186**	**176**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.00 UJ	5.00 U	5.0 U	2.0 UJ	2.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.0 UJ	**1.78**	5.00 UJ	2.5 U	2.0 U	**4.9**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	10.0 U
Xylenes (Total)	10000	3000	5000	NE	1.0 U	1 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2 U	1 U	2.0 U	2.0 U	1 U	2.0 U	20 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Building 1 Tank F										Downgradient Wetland		
Location ID:					GZA-101R	GZA-101R	GZA-101R	GZA-101R	TRC-201R	TRC-201R	TRC-201R	TRC-201R	TRC-201R	TRC-201R	GZA-107D	GZA-107M	GZA-107R
Sample ID:					18A-GZA101R-091818-1	19A-GZA101R-092619-1	20A-GZA101R-092420-1	21A-GZA101R-091421-1	16A-TRC201R-062816-1	17A-TRC201R-100617-1	18A-TRC201R-092618-1	19A-TRC201R-092519-1	20A-TRC201R-092220-1	21A-TRC201R-091021-1	17A-GZA107D-101917-1	17A-GZA107M-101917-1	17A-GZA107R-102017-1
Sample Date:					09/18/2018	09/26/2019	09/24/2020	09/14/2021	06/28/2016	10/06/2017	09/26/2018	09/25/2019	09/22/2020	09/10/2021	10/19/2017	10/19/2017	10/20/2017
Depth Interval:					36.5 - 38 ft	36.5 - 38 ft	36.5 - 38 ft	36.5 - 38 ft	112 ft	38 - 161 ft	38 - 161 ft	38 - 161 ft	38 - 161 ft	38 - 161 ft	38.17 - 43.17 ft	13.7 - 23.7 ft	61.16 - 63.16 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)											may not need these wells		
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.50 U	R	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	R	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	5.00 U	5.0 U	1.0 U	1.0 U	**95.3**	**67.7**	**73.2**	**77**	**73**	**74**	1.00 U	1.00 U	**1.19**
1,1-Dichloroethene	**7**	**80**	30000	100000	5.00 UJ	5.0 U	1.0 U	1.0 U	**23.4**	**16.9**	**18.0**	**20**	**17**	**19**	1.00 U	1.00 U	1.00 UJ
1,1-Dichloropropene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	5.00 U	5.0 U	0.50 U	0.50 U	5.0 U	5.00 U	5.00 U	1.0 U	0.50 U	0.50 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	10.0 U	R	0.50 U	0.50 UJ	10.0 U	10.0 U	10.0 U	R	0.50 U	0.50 UJ	2.00 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	2.50 U	2.5 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	5.00 U	3.0 U	0.60 U	0.60 U	5.0 U	5.00 U	5.00 U	0.60 U	0.60 U	0.60 U	1.00 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	5.00 U	3.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	200 U	100 U	100 U	100 U	100 U	100 UJ	**55 J**	100 U	100 U	20.0 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 UJ	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 UJ
2-Butanone	4000	50000	50000	100000	10.0 U	R	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	R	5.0 U	5.0 U	2.00 U	2.00 U	2.00 UJ
2-Chlorotoluene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	10.0 U	R	5.0 U	5.0 U	50.0 U	10.0 U	10.0 UJ	R	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	R	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	R	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	50.0 UJ	R	R	25 UJ	50.0 UJ	50.0 U	50.0 U	R	25 U	25 UJ	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	5.00 U	3.5 U	0.70 U	0.70 U	5.0 U	5.00 U	5.00 U	0.70 U	0.70 U	0.70 U	1.00 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	2.50 U	2.5 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	5.00 U	R	1.0 U	1.0 U	5.0 U	5.00 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Bromomethane	10	7	800	8000	10.0 UJ	R	1.0 UJ	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 UJ	1.0 U	1.0 U	2.00 U	2.00 U	2.00 UJ
Carbon Disulfide	NE	NE	NE	NE	10.0 U	25 UJ	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U	5.0 U	2.00 UJ	2.00 UJ	2.00 U
Carbon tetrachloride	5	2	5000	50000	5.00 U	2.5 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U
Chlorobenzene	100	200	1000	10000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	10.0 UJ	5.0 U	1.0 U	1.0 UJ	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 UJ	1.0 U	2.00 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
chloromethane	NE	NE	NE	NE	10.0 U	5.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	2.00 U	2.00 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	5.00 U	5.0 U	**5.4**	**4.8**	**165**	**178 J**	**160**	**170**	**140**	**180**	**2.06**	1.00 U	**2.04**
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.50 U	2.5 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U	0.50 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	2.50 U	2.5 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	10.0 U	5.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	2.00 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.00 UJ	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	2.50 U	2.5 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U	0.50 UJ	0.50 UJ	0.50 U
Isopropylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Methylene Chloride	5	2000	50000	100000	10.0 UJ	5.0 UJ	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	2.00 UJ	2.00 UJ	2.00 U
mp-xylene	10000	3000	5000	NE	10.0 U	5.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	2.00 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	10.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
N-Butylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**277**	**300**	**240 J+**	**220 J+**	5.0 U	5.00 U	5.00 U	1.0 U	R	1.0 UJ	**1.26**	1.00 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	10.0 U	R	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	R	2.5 U	2.5 U	2.00 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	**16.1**
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	5.00 U	5.0 U	1.0 U	1.0 U	**34.0 J**	**26.4**	**29.0**	**28**	**29**	**31**	1.00 U	1.00 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	2.50 U	2.5 U	0.40 U	0.40 U	2.5 U	2.50 UJ	2.50 U	0.40 U	0.40 U	0.40 U	0.50 U	0.50 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**134**	**120**	**110**	**110**	**62.8**	**60.4**	**48.2**	**50**	**40**	**44**	**6.44**	**1.91**	**1.63**
Trichlorofluoromethane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	5.00 UJ	2.5 UJ	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	**2.1**	**2.3**	**2.4**	1.00 U	1.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	NE	10 U	5.0 U	1.0 U	1 U	10 U	10 U	10 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Downgradient Wetland														
Location ID:					GZA-14	GZA-14	GZA-14	GZA-14A	GZA-14A	GZA-14A	GZA-14A	GZA-14A	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
Sample ID:					16A-GZA14-063016-1	17A-GZA14-102017-1	21A-GZA14-092121-1	16A-GZA14A-061716-1	16A-GZA14A-061716-2	17A-GZA14A-102017-1	21A-GZA14A-092121-1	21A-GZA14A-092121-2	16A-MW4-062416-1	17A-MW4-101817-1	18A-MW4-100418-1	19A-MW4-091919-1	19A-MW4-091919-2	20A-MW4-091820-1	20A-MW4-091820-2
Sample Date:					06/30/2016	10/20/2017	09/21/2021	06/17/2016	06/17/2016	10/20/2017	09/21/2021	09/21/2021	06/24/2016	10/18/2017	10/04/2018	09/19/2019	09/19/2019	09/18/2020	09/18/2020
Depth Interval:					39 - 49 ft	39 - 49 ft	39 - 49 ft	0 - 15 ft	0 - 15 ft	0 - 15 ft	0 - 15 ft	0 - 15 ft	18 - 28 ft	18 - 28 ft	18 - 28 ft	18 - 28 ft	18 - 28 ft	18 - 28 ft	18 - 28 ft
Sample Type:					N	N	N	N	FD	N	N	FD	N	N	N	N	FD	N	FD
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	0.50 U	1.0 U	1.0 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	0.50 U	2.0 U	2.0 U	2.00 U	0.50 U	0.50 U	2.0 U	2.00 U	2.00 U	R	R	0.50 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	0.60 U	1.0 U	1.0 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 U	100 U	100 U	20.0 U	20.0 U	20.0 U	40 U	40 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.00 UJ	1.0 U	1.0 UJ	1.0 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 UJ	5.0 U	10.0 U	10.0 U	2.00 UJ	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	R	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	25 U	10.0 U	10.0 U	10.0 U	25 U	25 U	10.0 U	10.0 U	10.0 U	R	R	25 U	25 U
Benzene	5	1000	10000	100000	1.0 U	1.00 U	0.70 U	1.0 U	1.0 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	R	R	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 UJ	2.00 UJ	1.0 U	2.0 U	2.0 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	5.0 U	2.0 U	2.0 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	1.0 UJ	2.0 U	2.0 U	2.00 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**2.2**	1.00 U	**1.3**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**34.1**	**44.9**	**39.8**	**20**	**19**	**26**	**27**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.40 U	0.5 UJ	0.5 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.61**	**1.14**	1.0 U	1.0 U	**1.0 J**	**1.0 J**
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	0.40 U	0.5 U	0.5 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	**4.2**	**6.41**	**1.9**	**2.1 J**	**2.2 J**	**1.47**	1.0 U	1.0 U	**6.1**	**8.59**	**6.64**	**4.7**	**4.5**	**6.5**	**6.4**
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	**1.08**	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	R	R
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.5 U	2.0 U	2.0 U	2.00 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.40 U	0.5 UJ	0.5 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	**1.59**	**1.5**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**1.7 J**	**1.47**	**1.59**	**3.7**	**3.8**	**1.5**	**1.6**
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Downgradient Wetland															
Location ID:					MW-4	MW-4A	MW-4A	MW-4A	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7
Sample ID:					21A-MW4-092021-1	16A-MW4A-062416-1	17A-MW4A-101817-1	21A-MW4A-092021-1	16A-MW5-061716-1	17A-MW5-102017-1	18A-MW-5-092818-1	19A-MW5-093019-1	20A-MW5-092120-1	21A-MW5-092121-1	16A-MW7-061716-1	17A-MW7-102017-1	18A-MW-7-092818-1	19A-MW7-092619-1	20A-MW7-091720-1	21A-MW7-092121-1
Sample Date:					09/20/2021	06/24/2016	10/18/2017	09/20/2021	06/17/2016	10/20/2017	09/28/2018	09/30/2019	09/21/2020	09/21/2021	06/17/2016	10/20/2017	09/28/2018	09/26/2019	09/17/2020	09/21/2021
Depth Interval:					18 - 28 ft	38 - 48 ft	38 - 48 ft	38 - 48 ft	28 - 38 ft	28 - 38 ft	28 - 38 ft	28 - 38 ft	28 - 38 ft	28 - 38 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)																
Volatile Organic Compounds (ug/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	R	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 UJ	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 UJ	2.00 U	R	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	25 U	10.0 U	10.0 U	25 U	10.0 U	10.0 U	10.0 U	R	25 U	25 U	10.0 U	10.0 U	10.0 UJ	R	25 U	25 U
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	2.0 U	2.00 U	1.0 U	2.0 UJ	2.00 UJ	2.00 U	R	1.0 U	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ	1.0 UJ	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	2.0 U	2.00 U	1.0 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**20**	**39.7**	**24.8**	**8.3**	**6.4**	**14.1**	**12.5**	**11**	**10**	**12**	**10.0**	**23.8**	**16.0**	**29**	**35**	**27**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	**1.4**	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.5 U	0.50 UJ	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	**4.5**	**8.7**	**5.68**	**1.8**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.0 U	1.00 U	**1.1**	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	R	**10 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**1.25**	1.00 U	1.0 U	**1.1**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	**2.30**	**1.7**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.8**	**4.26**	**8.50**	**27**	**17**	**49**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	**2.0 J**	1.00 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	**1.5**	**1.52**	**1.39 J**	**2.0**	**2.8**	**2.5 J+**
Xylenes (Total)	10000	3000	5000	NE	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Downgradient Wetland														
Location ID:					PS-1D	PS-1D	PS-1D	PS-1D	PS-1D	PS-1D	PS-1M	PS-1M	PS-1M	PS-1S	PS-1S	PS-1S	PS-1S	PS-1S	PS-2D
Sample ID:					16A-PS1D-062916-1	17A-PS1D-101617-1	18A-PS1D-092718-1	19A-PS1D-091719-1	20A-PS1D-091520-1	21A-PS1D-091721-1	16A-PS1M-062916-1	17A-PS1M-101617-1	21A-PS1M-091721-1	16A-PS1S-062916-1	17A-PS1S-101617-1	18A-PS1S-092718-1	19A-PS1S-091719-1	20A-PS1S-091520-1	21A-PS1S-091721-1	16A-PS2D-062916-1
Sample Date:					06/29/2016	10/16/2017	09/27/2018	09/17/2019	09/15/2020	09/17/2021	06/29/2016	10/16/2017	09/17/2021	06/29/2016	10/16/2017	09/27/2018	09/17/2019	09/15/2020	09/17/2021	06/29/2016
Depth Interval:					49.25 - 54.25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	34.25 - 39.25 ft	34.25 - 39.25 ft	34.25 - 39.25 ft	12 - 17 ft	12 - 17 ft	12 - 17 ft	12 - 17 ft	12 - 17 ft	12 - 17 ft	49.1 - 54.1 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)																
Volatile Organic Compounds (ug/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.5 U	0.50 U	1.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.2 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	50 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	50 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	**26**	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	10 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	10.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	10 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	10.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 UJ	R	25 U	25 UJ	10.0 U	10.0 U	50 UJ	10.0 UJ	10.0 U	R	25 U	25 UJ	10.0 U	
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.4 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 UJ	R	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	R	1.0 U	1.0 U	2.0 U	2.00 U	2.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	10 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**12.3**	**13.5**	**8.99**	**9.0**	**7.4**	**8.3**	**1.5**	1.00 U	2.0 U	**5.7**	**9.88**	**10.2**	**7.3**	**6.6**	**9.7**	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	1.0 U	0.5 U	0.50 U	0.50 UJ	0.40 U	0.40 U	0.40 U	0.5 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	**2.1**	**4.20**	**3.85**	**3.3**	**3.3 J-**	**3.2**	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	1.0 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	**1.0**	**1.10**	**1.34**	**2.2**	**2.5**	**3.0**	**7.9**	**7.44**	**3.4**	**18.2**	**25.6**	**23.3**	**21**	**22**	**22**	**1.0**
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.0 U	2.0 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3.3**	**1.62**	**3.45**	**3.1**	**3.0 J+**	1.0 U	**3.4**	**1.90**	**3.6**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	R	2.5 U	2.5 U	2.0 U	2.00 U	**34**	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.0 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	1.0 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**16.1**	**15.0**	**15.0**	**13**	**13**	**6.3**	**4.4**	**2.72**	**4.9**	**1.9**	**3.25**	**1.69**	**1.6**	1.0 U	**1.0**	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.00 U	**1.2**	1.0 U	1.0 U	1.0 UJ	1.00 U	2.0 U	**1.0**	**1.46**	**2.05 J**	**1.3**	**1.7**	**1.3**	1.0 UJ
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U

Notes:

ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Downgradient Wetland														
Location ID:					PS-2D	PS-2D	PS-2D	PS-2D	PS-2D	PS-2M	PS-2M	PS-2M	PS-2S	PS-2S	PS-2S	PS-3	PS-3	PS-3	PS-3
Sample ID:					17A-PS2D-101617-1	18A-PS2D-092718-1	19A-PS2D-091719-1	20A-PS2D-091520-1	21A-PS2D-091721-1	16A-PS2M-062916-1	17A-PS2M-101617-1	21A-PS2M-091721-1	16A-PS2S-062916-1	17A-PS2S-101617-1	21A-PS2S-091721-1	16A-PS3-062416-1	17A-PS3-101817-1	18A-PS3-100418-1	19A-PS3-091919-1	20A-PS3-091820-1
Sample Date:					10/16/2017	09/27/2018	09/17/2019	09/15/2020	09/17/2021	06/29/2016	10/16/2017	09/17/2021	06/29/2016	10/16/2017	09/17/2021	06/24/2016	10/18/2017	10/04/2018	09/19/2019	09/18/2020
Depth Interval:					49.1 - 54.1 ft	49.1 - 54.1 ft	49.1 - 54.1 ft	49.1 - 54.1 ft	49.1 - 54.1 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	12.5 - 17.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft	2.7 - 7.7 ft	2.7 - 7.7 ft	2.7 - 7.7 ft	2.7 - 7.7 ft	2.7 - 7.7 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	40 U	100 U	50 U	20.0 U	20.0 U	50 U	20.0 U	20.0 U	50 U	20.0 U	20.0 U	20.0 U	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ
2-Butanone	4000	50000	50000	100000	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	R	25 U	25 UJ	10.0 U	**19.0**	25 UJ	10.0 U	10.0 U	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U
Benzene	5	1000	10000	100000	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U
Bromomethane	10	7	800	8000	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	2.00 UJ	2.00 UJ	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	1.0 UJ	2.0 U	2.00 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**1.07**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.40 U	0.5 U	0.50 UJ	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	**1.08**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	**5.0**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	R
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Downgradient Wetland															
Location ID:					PS-3	PS-4	PS-4	PS-4	PS-5D	PS-5D	PS-5D	PS-5D	PS-5D	PS-5D	PS-5S	PS-5S	PS-5S	PS-8D	PS-8D	PS-8D
Sample ID:					21A-PS3-092021-1	16A-PS4-062416-1	17A-PS4-101817-1	21A-PS4-092021-1	16A-PS5D-062716-1	17A-PS5D-101917-1	18A-PS5D-100418-1	19A-PS5D-091919-1	20A-PS5D-091820-1	21A-PS5D-092121-1	16A-PS5S-062416-1	17A-PS5S-101817-1	21A-PS5S-092021-1	16A-PS8D-062916-1	17A-PS8D-101917-1	18A-PS8D-100218-1
Sample Date:					09/20/2021	06/24/2016	10/18/2017	09/20/2021	06/27/2016	10/19/2017	10/04/2018	09/19/2019	09/18/2020	09/21/2021	06/24/2016	10/18/2017	09/20/2021	06/29/2016	10/19/2017	10/02/2018
Depth Interval:					2.7 - 7.7 ft	12.9 - 17.9 ft	12.9 - 17.9 ft	12.9 - 17.9 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	13 - 18 ft	13 - 18 ft	13 - 18 ft	51.8 - 56.8 ft	51.8 - 56.8 ft	51.8 - 56.8 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)																
Volatile Organic Compounds (ug/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 UJ
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U
2-Butanone	4000	50000	50000	100000	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	**2.62**	**5.75**	**14 J+**	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	25 U	10.0 U	**52.7**	25 U	10.0 UJ	**51.8**	**33.3**	**29 J+**	25 U	25 U	10.0 U	**17.5**	25 U	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromomethane	10	7	800	8000	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 UJ	2.00 U	2.00 UJ
Carbon Disulfide	NE	NE	NE	NE	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	2.00 UJ	2.00 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 UJ	1.00 UJ	1.00 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	2.0 U	2.00 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	1.0 UJ	2.0 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
chloromethane	NE	NE	NE	NE	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	**4.8**	**4.53**	**7.7**	**11.6**	**21.0**	**16.6**	**13**	**13**	**14**	**7.4**	**6.85**	**8.5**	1.0 U	1.00 U	1.00 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.5 U	0.50 UJ	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.40 U	0.5 U	0.50 UJ	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	**1.71**	**1.7**	**1.8**	**1.86**	**1.39**	**1.8**	**1.5**	**2.0**	**1.0**	**1.28**	**1.8**	1.0 U	1.00 U	1.00 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 U
mp-xylene	10000	3000	5000	NE	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	2.00 UJ
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 UJ	**1.26**	**1.8**	**3.8**	**3.16**	**4.31**	**4.6**	**2.3**	**2.5 J+**	1.0 UJ	**1.31**	**2.9**	1.0 UJ	1.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	NE	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Downgradient Wetland									EPL						
Location ID:					PS-8D	PS-8D	PS-8D	PS-8M	PS-8M	PS-8M	PS-8S	PS-8S	PS-8S	AE03	AE03	AE03	AE03	AE03	AE03	AE03
Sample ID:					19A-PS8D-091719-1	20A-PS8D-091520-1	21A-PS8D-092121-1	16A-PS8M-062916-1	17A-PS8M-101917-1	21A-PS8M-092121-1	16A-PS8S-062916-1	17A-PS8S-101917-1	21A-PS8S-092121-1	16A-AE03-062816-1	16A-AE03-062816-2	17A-AE03-100917-1	18A-AE03-092418-1	18A-AE03-092418-2	19A-AE03-091219-1	19A-AE03-091219-2
Sample Date:					09/17/2019	09/15/2020	09/21/2021	06/29/2016	10/19/2017	09/21/2021	06/29/2016	10/19/2017	09/21/2021	06/28/2016	06/28/2016	10/09/2017	09/24/2018	09/24/2018	09/12/2019	09/12/2019
Depth Interval:					51.8 - 56.8 ft	51.8 - 56.8 ft	51.8 - 56.8 ft	34.3 - 39.3 ft	34.3 - 39.3 ft	34.3 - 39.3 ft	13 - 18 ft	13 - 18 ft	13 - 18 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	FD	N	N	FD	N	FD
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)																
Volatile Organic Compounds (ug/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 UJ	0.5 UJ	0.50 U	0.50 U	0.50 U	R	R
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	R	0.50 U	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	R	R
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	100 U	100 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	40 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	R	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	R
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	R
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	**9.0**	**9.2**	**9.79 J**	1.00 UJ	**8.17 J**	**7.7**	**7.6**
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	R
Acetone	6300	50000	50000	100000	R	25 U	25 U	10.0 U	10.0 U	25 U	10.0 UJ	10.0 U	25 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	R	R
Benzene	5	1000	10000	100000	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	R	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 UJ	2.00 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	1.0 UJ	2.0 UJ	2.00 U	1.0 UJ	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 UJ	2.0 UJ	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	**1.5**	**1.5**	**1.82 J**	**1.38**	**1.18**	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.40 U	0.5 U	0.50 UJ	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	**6.2**	**6.2**	**7.40**	**7.51**	**5.91**	**4.6**	**4.6**
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 UJ	2.00 UJ	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	**8.7 J**	**9.3 J**	**12.6**	**10.4**	**12.1**	**9.4**	**9.5**
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	**9.0**	**9.6**	**9.55 J**	**10.4**	**7.19**	**6.0**	**5.8**
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	**16.6**	**17.3**	**17.9**	**18.0**	**16.3**	**12**	**12**
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	**9.1**	**9.2**	**10.6**	1.00 UJ	**7.72 J**	**6.3**	**6.2**
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	R	R
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 UJ	1.0 U
Xylenes (Total)	10000	3000	5000	NE	1.0 U	1.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					EPL														
Location ID:					AE03	AE03	AE03	AE04	AE04	AE04	AE04	AE04	AE04	AE04	AE04	AE04	GZA-102S	GZA-102S	GZA-102S	GZA-102S
Sample ID:					20A-AE3-092320-1	20A-AE3-092320-2	21A-AE3-091521-1	16A-AE04-061316-1	17A-AE04-100917-1	18A-AE04-092518-1	18A-AE04-092518-2	19A-AE04-091219-1	19A-AE04-091219-2	20A-AE4-092320-1	20A-AE4-092320-2	21A-AE04-091521-1	18A-GZA102S-092418-1	19A-GZA102S-091319-1	20A-GZA102S-092320-1	21A-GZA102S-091621-1
Sample Date:					09/23/2020	09/23/2020	09/15/2021	06/13/2016	10/09/2017	09/25/2018	09/25/2018	09/12/2019	09/12/2019	09/23/2020	09/23/2020	09/15/2021	09/24/2018	09/13/2019	09/23/2020	09/16/2021
Depth Interval:					3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	1.7 - 10.7 ft	1.7 - 10.7 ft	1.7 - 10.7 ft	2.5 - 11.5 ft
Sample Type:					N	FD	N	N	N	N	FD	N	FD	N	FD	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)																
Volatile Organic Compounds (ug/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	R	R	0.50 U	0.50 U	0.50 U	0.50 U	R	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.00 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	0.50 U	0.50 UJ	2.0 UJ	2.00 UJ	2.00 U	2.00 U	R	R	0.50 U	0.50 U	0.50 UJ	2.00 U	R	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	1.00 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	100 U	100 U	20.0 U	20.0 U	20.0 UJ	20.0 UJ	40 U	40 U	100 U	100 U	100 U	20.0 UJ	40 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	2.00 UJ	R	R	5.0 U	5.0 U	5.0 U	2.00 U	R	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	2.00 UJ	R	R	5.0 U	5.0 U	5.0 U	2.00 UJ	R	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	**8.2**	**8.2**	**8.7**	**2.6**	1.00 U	**3.49**	**3.71**	**2.4**	**2.4**	**2.4**	**2.5**	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	R	5.0 U	5.0 U	5.0 U	2.00 UJ	R	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	25 U	25 U	25 UJ	10.0 U	10.0 U	10.0 U	10.0 U	R	R	25 U	25 U	25 UJ	10.0 UJ	R	25 U	25 UJ
Benzene	5	1000	10000	100000	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	1.00 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	2.00 U	1.0 U	1.0 UJ	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	2.00 U	1.0 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**14.8**	**2.7**	**2.5**	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	**4.3**	**4.5**	**4.8**	**2.6**	**1.68**	**4.11**	**4.40**	**2.0**	**2.0**	**2.0**	**2.1**	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	**8.2**	**7.8**	**7.5**	1.0 UJ	1.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	**6.3**	**6.2**	**6.9**	**1.8**	1.00 U	**3.05**	**3.33**	**1.1**	**1.0**	1.0 U	**1.0**	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	**12**	**12**	**13**	**3.8**	**1.65**	**7.55**	**7.92**	**4.5**	**4.6**	**3.8**	**4.0**	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	**6.1**	**6.4**	**6.5**	**4.5**	**4.76**	**9.19**	**9.47**	**8.9**	**9.0**	**8.8**	**9.0**	**2.1**	1.00 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	R	R	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 R	1.0 R	1.0 UJ	**2.27 J**	**2.0**	**1.3 J+**	1.0 UJ
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.00 U	R	R	2.5 U	2.5 U	2.5 U	2.00 U	R	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**6.39**	**2.9**	**2.5**	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.0 U	**1.6 J**	1.00 U	1.00 U	1.00 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	**9.57**	**1.3**	**1.2**	1.0 U
Xylenes (Total)	10000	3000	5000	NE	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1.0 U	1.0 U	1 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					EPL											
Location ID:					GZA-105D	GZA-105D	GZA-105D	GZA-105D	GZA-105D	GZA-105D	GZA-105D	GZA-105R	GZA-105R	GZA-105R	GZA-105R	GZA-105R
Sample ID:					16A-GZA105D-061516-1	17A-GZA-105D-101917-1	18A-GZA105D-092518-1	19A-GZA105D-091819-1	20A-GZA105D-092420-1	21A-GZA105D-091521-1	21A-GZA105D-091521-2	16A-GZA105R-061516-1	17A-GZA105R-100917-1	18A-GZA105R-091918-1	19A-GZA105R-091819-1	20A-GZA105R-092420-1	21A-GZA105R-091421-1
Sample Date:					06/15/2016	10/19/2017	09/25/2018	09/18/2019	09/24/2020	09/15/2021	09/15/2021	06/15/2016	10/09/2017	09/19/2018	09/18/2019	09/24/2020	09/14/2021
Depth Interval:					16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5 - 36.5 ft
Sample Type:					N	N	N	N	N	N	FD	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	10.0 U	10.0 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 UJ	200 UJ	50 U	50 U	20 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 UJ	200 U	100 U	100 U	40 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	5.0 U	5.00 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	100 U	100 U	100 U	50 U	50 U	20 U
1,1,2-Trichloroethane	**5**	900	50000	100000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	20 U
1,1-Dichloroethane	**70**	2000	20000	100000	**11.5**	**23.0**	**7.40**	**3.6**	**1.8**	**1.3**	**1.4**	200 U	200 U	200 U	**93**	**86**	**97**
1,1-Dichloroethene	**7**	**80**	30000	100000	**11.6**	**11.0 J**	5.00 U	**2.8**	**1.3**	**1.0**	**1.1**	200 U	200 U	200 U	50 U	50 U	**30**
1,1-Dichloropropene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	20 U
1,2,3-Trichloropropane	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	0.50 U	0.50 U	0.50 U	0.50 U	200 U	200 U	200 U	50 U	50 U	20 U
1,2,4-Trichlorobenzene	70	200	50000	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	70 U	70 U	40 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	56 U	56 U	40 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	20.0 U	20.0 U	10.0 U	R	0.50 U	0.50 UJ	0.50 UJ	400 UJ	400 UJ	400 UJ	R	50 U	20 UJ
1,2-Dibromoethane	0.02	2	50000	100000	5.0 U	5.00 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	100 U	100 U	100 U	50 U	50 U	20 U
1,2-Dichlorobenzene	600	8000	2000	80000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
1,2-Dichloroethane	5	5	20000	100000	10.0 U	10.0 U	5.00 U	0.60 U	0.60 U	0.60 U	0.60 U	200 U	200 U	200 U	50 U	50 U	20 U
1,2-Dichloropropane	5	3	50000	100000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	20 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	60 U	60 U	40 U
1,3-Dichlorobenzene	100	6000	50000	100000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	40 U
1,3-Dichloropropane	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
1,4-Dichlorobenzene	5	60	8000	80000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	20 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	200 U	100 UJ	40 U	100 U	100 U	100 U	4000 U	4000 U	4000 UJ	4000 U	10000 U	4000 U
2,2-Dichloropropane	NE	NE	NE	NE	10.0 U	10.0 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	200 U	200 UJ	200 U	100 U	100 U	40 U
2-Butanone	4000	50000	50000	100000	100 U	20.0 UJ	10.0 U	R	5.0 U	5.0 U	5.0 U	2000 U	400 U	400 U	R	500 U	200 U
2-Chlorotoluene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
2-Hexanone	NE	NE	NE	NE	100 U	20.0 U	10.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	2000 U	400 U	400 U	200 U	500 U	200 U
2-Phenylbutane	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
4-Chlorotoluene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
4-Methyl-2-pentanone	350	50000	50000	100000	100 U	20.0 U	10.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	2000 U	400 U	400 U	350 U	500 U	200 U
Acetone	6300	50000	50000	100000	100 U	100 U	50.0 U	R	25 U	25 UJ	25 UJ	2000 U	2000 U	2000 UJ	R	2500 U	1000 UJ
Benzene	5	1000	10000	100000	10.0 U	10.0 U	5.00 U	0.70 U	0.70 U	0.70 U	0.70 U	200 U	200 U	200 U	50 U	50 U	20 U
Bromobenzene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	62 U	62 U	40 U
Bromochloromethane	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	83 U	83 U	40 U
Bromodichloromethane	3	6	50000	100000	5.0 U	5.00 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	100 U	100 UJ	100 U	50 U	50 U	20 U
Bromoform	4	700	50000	100000	10.0 U	10.0 U	5.00 UJ	R	1.0 U	1.0 U	1.0 U	200 U	200 UJ	200 UJ	R	50 U	20 U
Bromomethane	10	7	800	8000	20.0 U	20.0 UJ	10.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	400 UJ	400 U	400 U	50 U	50 UJ	20 U
Carbon Disulfide	NE	NE	NE	NE	20.0 U	20.0 U	10.0 U	5.0 U	5.0 U	5.0 U	5.0 U	400 U	400 U	400 U	500 U	500 U	200 U
Carbon tetrachloride	5	2	5000	50000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 UJ	200 UJ	50 U	50 U	20 U
Chlorobenzene	100	200	1000	10000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Chloroethane	NE	NE	NE	NE	20.0 UJ	20.0 U	10.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	400 U	400 U	400 U	100 U	100 U	40 UJ
Chloroform	70	50	20000	100000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	40 U
chloromethane	NE	NE	NE	NE	20.0 UJ	20.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	400 UJ	400 U	400 UJ	100 U	100 U	40 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**419**	**823**	**244**	**130**	**54**	**33**	**35**	**216**	**222**	**264**	**210**	**190**	**150**
cis-1,3-Dichloropropene	NE	NE	NE	NE	5.0 U	5.00 U	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	100 U	100 U	100 U	50 U	50 U	20 U
Cymene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Dibromochloromethane	2	20	50000	100000	5.0 U	5.00 U	2.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	100 U	100 UJ	100 UJ	50 UJ	50 U	20 U
Dibromomethane	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	20 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	20.0 U	20.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	400 U	400 U	400 U	100 U	100 U	40 U
Diethyl Ether	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Diisopropyl Ether	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 UJ	200 U	100 U	100 U	40 U
Ethylbenzene	700	20000	5000	100000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	5.0 U	5.00 U	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	100 U	100 U	100 U	50 U	50 U	20 U
Isopropylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Methyl tert-butyl ether	NE	NE	NE	100000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 UJ	200 U	70 U	70 U	40 U
Methylene Chloride	5	2000	50000	100000	20.0 U	20.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	400 U	400 U	400 U	50 U	100 U	200 U
mp-xylene	10000	3000	5000	NE	20.0 U	20.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	400 U	400 U	400 U	100 U	100 U	40 U
Naphthalene	140	700	20000	100000	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	200 UJ	200 U	400 U	100 U	100 U	40 U
N-Butylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
N-Propylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
o-Xylene	10000	3000	5000	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Styrene	100	100	6000	60000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Tert-Butylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 UJ	200 U	100 U	100 U	40 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**134**	**382**	**116**	**24**	**5.9 J+**	**17 J+**	**19 J+**	**4980**	**5630**	**5350**	**5100**	**5300 J+**	**5600 J+**
Tetrahydrofuran	NE	NE	NE	NE	20.0 U	20.0 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	400 U	400 U	400 U	250 U	250 U	100 U
Toluene	**1000**	50000	40000	100000	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	10.0 U	10.0 U	5.00 U	**1.5**	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	80 U	80 U	40 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	5.0 U	5.00 U	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	100 U	100 UJ	100 U	50 U	50 U	20 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**250**	**994**	**289**	**55**	**23**	**38**	**42**	**7120**	**8270**	**7570**	**6700**	**8200**	**7500**
Trichlorofluoromethane	NE	NE	NE	NE	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	40 U
Vinyl chloride	**2**	**2**	50000	100000	**79.7**	**83.9**	**46.8**	**23**	**16**	**8.4**	**9.4**	200 U	200 U	200 U	50 U	50 U	20 U
Xylenes (Total)	10000	3000	5000	NE	20 U	20 U	10 U	1.0 U	1.0 U	1 U	1 U	400 U	400 U	400 U	100 U	100 U	40 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					EPL													
Location ID:					GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	IP-01R2	IP-01R2	IP-01R2	IP-01R2	IP-01R2	IP-01R2	IP-01R2
Sample ID:					16A-GZA105S-061516-1	17A-GZA105S-100917-1	17A-GZA105S-100917-2	18A-GZA105S-092518-1	19A-GZA105S-091819-1	20A-GZA105S-092420-1	21A-GZA105S-091521-1	16A-IPIR2-062716-1	17A-IP1R2-100617-1	17A-IP1R2-100617-2	18A-IP1R2-092418-1	18A-IP1R2-092418-2	19A-IP1R2-091319-1	20A-IP1R2-092420-1
Sample Date:					06/15/2016	10/09/2017	10/09/2017	09/25/2018	09/18/2019	09/24/2020	09/15/2021	06/27/2016	10/06/2017	10/06/2017	09/24/2018	09/24/2018	09/13/2019	09/24/2020
Depth Interval:					4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft
Sample Type:					N	N	FD	N	N	N	N	N	N	FD	N	FD	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	20 U	10 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U	0.50 U	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	20 U	10 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**149**	**109**	**101**	200 U	200 U	**130**	**86**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	**34**	**24**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 UJ	200 UJ	40 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	20 U	10 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	100 U	100 U	100 U	200 U	200 U	20 U	10 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 UJ	100 U	100 U	200 U	200 U	40 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	2.00 U	R	0.50 U	0.50 UJ	200 U	200 U	200 U	400 U	400 U	R	10 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	100 U	100 U	100 U	200 U	200 U	20 U	10 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	20 U	10 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	20 U	10 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	100 U	2000 U	2000 U	2000 U	4000 UJ	4000 UJ	1600 U	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	1000 U	200 U	200 U	400 U	400 U	R	100 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	1000 U	200 U	200 U	400 UJ	400 UJ	80 U	100 U
2-Phenylbutane	NE	NE	NE	NE	**1.8**	**1.77 J**	**1.93 J**	**1.19**	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	5.0 U	1000 U	200 U	200 U	400 UJ	400 UJ	200 U	100 U
Acetone	6300	50000	50000	100000	10.0 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	1000 U	1000 U	1000 U	2000 UJ	2000 UJ	R	500 U
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	100 U	100 U	100 U	200 U	200 U	20 U	10 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U
Bromoform	4	700	50000	100000	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	R	10 U
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	2.00 UJ	R	1.0 UJ	1.0 U	200 U	200 U	200 U	400 U	400 U	20 U	10 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	200 U	200 U	200 U	400 U	400 U	200 U	100 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	20 U	10 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	200 UJ	200 U	200 U	400 U	400 U	40 U	20 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	200 UJ	200 U	200 U	400 U	400 U	40 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**110**	**105 J**	**121 J**	200 U	200 U	**120**	**87**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	20 U	10 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	400 U	400 U	40 U	20 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 UJ	100 U	100 U	200 U	200 U	40 U	20 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	100 UJ	100 U	100 U	200 U	200 U	40 U	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	100 UJ	100 UJ	100 UJ	200 U	200 U	40 U	20 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	400 U	400 U	20 UJ	20 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	200 U	200 U	200 U	400 U	400 U	40 U	20 U
Naphthalene	140	700	20000	100000	1.0 UJ	**2.00**	**1.31**	2.00 U	1.0 U	1.0 U	1.0 U	100 UJ	100 U	100 U	400 U	400 U	40 U	20 U
N-Butylbenzene	NE	NE	NE	NE	**1.1**	**1.90 J**	**1.47 J**	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	**1.03**	**1.12**	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 UJ	100 U	100 U	200 U	200 U	40 U	20 U
Tert-Butylbenzene	NE	NE	NE	NE	**7.1**	**4.17**	**4.77**	**2.54**	**2.9**	**1.8**	**1.9**	100 U	100 U	100 U	200 U	200 U	40 U	20 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	R	1.0 UJ	**3560**	**4450**	**4700**	**2930 J**	**3090 J**	**3400**	**2900 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	R	2.5 U	2.5 U	200 U	200 U	200 U	400 U	400 U	100 U	50 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	100 U	100 U	200 U	200 U	40 U	20 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	50.0 U	50.0 UJ	50.0 UJ	100 U	100 U	20 U	10 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**7290 J-**	**8450**	**8590**	**7430**	**7570**	**7300**	**6600**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 UJ	100 U	100 U	200 U	200 U	40 U	20 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	100 UJ	100 U	100 U	200 U	200 U	20 U	10 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	200 U	200 U	200 U	400 U	400 U	40 U	20 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					EPL													
Location ID:					IP-01R2	IP-01R2	PZ-2S	PZ-2S	PZ-2S	PZ-2S	TRC-101	TRC-101	TRC-101	TRC-101	TRC-102	TRC-102	TRC-102	TRC-102
Sample ID:					21A-IP1R2-092121-1	21A-IP1R2-092121-2	18A-PZ2S-092418-1	19A-PZ2S-093019-1	20A-PZ2S-092520-1	21A-PZ2S-092121-1	18A-TRC101-092418-1	19A-TRC101-091919-1	20A-TRC101-092320-1	21A-TRC101-091421-1	16A-TRC102-062716-1	16A-TRC102-062716-2	17A-TRC102-100217-1	18A-TRC102-092418-1	19A-TRC102-092019-1
Sample Date:					09/21/2021	09/21/2021	09/24/2018	09/30/2019	09/25/2020	09/21/2021	09/24/2018	09/19/2019	09/23/2020	09/14/2021	06/27/2016	06/27/2016	10/02/2017	09/24/2018	09/20/2019
Depth Interval:					54 - 74 ft	54 - 74 ft	3.55 - 8.55 ft	3.55 - 8.55 ft	3.55 - 8.55 ft	3.5 - 8.5 ft	1.5 - 10.5 ft	1.5 - 10.5 ft	1.5 - 10.5 ft	1.5 - 10.5 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft
Sample Type:					N	FD	N	N	N	N	N	N	N	N	N	FD	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	10 U	10 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	10 U	10 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 UJ	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	10 U	10 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**81**	**81**	1.00 U	1.0 U	1.0 U	1.0 U	**1.54**	**1.4**	1.0 U	**1.1**	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	**23**	**25**	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	20 U	20 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	10 U	10 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	10 U	10 U	1.00 U	0.50 U	0.50 U	0.50 U	1.00 U	1.0 U	0.50 U	0.50 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	20 U	20 U	1.00 U	**1.4**	1.0 U	**1.1**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	10 U	10 U	2.00 U	R	0.50 U	0.50 U	2.00 U	R	0.50 U	0.50 UJ	2.0 U	2.0 UJ	2.00 U	2.00 U	R
1,2-Dibromoethane	0.02	2	50000	100000	10 U	10 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 UJ	0.50 U	0.50 UJ	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	10 U	10 U	1.00 U	0.60 U	0.60 U	0.60 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	0.60 U
1,2-Dichloropropane	5	3	50000	100000	10 U	10 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	20 U	20 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	10 U	10 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	2000 U	20.0 U	40 U	100 U	100 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 UJ	20.0 U	20.0 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	20 U	20 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 U
2-Butanone	4000	50000	50000	100000	100 U	100 U	2.00 U	R	5.0 U	5.0 U	2.00 U	R	5.0 U	5.0 U	10.0 U	10.0 UJ	2.00 U	2.00 U	R
2-Chlorotoluene	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
2-Hexanone	NE	NE	NE	NE	100 U	100 U	2.00 U	R	5.0 U	5.0 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 UJ	2.00 U	2.00 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	**8.41**	**7.6**	**7.9**	**11**	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	100 U	100 U	2.00 U	R	5.0 U	5.0 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 UJ	2.00 U	2.00 UJ	5.0 U
Acetone	6300	50000	50000	100000	500 U	500 U	10.0 U	R	25 U	25 U	10.0 U	R	25 U	25 UJ	10.0 UJ	10.0 UJ	10.0 U	10.0 U	R
Benzene	5	1000	10000	100000	10 U	10 U	1.00 U	0.70 U	0.70 U	0.70 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.0 UJ	1.00 U	1.00 U	0.70 U
Bromobenzene	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
Bromodichloromethane	3	6	50000	100000	10 U	10 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 UJ	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	10 U	10 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	R
Bromomethane	10	7	800	8000	10 U	10 U	2.00 UJ	R	1.0 UJ	1.0 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	100 U	100 U	2.00 U	5.0 U	5.0 U	5.0 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.0 UJ	2.00 UJ	2.00 UJ	5.0 U
Carbon tetrachloride	5	2	5000	50000	10 U	10 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Chlorobenzene	100	200	1000	10000	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Chloroethane	NE	NE	NE	NE	20 UJ	20 UJ	2.00 U	1.0 UJ	1.0 U	1.0 UJ	2.00 U	1.0 U	1.0 U	1.0 UJ	2.0 U	2.0 UJ	2.00 U	2.00 UJ	1.0 U
Chloroform	70	50	20000	100000	20 U	20 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
chloromethane	NE	NE	NE	NE	20 U	20 U	2.00 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 UJ	2.00 UJ	2.00 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**85**	**89**	**1.02**	1.0 U	1.0 U	**1.2**	1.00 U	1.0 U	1.0 U	1.0 U	**6.7 J**	**3.8 J**	**1.66**	**1.16 J**	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	10 U	10 U	0.50 U	0.40 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 UJ	0.50 UJ	0.50 U	0.40 U
Cymene	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Dibromochloromethane	2	20	50000	100000	10 U	10 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 UJ	0.50 U	0.50 U	0.50 UJ
Dibromomethane	NE	NE	NE	NE	10 U	10 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	20 U	20 U	2.00 UJ	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 UJ	2.00 U	2.00 UJ	1.0 U
Diethyl Ether	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 UJ	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	20 U	20 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 U
Ethylbenzene	700	20000	5000	100000	20 U	20 U	1.00 U	1.0 U	1.0 U	**1.3**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	10 U	10 U	0.50 U	0.40 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 UJ	0.50 U	0.50 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	**4.67**	**3.0**	**3.2**	**3.1**	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 U
Methylene Chloride	5	2000	50000	100000	100 U	100 U	2.00 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.0 UJ	2.00 U	2.00 UJ	1.0 U
mp-xylene	10000	3000	5000	NE	20 U	20 U	2.00 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U
Naphthalene	140	700	20000	100000	20 U	20 U	2.00 U	1.0 U	1.0 U	**3.3**	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	**7.95**	**5.6**	**5.7**	**9.0**	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	**1.2**	**17.2**	**11**	**12**	**13**	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
o-Xylene	10000	3000	5000	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Styrene	100	100	6000	60000	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	**15.4**	**11**	**12**	**14**	1.0 U	1.0 UJ	**2.88**	**2.81**	**6.1**
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**2200**	**2600**	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 R	1.0 UJ	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	50 U	50 U	2.00 U	R	2.5 U	2.5 U	2.00 UJ	2.5 U	2.5 U	2.5 U	2.0 U	2.0 UJ	2.00 U	2.00 U	2.5 U
Toluene	**1000**	50000	40000	100000	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	10 U	10 U	0.50 U	0.40 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 UJ	0.50 UJ	0.50 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**5100**	**5800**	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.1**	**1.0 J-**	**1.10**	1.00 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	20 U	20 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	10 U	10 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	**5.2**	**5.2 J-**	**1.09 J**	1.00 UJ	1.0 U
Xylenes (Total)	10000	3000	5000	NE	20 U	20 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					EPL											
Location ID:					TRC-102	TRC-102	TRC-103	TRC-103	TRC-103	TRC-103	TRC-401R	TRC-401R	TRC-401R	TRC-401R	TRC-401R	TRC-401R
Sample ID:					20A-TRC102-092320-1	21A-TRC102-090721-1	18A-TRC103-092418-1	19A-TRC103-091919-1	20A-TRC103-092320-1	21A-TRC103-090721-1	16A-TRC401R-062716-1	17A-TRC401R-100917-1	18A-TRC401R-091918-1	19A-TRC401R-093019-1	20A-TRC401R-092420-1	21A-TRC401R-091621-1
Sample Date:					09/23/2020	09/07/2021	09/24/2018	09/19/2019	09/23/2020	09/07/2021	06/27/2016	10/09/2017	09/19/2018	09/30/2019	09/24/2020	09/16/2021
Depth Interval:					2.25 - 12.25 ft	2.25 - 12.25 ft	1.25 - 11.25 ft	1.25 - 11.25 ft	1.25 - 11.25 ft	1.25 - 11.25 ft	38 - 58 ft	38 - 58 ft	38 - 58 ft	38 - 58 ft	38 - 58 ft	38 - 58 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)												
Volatile Organic Compounds (ug/l)																
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 UJ	10 U	10 U	10 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	2.50 U	10.0 U	R	10 U	10 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	10 U	10 U	10 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	**145**	**40.8**	**75.2 J**	**92**	**86**	**63**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	**20**	**16**	**12 J+**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	10 U	10 U	10 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	1.00 U	1.0 U	0.50 U	0.50 U	100 U	5.00 U	20.0 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	100 U	5.00 U	20.0 U	20 U	20 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	0.50 U	2.00 U	R	0.50 U	0.50 U	200 U	10.0 U	40.0 UJ	R	10 U	10 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	2.50 U	10.0 U	10 U	10 U	10 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	1.00 U	0.60 U	0.60 U	0.60 U	100 U	5.00 U	20.0 U	10 U	10 U	10 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	10 U	10 U	10 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	10 U	10 U	10 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	100 U	20.0 UJ	40 U	100 U	100 U	2000 U	100 UJ	400 UJ	800 U	2000 U	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 UJ	20.0 UJ	20 U	20 U	20 U
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 U	2.00 U	R	5.0 U	5.0 U	1000 U	10.0 U	40.0 U	R	100 U	100 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	2.00 UJ	5.0 U	5.0 U	5.0 U	1000 U	10.0 U	40.0 U	R	100 U	100 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	100 U	5.00 U	20.0 U	20 U	20 U	20 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	2.00 UJ	5.0 U	5.0 U	5.0 U	1000 U	10.0 U	40.0 U	R	100 U	100 U
Acetone	6300	50000	50000	100000	25 U	25 UJ	10.0 UJ	R	25 U	25 UJ	1000 UJ	50.0 U	200 UJ	R	500 U	500 UJ
Benzene	5	1000	10000	100000	0.70 U	0.70 U	1.00 U	0.70 U	0.70 U	0.70 U	100 U	5.00 U	20.0 U	10 U	10 U	10 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	2.50 U	10.0 U	10 U	10 U	10 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 U	R	1.0 U	1.0 U	100 U	5.00 U	20.0 UJ	10 U	10 U	10 U
Bromomethane	10	7	800	8000	1.0 UJ	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U	200 U	10.0 U	40.0 U	R	10 UJ	10 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	2.00 U	5.0 U	5.0 U	5.0 U	200 U	10.0 U	40.0 U	100 U	100 U	100 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 UJ	10 U	10 U	10 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 U	2.00 U	1.0 U	1.0 UJ	1.0 U	200 U	10.0 U	40.0 U	20 U	20 U	20 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U	200 UJ	10.0 U	40.0 UJ	20 U	20 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	**3.20**	**1.2**	**2.1**	**1.7**	**107**	**28.6**	**127**	**100**	**90**	**64**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.40 U	50.0 U	2.50 U	10.0 U	10 U	10 U	10 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	2.50 U	10.0 U	10 U	10 U	10 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	10 U	10 U	10 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U	200 UJ	10.0 U	40.0 U	20 U	20 U	20 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 UJ	5.00 U	20.0 U	20 U	20 U	20 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.40 U	50.0 U	2.50 U	10.0 U	10 U	10 U	10 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U	200 UJ	10.0 U	40.0 U	10 U	20 U	100 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U	200 U	10.0 U	40.0 U	20 U	20 U	20 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 UJ	2.00 U	1.0 U	1.0 U	1.0 UJ	100 U	5.00 U	40.0 U	20 U	20 U	20 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Styrene	100	100	6000	60000	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Tert-Butylbenzene	NE	NE	NE	NE	**6.7**	**2.3 J**	**1.25**	**1.1**	1.0 U	1.0 UJ	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 R	1.0 UJ	1.00 UJ	1.0 U	R	1.0 UJ	**2240 J+**	**216**	**1070**	**2600**	**1800 J+**	**1300 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	2.00 U	2.5 U	2.5 U	2.5 U	200 U	10.0 U	40.0 U	R	50 U	50 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.40 U	50.0 U	2.50 U	10.0 UJ	10 U	10 U	10 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	**2.03**	1.0 U	**1.1**	**1.1**	**4150 J**	**355**	**1960**	**5200**	**3600**	**2100 J**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	20 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	**2.39**	1.0 U	**1.0**	**1.6**	100 U	5.00 U	20.0 U	10 U	10 U	10 U
Xylenes (Total)	10000	3000	5000	NE	1.0 U	1 U	2.0 U	1.0 U	1.0 U	1 U	200 U	10 U	40 U	20 U	20 U	20 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Former Tank Farm											
Location ID:					AE100R-1	AE100R-1	AE100R-1	AE100R-1	AE100R-1	AE100R-1	AE100R-2	AE100R-2	AE100R-2	AE100R-3	AE100R-3	AE100R-3	AE100R-3
Sample ID:					16A-AE100R1-061516-1	17A-AE100R1-100417-1	18A-AE100R1-091918-1	19A-AE100R1-092319-1	20A-AE100R1-091020-1	21A-AE100R1-090921-1	16A-AE100R2-061516-1	17A-AE100R2-100417-1	21A-AE100R2-090921-1	16A-AE100R3-061516-1	17A-AE100R3-100417-1	18A-AE100R3-091918-1	19A-AE100R3-092319-1
Sample Date:					06/15/2016	10/04/2017	09/19/2018	09/23/2019	09/10/2020	09/09/2021	06/15/2016	10/04/2017	09/09/2021	06/15/2016	10/04/2017	09/19/2018	09/23/2019
Depth Interval:					18 - 24 ft	18.68 - 24.68 ft	18 - 24 ft	18 - 24 ft	18 - 24 ft	18 - 24 ft	43 - 48 ft	43.68 - 48.68 ft	43 - 48 ft	50 - 56 ft	50.68 - 56.68 ft	50 - 56 ft	50 - 56 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	20.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	10 U	50.0 U	50.0 U	100 U	50 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	10.0 U	R	0.50 U	0.50 U	0.5 U	0.50 U	10 U	25.0 U	25.0 U	50.0 U	R
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	10 U	50.0 U	50.0 U	100 U	50 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	**2.8**	**2.7**	**5.15**	20 U	50.0 U	50.0 U	100 U	**73**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.49 J**	10 U	50.0 U	50.0 U	100 U	50 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	10 U	50.0 U	50.0 U	100 U	100 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	0.50 U	0.50 U	1.0 U	1.00 U	10 U	50.0 U	50.0 U	100 U	100 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	70 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	**46.5**	**6.12**	20.0 U	1.0 U	1.0 U	1.0 U	**3.3**	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	40.0 UJ	R	0.50 UJ	0.50 U	2.0 U	2.00 UJ	10 U	100 UJ	100 UJ	200 UJ	R
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	10.0 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	10 U	25.0 U	25.0 U	50.0 U	50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	20.0 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	10 U	50.0 U	50.0 U	100 U	50 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	10 U	50.0 U	50.0 U	100 U	50 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	**2.8**	**1.11**	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	50 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	10 U	50.0 U	50.0 U	100 U	50 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	20.0 U	400 UJ	40 U	100 U	100 U	NS	20.0 U	2000 U	NS	1000 U	2000 UJ	4000 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 UJ	20.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 UJ	20 UJ	50.0 U	50.0 UJ	100 UJ	100 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	40.0 U	R	5.0 U	5.0 U	10.0 U	2.00 U	100 U	500 U	100 U	200 U	R
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	40.0 U	R	5.0 U	5.0 U	10.0 U	2.00 U	100 U	500 U	100 U	200 UJ	R
2-Phenylbutane	NE	NE	NE	NE	**3.0**	**2.75**	20.0 U	**2.2**	**2.0**	**1.1**	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	40.0 U	R	5.0 U	5.0 U	10.0 U	2.00 U	100 U	500 U	100 U	200 U	R
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	200 UJ	R	R	25 U	10.0 U	10.0 U	500 U	500 U	500 U	1000 UJ	R
Benzene	5	1000	10000	100000	1.0 U	1.00 U	20.0 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	10 U	50.0 U	50.0 U	100 U	50 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	10.0 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	10 U	25.0 U	25.0 U	50.0 U	50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 UJ	20.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 UJ	10 U	50.0 U	50.0 UJ	100 UJ	50 U
Bromomethane	10	7	800	8000	2.0 UJ	2.00 U	40.0 U	R	1.0 UJ	1.0 UJ	2.0 UJ	2.00 U	10 UJ	100 U	100 U	200 UJ	R
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	40.0 U	5.0 U	5.0 U	5.0 UJ	2.0 U	2.00 U	100 UJ	100 U	100 U	200 U	500 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 U	20.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	10 U	50.0 U	50.0 U	100 UJ	50 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	40.0 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	20 U	100 U	100 U	200 U	100 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	50 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 U	40.0 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	20 U	100 U	100 U	200 U	100 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**7.5**	**5.29**	**35.6**	**16**	**6.5**	**33**	**54.1**	**49.4**	**73**	50.0 U	50.0 U	100 U	**61**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	10.0 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	10 U	25.0 U	25.0 U	50.0 U	50 U
Cymene	NE	NE	NE	NE	**2.5**	**1.40**	20.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	20 UJ	50.0 U	50.0 U	100 U	100 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	10.0 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	10 U	25.0 U	25.0 U	50.0 UJ	50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	10 U	50.0 U	50.0 U	100 U	100 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	40.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	20 U	100 U	100 UJ	200 U	100 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 UJ	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	20 U	50.0 U	50.0 UJ	100 U	100 U
Ethylbenzene	700	20000	5000	100000	**49.2**	**38.1**	20.0 U	**4.7**	**2.7**	**1.1**	**2.4**	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	**3.1**	1.00 U	20.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	20 UJ	50.0 U	50.0 U	100 U	100 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	10.0 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	10 U	25.0 U	25.0 UJ	50.0 U	50 U
Isopropylbenzene	NE	NE	NE	NE	**16.0**	**14.7**	20.0 U	**4.3**	**2.6**	**1.0 J**	**1.1**	1.00 U	20 UJ	50.0 U	50.0 U	100 U	100 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.00 UJ	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	20 U	50.0 U	50.0 UJ	100 U	70 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	40.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	100 U	100 U	100 U	200 U	50 U
mp-xylene	10000	3000	5000	NE	**33.7**	**8.61**	40.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	20 U	100 U	100 U	200 U	100 U
Naphthalene	140	700	20000	100000	**15.9 J**	**11.2**	40.0 U	**2.0**	**1.4**	1.0 UJ	1.0 UJ	1.00 U	20 UJ	50.0 UJ	50.0 U	200 U	100 U
N-Butylbenzene	NE	NE	NE	NE	**2.8**	**2.55**	20.0 U	**1.2**	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
N-Propylbenzene	NE	NE	NE	NE	**38.3**	**35.3**	20.0 U	**13**	**5.3**	**1.6**	**1.9**	**1.09 J**	20 U	50.0 U	50.0 U	100 U	100 U
o-Xylene	10000	3000	5000	NE	**31.9**	**11.0**	20.0 U	1.0 U	1.0 U	1.0 U	**1.0**	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
Tert-Butylbenzene	NE	NE	NE	NE	**6.1**	**6.38**	20.0 U	**6.7**	**6.7**	**6.0**	**2.5**	**1.75**	20 U	50.0 U	50.0 U	100 U	100 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	20 U	50.0 U	50.0 UJ	100 U	100 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	**635**	**3.6**	R	**5.5 J+**	**72.2**	**114 J**	**1300 J+**	**2270**	**3440 J**	**1390**	**5700**
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	40.0 U	R	2.5 U	2.5 U	3.0 U	2.00 U	50 U	100 U	100 U	200 U	R
Toluene	**1000**	50000	40000	100000	**78.7**	**29.2**	20.0 U	**1.4**	**1.9**	1.0 U	**3.1**	1.00 U	20 U	50.0 U	50.0 U	100 U	100 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	**1.4**	**2.0**	**1.32**	20 U	50.0 U	50.0 U	100 U	80 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 UJ	10.0 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	10 U	25.0 U	25.0 UJ	50.0 U	50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	**971**	**13**	**2.5**	**44**	**81.1**	**182**	**1500**	**3410**	**4780**	**2200**	**7300**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	20.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	20 U	50.0 U	50.0 U	100 UJ	100 U
Vinyl chloride	**2**	**2**	50000	100000	**3.8**	**1.35**	20.0 U	**4.8**	**4.1**	**13**	**13.8**	**9.87 J**	10 U	50.0 UJ	50.0 U	100 U	50 U
Xylenes (Total)	10000	3000	5000	NE	**65.6**	**19.6**	40 U	1.0 U	1.0 U	1 U	**2.0**	2.0 U	20 U	100 U	100 U	200 U	100 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Former Tank Farm											
Location ID:					AE100R-3	AE100R-3	AE100R-4	AE100R-4	AE100R-4	AE100R-4	AE100R-4	AE100R-4	AE100R-5	AE100R-5	AE100R-5	AE100R-5	AE100R-5
Sample ID:					20A-AE100R3-091020-1	21A-AE100R3-090921-1	16A-AE100R4-061516-1	17A-AE100R4-100417-1	18A-AE100R4-091918-1	19A-AE100R4-092319-1	20A-AE100R4-091020-1	21A-AE100R4-090921-1	16A-AE100R5-061516-1	17A-AE100R5-100417-1	18A-AE100R5-091918-1	19A-AE100R5-092319-1	20A-AE100R5-091020-1
Sample Date:					09/10/2020	09/09/2021	06/15/2016	10/04/2017	09/19/2018	09/23/2019	09/10/2020	09/09/2021	06/15/2016	10/04/2017	09/19/2018	09/23/2019	09/10/2020
Depth Interval:					50 - 56 ft	50 - 56 ft	63 - 68 ft	63.68 - 68.68 ft	63 - 68 ft	63 - 68 ft	63 - 68 ft	63 - 68 ft	88 - 93 ft	88.68 - 93.68 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	25 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10 U	10.0 U	10.0 U	50.0 U	25 U	10 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	25 U	25 U	25.0 U	25.0 U	50.0 U	R	25 U	10 U	5.0 U	5.00 U	25.0 U	R	10 U
1,1,2-Trichloroethane	**5**	900	50000	100000	25 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	**21**	10.0 U	10.0 U	50.0 U	25 U	10 U
1,1-Dichloroethane	**70**	2000	20000	100000	**52**	**65**	50.0 U	50.0 U	100 U	70 U	**53**	**39**	**22.0**	**27.1**	50.0 U	50 U	**36**
1,1-Dichloroethene	**7**	**80**	30000	100000	25 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	**13**	10.0 U	10.0 U	50.0 U	25 U	**10**
1,1-Dichloropropene	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	25 U	25 U	50.0 U	50.0 U	100 U	100 U	25 U	10 U	10.0 U	10.0 U	50.0 U	50 U	10 U
1,2,3-Trichloropropane	NE	NE	NE	NE	25 U	25 U	50.0 U	50.0 U	100 U	100 U	25 U	10 U	10.0 U	10.0 U	50.0 U	50 U	10 U
1,2,4-Trichlorobenzene	70	200	50000	NE	50 U	50 U	50.0 U	50.0 U	100 U	70 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	25 UJ	25 U	100 UJ	100 UJ	200 UJ	R	25 UJ	10 U	20.0 U	20.0 UJ	100 UJ	R	10 UJ
1,2-Dibromoethane	0.02	2	50000	100000	25 U	25 U	25.0 U	25.0 U	50.0 U	50 U	25 U	10 U	5.0 U	5.00 U	25.0 U	25 U	10 U
1,2-Dichlorobenzene	600	8000	2000	80000	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
1,2-Dichloroethane	5	5	20000	100000	25 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10 U	10.0 U	10.0 U	50.0 U	25 U	10 U
1,2-Dichloropropane	5	3	50000	100000	25 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10 U	10.0 U	10.0 U	50.0 U	25 U	10 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	40 U	50 U	50.0 U	50.0 U	100 U	50 U	40 U	20 U	10.0 U	10.0 U	50.0 U	40 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
1,4-Dichlorobenzene	5	60	8000	80000	25 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10 U	10.0 U	10.0 U	50.0 U	25 U	10 U
1,4-Dioxane	**0.3**	6000	50000	100000	5000 U	5000 U	NS	1000 U	2000 UJ	4000 U	5000 U	2000 U	NS	200 U	1000 UJ	2000 U	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	50 U	50 UJ	50.0 U	50.0 UJ	100 UJ	100 U	50 U	20 UJ	10.0 U	10.0 UJ	50.0 UJ	50 U	20 U
2-Butanone	4000	50000	50000	100000	250 U	250 U	500 U	100 U	200 U	R	250 U	100 U	100 U	20.0 U	100 U	R	100 U
2-Chlorotoluene	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
2-Hexanone	NE	NE	NE	NE	250 U	250 U	500 U	100 U	200 UJ	R	250 U	100 U	100 U	20.0 U	100 UJ	R	100 U
2-Phenylbutane	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
4-Chlorotoluene	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
4-Methyl-2-pentanone	350	50000	50000	100000	250 U	250 U	500 U	100 U	200 U	R	250 U	100 U	100 U	20.0 U	100 U	R	100 U
Acetone	6300	50000	50000	100000	1300 UJ	1300 U	500 U	500 U	1000 UJ	R	1300 UJ	500 U	100 U	100 U	500 UJ	R	500 UJ
Benzene	5	1000	10000	100000	25 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10 U	10.0 U	10.0 U	50.0 U	25 U	10 U
Bromobenzene	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
Bromochloromethane	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
Bromodichloromethane	3	6	50000	100000	25 U	25 U	25.0 U	25.0 U	50.0 U	50 U	25 U	10 U	5.0 U	5.00 U	25.0 U	25 U	10 U
Bromoform	4	700	50000	100000	25 U	25 U	50.0 U	50.0 UJ	100 UJ	50 U	25 U	10 U	10.0 U	10.0 UJ	50.0 UJ	25 U	10 U
Bromomethane	10	7	800	8000	25 UJ	25 UJ	100 U	100 U	200 UJ	R	25 UJ	10 UJ	20.0 UJ	20.0 U	100 UJ	R	10 UJ
Carbon Disulfide	NE	NE	NE	NE	250 U	250 UJ	100 U	100 U	200 U	500 U	250 U	100 UJ	20.0 U	20.0 U	100 U	250 U	100 U
Carbon tetrachloride	5	2	5000	50000	25 U	25 U	50.0 U	50.0 U	100 UJ	50 U	25 U	10 U	10.0 U	10.0 U	50.0 UJ	25 U	10 U
Chlorobenzene	100	200	1000	10000	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
Chloroethane	NE	NE	NE	NE	50 UJ	50 U	100 U	100 U	200 U	100 U	50 UJ	20 U	20.0 U	20.0 U	100 U	50 U	20 UJ
Chloroform	70	50	20000	100000	50 U	50 U	50.0 U	50.0 U	100 U	50 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
chloromethane	NE	NE	NE	NE	50 U	50 U	100 U	100 U	200 U	100 U	50 U	20 U	20.0 U	20.0 U	100 U	50 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**52**	**61**	**58.5**	50.0 U	100 U	**89**	**92**	**140**	**118**	**65.2**	**68.5**	**160**	**400**
cis-1,3-Dichloropropene	NE	NE	NE	NE	25 U	25 U	25.0 U	25.0 U	50.0 U	50 U	25 U	10 U	5.0 U	5.00 U	25.0 U	25 U	10 U
Cymene	NE	NE	NE	NE	50 U	50 UJ	50.0 U	50.0 U	100 U	100 U	50 U	20 UJ	10.0 U	10.0 U	50.0 U	50 U	20 U
Dibromochloromethane	2	20	50000	100000	25 U	25 U	25.0 U	25.0 U	50.0 UJ	50 U	25 U	10 U	5.0 U	5.00 U	25.0 UJ	25 U	10 U
Dibromomethane	NE	NE	NE	NE	25 U	25 U	50.0 U	50.0 U	100 U	100 U	25 U	10 U	10.0 U	10.0 U	50.0 U	50 U	10 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	50 U	50 U	100 U	100 UJ	200 U	100 U	50 U	20 U	20.0 U	20.0 UJ	100 U	50 U	20 U
Diethyl Ether	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
Diisopropyl Ether	NE	NE	NE	NE	50 UJ	50 U	50.0 U	50.0 U	100 U	100 U	50 UJ	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 UJ	100 U	100 U	50 U	20 U	10.0 U	10.0 UJ	50.0 U	50 U	20 U
Ethylbenzene	700	20000	5000	100000	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	50 U	50 UJ	50.0 U	50.0 U	100 U	100 U	50 U	20 UJ	10.0 U	10.0 U	50.0 U	50 U	20 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	25 U	25 U	25.0 U	25.0 UJ	50.0 U	50 U	25 U	10 U	5.0 U	5.00 UJ	25.0 U	25 U	10 U
Isopropylbenzene	NE	NE	NE	NE	50 U	50 UJ	50.0 U	50.0 U	100 U	100 U	50 U	20 UJ	10.0 U	10.0 U	50.0 U	50 U	20 U
Methyl tert-butyl ether	NE	NE	NE	100000	50 U	50 U	50.0 U	50.0 UJ	100 U	70 U	50 U	20 U	10.0 U	10.0 UJ	50.0 U	50 U	20 U
Methylene Chloride	5	2000	50000	100000	50 UJ	250 U	100 U	100 U	200 U	50 U	50 UJ	100 U	20.0 U	20.0 U	100 U	25 U	20 UJ
mp-xylene	10000	3000	5000	NE	50 U	50 U	100 U	100 U	200 U	100 U	50 U	20 U	20.0 U	20.0 U	100 U	50 U	20 U
Naphthalene	140	700	20000	100000	50 U	50 UJ	50.0 UJ	50.0 U	200 U	100 U	50 U	20 UJ	10.0 UJ	10.0 U	100 U	50 U	20 U
N-Butylbenzene	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
N-Propylbenzene	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
o-Xylene	10000	3000	5000	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
Styrene	100	100	6000	60000	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
Tert-Butylbenzene	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 UJ	100 U	100 U	50 U	20 U	10.0 U	10.0 UJ	50.0 U	50 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**4000 J+**	**6100 J+**	**1490**	**1900 J**	**1500**	**4000**	**3400 J+**	**2600 J+**	**302**	**493 J**	**884**	**1400**	**1100 J+**
Tetrahydrofuran	NE	NE	NE	NE	130 U	130 U	100 U	100 U	200 U	R	130 U	50 U	30.0 U	20.0 U	100 U	R	50 U
Toluene	**1000**	50000	40000	100000	50 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	50 U	50 U	50.0 U	50.0 U	100 U	80 U	50 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	25 U	25 U	25.0 U	25.0 UJ	50.0 U	50 U	25 U	10 U	5.0 U	5.00 UJ	25.0 U	25 U	10 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**4900**	**7300**	**2350**	**2990**	**2740**	**5400**	**4700**	**3400**	**718**	**1020**	**1810**	**2300**	**2200**
Trichlorofluoromethane	NE	NE	NE	NE	50 U	50 U	50.0 U	50.0 U	100 UJ	100 U	50 U	20 U	10.0 U	10.0 U	50.0 UJ	50 U	20 U
Vinyl chloride	**2**	**2**	50000	100000	25 U	25 U	50.0 UJ	50.0 U	100 U	50 U	25 U	10 U	**33.2**	10.0 U	50.0 U	25 U	**38**
Xylenes (Total)	10000	3000	5000	NE	50 U	50 U	100 U	100 U	200 U	100 U	50 U	20 U	20 U	20 U	100 U	50 U	20 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Former Tank Farm							Sitewide GW groups			
Location ID:					AE100R-5	AE100R-6	AE100R-6	AE100R-6	AE100R-6	AE100R-6	AE100R-6	TRC-402	TRC-402	TRC-403	TRC-403
Sample ID:					21A-AE100R5-090921-1	16A-AE100R6-061516-1	17A-AE100R6-100417-1	18A-AE100R6-091918-1	19A-AE100R6-092319-1	20A-AE100R6-091020-1	21A-AE100R6-090921-1	16A-TRC402-063016-1	17A-TRC402-100617-1	16A-TRC403-063016-1	17A-TRC403-100617-1
Sample Date:					09/09/2021	06/15/2016	10/04/2017	09/19/2018	09/23/2019	09/10/2020	09/09/2021	06/30/2016	10/06/2017	06/30/2016	10/06/2017
Depth Interval:					88 - 93 ft	108.5 - 113.5 ft	109.18 - 114.18 ft	108.5 - 113.5 ft	108.5 - 113.5 ft	108.5 - 113.5 ft	108.5 - 113.5 ft	53.3 - 63.3 ft	53.3 - 63.3 ft	37.5 - 47.5 ft	37.5 - 47.5 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)											
Volatile Organic Compounds (ug/l)															
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.0 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	5.0 U	1.0 U	1.00 U	1.0 UJ	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 UJ	1.00 U	1.0 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.5 U	12.5 U	10.0 U	25.0 U	R	5.0 U	2.5 U	0.5 U	0.50 U	0.5 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	5.0 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	**30**	**28.5**	**31.6**	50.0 U	**32**	**28**	**21**	1.0 U	**1.29**	1.0 U	1.00 U
1,1-Dichloroethene	**7**	**80**	30000	100000	**10**	25.0 U	20.0 U	50.0 U	10 U	**7.3**	**5.9**	1.0 U	**2.60**	1.0 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	7.0 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	2.5 U	25.0 U	20.0 U	50.0 U	20 U	5.0 U	2.5 U	1.0 U	1.00 U	1.0 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 UJ	1.00 U	1.0 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.5 UJ	50.0 UJ	40.0 UJ	100 UJ	R	5.0 UJ	2.5 UJ	2.0 U	2.00 U	2.0 UJ	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	2.5 U	12.5 U	10.0 U	25.0 U	10 U	5.0 U	2.5 U	0.5 U	0.50 U	0.5 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	3.0 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	3.0 U	1.0 U	1.00 U	1.0 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	3.0 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	3.0 U	1.0 U	1.00 U	1.0 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 UJ	1.0 U	1.00 UJ
1,3-Dichloropropane	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	5.0 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	500 U	NS	400 U	1000 UJ	800 U	1000 U	500 U	20.0 UJ	20.0 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	5.0 U	25.0 U	20.0 UJ	50.0 UJ	20 U	10 U	5.0 U	1.0 UJ	1.00 UJ	1.0 UJ	1.00 UJ
2-Butanone	4000	50000	50000	100000	25 U	250 U	40.0 U	100 U	R	50 U	25 U	10.0 U	2.00 U	10.0 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
2-Hexanone	NE	NE	NE	NE	25 U	250 U	40.0 U	100 UJ	R	50 U	25 U	10.0 U	2.00 U	10.0 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 UJ	1.0 U	1.00 UJ
4-Methyl-2-pentanone	350	50000	50000	100000	25 U	250 U	40.0 U	100 U	R	50 U	25 U	10.0 U	2.00 U	10.0 U	2.00 U
Acetone	6300	50000	50000	100000	130 UJ	250 U	200 U	500 UJ	R	250 UJ	130 UJ	10.0 U	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	3.5 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	3.5 U	1.0 U	1.00 U	1.0 U	1.00 U
Bromobenzene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 UJ	1.0 U	1.00 UJ
Bromochloromethane	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 UJ	1.0 U	1.00 UJ
Bromodichloromethane	3	6	50000	100000	2.5 U	12.5 U	10.0 U	25.0 U	10 U	5.0 U	2.5 U	0.5 U	0.50 U	0.5 UJ	0.50 U
Bromoform	4	700	50000	100000	4.0 U	25.0 U	20.0 UJ	50.0 UJ	10 U	5.0 U	4.0 U	1.0 U	1.00 U	1.0 UJ	1.00 U
Bromomethane	10	7	800	8000	5.0 U	50.0 U	40.0 U	100 UJ	R	7.0 UJ	5.0 U	2.0 UJ	2.00 U	2.0 UJ	2.00 U
Carbon Disulfide	NE	NE	NE	NE	25 U	50.0 U	40.0 U	100 U	100 U	50 U	25 U	2.0 U	2.00 U	2.0 U	2.00 U
Carbon tetrachloride	5	2	5000	50000	2.5 U	25.0 U	20.0 U	50.0 UJ	10 U	5.0 U	2.5 U	1.0 UJ	1.00 U	1.0 UJ	1.00 U
Chlorobenzene	100	200	1000	10000	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Chloroethane	NE	NE	NE	NE	5.0 U	50.0 U	40.0 U	100 U	20 U	10 UJ	5.0 U	2.0 U	2.00 U	2.0 U	2.00 U
Chloroform	70	50	20000	100000	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
chloromethane	NE	NE	NE	NE	5.0 U	50.0 U	40.0 U	100 U	20 U	10 U	5.0 U	2.0 U	2.00 U	2.0 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**740**	**188**	**160**	**101 D**	**110**	**140**	**71**	1.0 U	1.00 UJ	1.0 U	1.00 UJ
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	12.5 U	10.0 U	25.0 U	10 U	5.0 U	2.5 U	0.5 U	0.50 U	0.5 UJ	0.50 U
Cymene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Dibromochloromethane	2	20	50000	100000	2.5 U	12.5 U	10.0 U	25.0 UJ	10 U	5.0 U	2.5 U	0.5 U	0.50 U	0.5 U	0.50 U
Dibromomethane	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	8.3 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	5.0 U	50.0 U	40.0 UJ	100 U	20 U	10 U	5.0 U	2.0 U	2.00 U	2.0 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.0 U	25.0 U	20.0 UJ	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 UJ	1.0 U	1.00 UJ
Ethylbenzene	700	20000	5000	100000	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	2.5 U	12.5 U	10.0 UJ	25.0 U	10 U	5.0 U	2.5 U	0.5 U	0.50 U	0.5 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	5.0 U	25.0 U	20.0 UJ	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 UJ	1.0 U	1.00 UJ
Methylene Chloride	5	2000	50000	100000	5.0 U	50.0 U	40.0 U	100 U	10 U	10 UJ	5.0 U	2.0 U	2.00 U	2.0 U	2.00 U
mp-xylene	10000	3000	5000	NE	5.0 U	50.0 U	40.0 U	100 U	20 U	10 U	5.0 U	2.0 U	2.00 U	2.0 U	2.00 U
Naphthalene	140	700	20000	100000	5.0 U	25.0 UJ	20.0 U	100 U	20 U	10 U	5.0 U	1.0 UJ	1.00 U	1.0 U	1.00 U
N-Butylbenzene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
o-Xylene	10000	3000	5000	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Styrene	100	100	6000	60000	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.0 U	25.0 U	20.0 UJ	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 UJ	1.0 U	1.00 UJ
Tetrachloroethene	**5**	**50**	**30000**	100000	**1100 J+**	**754**	**849 J**	**744 D**	**1200**	**900 J+**	**600 J+**	1.0 U	1.00 U	1.0 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	13 U	50.0 U	40.0 U	100 U	R	25 U	13 U	2.0 U	2.00 U	2.0 U	2.00 U
Toluene	**1000**	50000	40000	100000	5.0 U	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**10**	25.0 U	20.0 U	50.0 U	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	12.5 U	10.0 UJ	25.0 U	10 U	5.0 U	2.5 U	0.5 U	0.50 UJ	0.5 UJ	0.50 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**1600**	**1170**	**1320**	**1350 D**	**1600**	**1300**	**760**	1.0 U	1.00 U	1.0 U	1.00 U
Trichlorofluoromethane	NE	NE	NE	NE	5.0 U	25.0 U	20.0 U	50.0 UJ	20 U	10 U	5.0 U	1.0 U	1.00 U	1.0 U	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	**33**	25.0 UJ	20.0 U	50.0 U	10 U	**7.0**	2.5 U	1.0 UJ	1.00 U	1.0 UJ	1.00 U
Xylenes (Total)	10000	3000	5000	NE	5 U	50 U	40 U	100 U	20 U	10 U	5 U	2.0 U	2.0 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A													
Location ID:					AE101D	AE101D	AE101D	AE101D	AE101D	AE101D	AE101D	AE101R-1	AE101R-1	AE101R-1	AE101R-1	AE101R-1	AE101R-1	AE101R-1
Sample ID:					16A-AE101D-061516-1	16A-AE101D-061516-2	17A-AE101D-100217-1	18A-AE101D-092618-1	19A-AE101D-093019-1	20A-AE101D-091820-1	21A-AE101D-090721-1	16A-AE101R1-061616-1	17A-AE101R1-101117-1	18A-AE101R1-092018-1	19A-AE101R1-092519-1	19A-AE101R1-092519-2	20A-AE101R1-092320-1	20A-AE101R1-092320-2
Sample Date:					06/15/2016	06/15/2016	10/02/2017	09/26/2018	09/30/2019	09/18/2020	09/07/2021	06/16/2016	10/11/2017	09/20/2018	09/25/2019	09/25/2019	09/23/2020	09/23/2020
Depth Interval:					20 - 25 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	30.5 - 35.5 ft	30.5 - 35.5 ft	30.5 - 35.5 ft	30.5 - 35.5 ft	30.5 - 35.5 ft	30.5 - 35.5 ft	30.5 - 35.5 ft
Sample Type:					N	FD	N	N	N	N	N	N	N	N	N	FD	N	FD
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	2.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.5 U	0.50 U	1.00 U	0.50 U	R	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.0**	1.0 U	**1.55**	2.00 UJ	**1.7**	2.0 U	**1.7**	**1.8**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	2.00 U	0.50 U	1.0 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 UJ	2.00 U	4.00 UJ	0.50 U	R	0.50 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.00 U	0.50 U	1.0 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	2.00 U	0.60 U	1.2 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	40.0 UJ	10 U	80 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	2.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	4.00 U	5.0 UJ	R	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	4.00 U	5.0 U	R	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	4.00 U	5.0 U	R	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	10.0 UJ	R	25 U	25 U	10.0 U	10.0 U	20.0 UJ	25 U	R	25 U	25 U
Benzene	5	1000	10000	100000	1.0 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	2.00 U	0.70 U	1.4 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.00 U	0.50 U	1.0 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	R	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 UJ	2.0 UJ	2.00 UJ	2.00 U	R	1.0 U	1.0 U	2.0 U	2.00 UJ	4.00 U	1.0 U	R	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	4.00 U	5.0 U	10 UJ	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	2.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 UJ	2.00 U	4.00 U	1.0 UJ	2.0 U	1.0 UJ	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 UJ	2.0 UJ	2.00 U	2.00 U	**1.5**	1.0 U	1.0 U	2.0 UJ	2.00 UJ	4.00 UJ	1.0 U	2.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**20.2**	**20.3**	**51.6**	**24.4**	**32**	**64**	**32**	**12.8**	**38.7**	**32.7**	**30**	**27**	**27**	**29**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	1.00 U	0.40 U	1.0 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.00 U	0.50 U	1.0 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	4.00 U	1.0 U	2.0 U	1.0 U	1.0 UJ
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 UJ
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	1.00 U	0.40 U	1.0 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	4.00 U	1.0 UJ	2.0 UJ	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	4.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	4.00 U	1.0 U	2.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	**1.2**	1.0 U	**1.4 J**	1.0 U	1.00 U	2.00 U	**1.1**	2.0 U	**1.4**	**1.7**
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**1.4**	**1.3**	1.00 UJ	**21.4**	1.0 U	**2.3 J+**	**2.5 J+**	**17.9**	**126**	**166**	**160**	**170**	**160 J+**	**130 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.0 U	2.00 U	4.00 U	2.5 UJ	R	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	1.00 UJ	0.40 U	1.0 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**3.4**	**3.0**	**2.73**	**11.3**	**3.8**	**14**	**25**	**17.7**	**64.9**	**55.0**	**50**	**39**	**33**	**44**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	2.0 U	1.0 U	1.0 UJ
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.00 UJ	**1.66**	**1.6**	**2.3**	**1.8**	1.0 U	**7.40**	**6.40**	**6.4**	**5.5 J-**	**7.5**	**7.6**
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	4 U	1.0 U	2.0 U	1.0 U	1.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	AE101R-1	AE101R-2	AE101R-2	AE101R-2	AE101R-2	AE101R-2	AE101R-2	AE101R-3	AE101R-3	AE101R-3	AE101R-3	AE101R-3	AE101R-3
					Sample ID:	21A-AE101R1-091021-1	16A-AE101R2-061616-1	17A-AE101R2-101117-1	18A-AE101R2-092018-1	19A-AE101R2-092519-1	20A-AE101R2-092320-1	21A-AE101R2-091021-1	16A-AE101R3-061616-1	17A-AE101R3-101117-1	18A-AE101R3-092018-1	18A-AE101R3-092018-2	19A-AE101R3-092519-1	20A-AE101R3-092320-1
					Sample Date:	09/10/2021	06/16/2016	10/11/2017	09/20/2018	09/25/2019	09/23/2020	09/10/2021	06/16/2016	10/11/2017	09/20/2018	09/20/2018	09/25/2019	09/23/2020
					Depth Interval:	30.5 - 35.5 ft	55 - 60 ft	55 - 60 ft	55 - 60 ft	55 - 60 ft	55 - 60 ft	55 - 60 ft	80 - 85 ft	80 - 85 ft	80 - 85 ft	80 - 85 ft	80 - 85 ft	80 - 85 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	FD	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**2.0**	**7.7**	**7.88**	**5.44 J**	**5.8**	**7.2**	**7.1**	**9.9**	**6.52**	**3.88 J**	**3.91 J**	**4.0**	**2.5**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 UJ	2.0 U	2.00 U	2.00 UJ	R	0.50 U	0.50 UJ	2.0 U	2.00 U	2.00 UJ	2.00 UJ	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	100 U	NS	20.0 U	20.0 UJ	20.0 UJ	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U
Acetone	6300	50000	50000	100000	25 UJ	10.0 U	10.0 U	10.0 UJ	R	25 U	25 UJ	10.0 U	10.0 U	10.0 UJ	10.0 UJ	R	25 U
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 UJ	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**33**	**116**	**62.8**	**80.1**	**34**	**71**	**74**	**32.2**	**20.6**	**38.8**	**39.0**	**19**	**9.6**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	2.00 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	**2.2**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**130 J+**	**6.4**	**5.06**	**4.66**	**19**	**8.2 J+**	**33 J+**	**15.5**	**8.66**	**2.22**	**2.06**	**6.9**	**2.1 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	**2.9**	2.00 U	2.00 U	2.00 U	R	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.4**	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 UJ	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 UJ	0.50 UJ	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**41**	**28.0**	**25.6**	**35.4**	**44**	**46**	**91**	**42.6**	**27.6**	**13.0**	**13.2**	**18**	**7.3**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	**8.5**	**11.6**	**10.5**	**14.3**	**5.8**	**18**	**13**	**5.8**	**2.86**	**10.8**	**10.2**	**4.9**	**3.6**
Xylenes (Total)	10000	3000	5000	NE	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A												
Location ID:					AE101R-3	AE101R-4	AE101R-5	AE101R-5	AE101R-5	AE101R-5	AE101R-5	AE101R-5	AE101R-6	AE101R-6	AE101R-6	AE101R-6	AE101R-6
Sample ID:					21A-AE101R3-091021-1	21A-AE101R4-091021-1	16A-AE101R5-061616-1	17A-AE101R5-101917-1	18A-AE101R5-092618-1	19A-AE101R5-092519-1	20A-AE101R5-092420-1	21A-AE101R5-091621-1	16A-AE101R6-061716-1	17A-AE101R6-101917-1	18A-AE101R6-092618-1	19A-AE101R6-093019-1	20A-AE101R6-092420-1
Sample Date:					09/10/2021	09/10/2021	06/16/2016	10/19/2017	09/26/2018	09/25/2019	09/24/2020	09/16/2021	06/17/2016	10/19/2017	09/26/2018	09/30/2019	09/24/2020
Depth Interval:					80 - 85 ft	153 - 158 ft	175 - 180 ft	175 - 180 ft	175 - 180 ft	175 - 180 ft	175 - 180 ft	175 - 180 ft	227 - 232 ft	227 - 232 ft	227 - 232 ft	227 - 232 ft	227 - 232 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	10 U	10 U	10 U	10.0 UJ	20.0 U	10.0 U	10 U	10 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 UJ	20.0 U	10.0 U	20 U	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	25.0 U	25.0 U	10.0 U	R	10 U	10 U	5.0 U	10.0 U	5.00 U	R	10 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	10 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U
1,1-Dichloroethane	**70**	2000	20000	100000	**3.2**	**11**	50.0 U	**51.5**	**47.8**	**51**	**45**	**56**	**30.5 J**	**36.2**	**33.8**	**42**	**36**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	**1.8**	50.0 U	50.0 U	20.0 U	**14**	**12**	**16 J+**	10.0 U	20.0 U	10.0 U	10 U	**12**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	50.0 U	50.0 U	20.0 U	20 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 UJ	20.0 U	10.0 U	20 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 UJ	0.50 UJ	100 U	100 U	40.0 U	R	10 U	10 UJ	20.0 U	40.0 U	20.0 U	R	10 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	25.0 U	25.0 U	10.0 U	10 U	10 U	10 U	5.0 U	10.0 U	5.00 U	10 U	10 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	50.0 U	50.0 U	20.0 U	10 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	10 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 UJ	20.0 U	10.0 U	20 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	10 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	100 U	NS	1000 U	400 U	800 U	2000 U	NS	NS	400 U	200 U	800 U	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 UJ	20.0 U	20 U	20 U	20 U	10.0 UJ	20.0 UJ	10.0 U	20 U	20 U
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 U	500 U	100 U	40.0 UJ	R	100 U	100 U	100 U	40.0 U	20.0 UJ	R	100 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	500 U	100 U	40.0 UJ	R	100 U	100 U	100 U	40.0 U	20.0 UJ	R	100 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	500 U	100 U	40.0 U	R	100 U	100 U	100 U	40.0 U	20.0 U	R	100 U
Acetone	6300	50000	50000	100000	25 UJ	25 UJ	500 U	500 U	200 UJ	R	500 U	500 UJ	100 U	200 U	100 UJ	R	500 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	50.0 U	50.0 U	20.0 U	10 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	25.0 U	25.0 U	10.0 U	10 U	10 U	10 U	5.0 U	10.0 U	5.00 U	10 U	10 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	10 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	100 UJ	100 U	40.0 U	10 UJ	10 UJ	10 U	20.0 U	40.0 U	20.0 U	R	10 UJ
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	100 U	100 UJ	40.0 U	100 U	100 U	100 U	20.0 U	40.0 UJ	20.0 U	100 U	100 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	50.0 U	50.0 UJ	20.0 U	10 U	10 U	10 U	10.0 UJ	20.0 UJ	10.0 U	10 U	10 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 U	100 U	100 U	40.0 U	20 U	20 U	20 UJ	20.0 U	40.0 U	20.0 U	20 U	20 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	100 UJ	100 U	40.0 U	20 U	20 U	20 U	20.0 U	40.0 U	20.0 U	20 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**26**	**380**	**786**	**924**	**809**	**1200**	**1300**	**1600**	**853**	**1140**	**1620**	**1500**	**1700**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	25.0 U	25.0 U	10.0 U	10 U	10 U	10 U	5.0 UJ	10.0 U	5.00 U	10 U	10 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	25.0 U	25.0 U	10.0 U	10 U	10 U	10 U	5.0 U	10.0 U	5.00 U	10 U	10 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	100 U	100 U	40.0 U	20 U	20 U	20 U	20.0 U	40.0 U	20.0 U	20 U	20 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 UJ	20.0 U	10.0 U	20 U	20 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 UJ	20.0 U	20 U	20 U	20 U	10.0 U	20.0 UJ	10.0 U	20 U	20 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	25.0 U	25.0 UJ	10.0 U	10 U	10 U	10 U	5.0 U	10.0 UJ	5.00 U	10 U	10 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 UJ	20.0 U	10.0 U	20 U	20 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	100 U	100 UJ	40.0 U	10 U	20 U	100 U	20.0 U	40.0 UJ	20.0 U	10 U	20 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	100 U	100 U	40.0 U	20 U	20 U	20 U	20.0 U	40.0 U	20.0 U	20 U	20 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	50.0 UJ	50.0 U	40.0 U	20 U	20 U	20 U	10.0 U	20.0 U	20.0 U	20 U	20 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**4.3 J+**	**31 J+**	**245**	**623**	**451**	**730**	**480**	**670 J+**	**145**	**378**	**28.3**	**17**	**27 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	100 U	100 U	40.0 U	R	50 U	50 U	20.0 U	40.0 U	20.0 U	R	50 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	50.0 U	50.0 U	20.0 U	20 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	**2.6**	50.0 U	50.0 U	20.0 U	20 U	**22**	**23**	**12.0**	20.0 U	**15.6**	**25**	**32**
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	25.0 U	25.0 U	10.0 U	10 U	10 U	10 U	5.0 UJ	10.0 U	5.00 U	10 U	10 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**12**	**160**	**2490**	**2560**	**2280**	**2800**	**2300**	**2400**	**695**	**1270**	**993**	**1300**	**920**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	50.0 U	50.0 UJ	20.0 U	20 U	20 U	20 U	10.0 U	20.0 UJ	10.0 U	20 U	20 U
Vinyl chloride	**2**	**2**	50000	100000	**9.3**	**26**	50.0 U	50.0 U	20.0 U	**14**	**16**	**20 J+**	10.0 U	20.0 U	**52.4**	**250**	**310**
Xylenes (Total)	10000	3000	5000	NE	1 U	1 U	100 U	100 U	40 U	20 U	20 U	20 U	20 U	40 U	20 U	20 U	20 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A												
					Location ID:	AE101R-6	AE101S	AE101S	AE101S	AE101S	AE101S	AE101S	AE102D	AE102D	AE102D	AE102D	AE102D	AE102D	AE102M
					Sample ID:	21A-AE101R6-091621-1	16A-AE101S-061716-1	17A-AE101S-100217-1	18A-AE101S-092618-1	19A-AE101S-093019-1	20A-AE101S-091820-1	21A-AE101S-090721-1	16A-AE102D-061316-1	17A-AE102D-100217-1	18A-AE102D-100118-1	19A-AE102D-092519-1	20A-AE102D-090920-1	21A-AE102D-091521-1	16A-AE102M-061316-1
					Sample Date:	09/16/2021	06/17/2016	10/02/2017	09/26/2018	09/30/2019	09/18/2020	09/07/2021	06/13/2016	10/02/2017	10/01/2018	09/25/2019	09/09/2020	09/15/2021	06/13/2016
					Depth Interval:	227 - 232 ft	10 - 15 ft	10 - 15 ft	10 - 15 ft	10 - 15 ft	10 - 15 ft	10 - 15 ft	33 - 38 ft	33 - 38 ft	33 - 38 ft	33 - 38 ft	33 - 38 ft	33 - 38 ft	23 - 28 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	10 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	5.0 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,1,2-Trichloroethane	**5**	900	50000	100000	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**51**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**6.8**	**1.90**	**7.33**	**6.0**	**7.1**	**8.7**	**1.3**
1,1-Dichloroethene	**7**	**80**	30000	100000	**17 J+**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	**1.1**	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	7.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	5.0 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	5.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	5.0 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	10.0 UJ	2.00 U	2.00 U	0.50 U	0.50 UJ	0.50 UJ	2.0 U
1,2-Dibromoethane	0.02	2	50000	100000	5.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	5.0 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	5.0 U	1.00 UJ	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U
1,2-Dichloropropane	5	3	50000	100000	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	NS	20.0 U	20.0 U	40 U	100 U	100 U	NS	20.0 U	20.0 U	10 U	100 U	100 U	NS
2,2-Dichloropropane	NE	NE	NE	NE	10 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 UJ	1.0 U	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
2-Butanone	4000	50000	50000	100000	50 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	50.0 U	2.00 U	2.00 U	5.0 UJ	5.0 U	5.0 U	10.0 U
2-Chlorotoluene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	50 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	50.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U
2-Phenylbutane	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	50 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	50.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U
Acetone	6300	50000	50000	100000	250 UJ	10.0 U	10.0 U	10.0 UJ	R	25 U	25 U	50.0 U	10.0 U	10.0 U	25 U	R	25 UJ	10.0 U
Benzene	5	1000	10000	100000	5.0 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	5.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U
Bromobenzene	NE	NE	NE	NE	10 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	5.0 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Bromoform	4	700	50000	100000	5.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Bromomethane	10	7	800	8000	7.0 U	2.0 U	2.00 UJ	2.00 U	R	1.0 U	1.0 U	10.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 U	2.0 U
Carbon Disulfide	NE	NE	NE	NE	50 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U
Carbon tetrachloride	5	2	5000	50000	5.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	10 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	10.0 U	**3.02**	2.00 U	1.0 UJ	1.0 UJ	1.0 UJ	2.0 U
Chloroform	70	50	20000	100000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	10 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**1500**	**18.6**	**40.8**	**17.5**	**19**	**39**	**19**	**36.6**	**12.4**	**60.2**	**4.6**	**30**	**77**	**51.0**
cis-1,3-Dichloropropene	NE	NE	NE	NE	5.0 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	2.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U
Cymene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	5.0 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Dibromomethane	NE	NE	NE	NE	8.3 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	10 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	10 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	5.0 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	2.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U
Isopropylbenzene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	10 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	50 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U
mp-xylene	10000	3000	5000	NE	10 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	10 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	5.0 UJ	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ
N-Butylbenzene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	**1.3**	1.0 U	**1.4 J**	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.3**	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**170 J+**	1.0 U	**1.94 J**	**1.13**	1.0 U	**4.4 J+**	**2.7 J+**	**19.6**	**1.05**	1.00 U	1.0 U	**7.0 J+**	**4.4 J+**	**5.1**
Tetrahydrofuran	NE	NE	NE	NE	25 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	10.0 U	2.00 U	2.00 U	2.5 UJ	2.5 U	2.5 U	2.0 U
Toluene	**1000**	50000	40000	100000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**66**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	**1.33**	**2.52**	**1.9**	**2.6**	**2.7**	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	5.0 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	2.5 UJ	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**1800**	**10.7**	**12.9**	**7.41**	1.0 U	**3.9**	**21**	**131**	**8.18**	**3.21**	**1.1**	**27**	**29**	**10.7**
Trichlorofluoromethane	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	**340 J+**	1.0 U	1.00 UJ	1.00 U	1.0 U	**1.2**	**1.4**	**19.4 J**	**4.71**	1.00 U	**2.7**	**11**	**33**	**9.6**
Xylenes (Total)	10000	3000	5000	NE	10 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	10 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A												
Location ID:					AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102RR-1	AE102RR-2	AE102RR-2	AE102RR-2	AE102RR-2	AE102RR-2
Sample ID:					17A-AE102M-100217-1	18A-AE102M-100118-1	19A-AE102M-092519-1	19A-AE102M-092519-2	20A-AE102M-090920-1	20A-AE102M-090920-2	21A-AE102M-091521-1	21A-AE102RR1-090721-1	16A-AE102RR2-061416-1	17A-AE102RR2-100317-1	18A-AE102RR2-091918-1	18A-AE102RR2-091918-2	19A-AE102RR2-092419-1
Sample Date:					10/02/2017	10/01/2018	09/25/2019	09/25/2019	09/09/2020	09/09/2020	09/15/2021	09/07/2021	06/14/2016	10/03/2017	09/19/2018	09/19/2018	09/24/2019
Depth Interval:					23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	43 - 48 ft	75 - 80 ft	75 - 80 ft	75 - 80 ft	75 - 80 ft	75 - 80 ft
Sample Type:					N	N	N	FD	N	FD	N	N	N	N	N	FD	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	2.50 U	2.50 U	2.5 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**1.82**	**1.91**	**2.4**	**2.5**	**2.2**	**2.4**	**2.2**	**8.0**	**10.3**	**7.95**	**12.2**	**12.8**	**11**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.1 J+**	**1.3**	**1.8**	**2.9**	5.00 U	5.00 U	5.00 U	5.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	2.00 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U	2.0 UJ	10.0 U	10.0 U	10.0 U	5.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	2.50 U	2.50 U	2.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	5.00 UJ	5.00 U	5.00 U	3.0 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	3.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	10 U	10 U	100 U	100 U	100 U	100 U	200 U	100 U	100 U	100 U	500 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U
2-Butanone	4000	50000	50000	100000	2.00 U	2.00 UJ	5.0 UJ	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	10.0 U	25 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
2-Hexanone	NE	NE	NE	NE	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	10.0 U	25 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	10.0 U	25 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 UJ	25 U	25 U	R	R	25 UJ	25 UJ	10.0 U	50.0 U	50.0 U	50.0 U	130 U
Benzene	5	1000	10000	100000	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	5.00 U	5.00 U	5.00 U	3.5 U
Bromobenzene	NE	NE	NE	NE	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Bromodichloromethane	3	6	50000	100000	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	2.50 U	2.50 U	2.5 U
Bromoform	4	700	50000	100000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	4.0 U
Bromomethane	10	7	800	8000	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U
Carbon Disulfide	NE	NE	NE	NE	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	10.0 U	10.0 U	10.0 U	25 U
Carbon tetrachloride	5	2	5000	50000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	2.5 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	2.00 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U
Chloroform	70	50	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
chloromethane	NE	NE	NE	NE	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**50.3**	**23.2**	**43**	**45**	**36**	**39**	**49**	**150**	**88.8**	**211**	**188**	**184**	**130**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	2.50 U	2.50 U	2.50 U	2.5 U
Cymene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Dibromochloromethane	2	20	50000	100000	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	2.50 U	2.50 U	2.5 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	2.50 U	2.50 U	2.50 U	2.5 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U
Methylene Chloride	5	2000	50000	100000	2.00 U	2.00 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U
mp-xylene	10000	3000	5000	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U
Naphthalene	140	700	20000	100000	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	5.00 U	10.0 U	10.0 U	5.0 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Styrene	100	100	6000	60000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Tert-Butylbenzene	NE	NE	NE	NE	**1.79**	**2.85**	**2.8**	**3.0**	**3.2**	**3.2**	**2.9**	1.0 UJ	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**26.8 J**	**12.9**	**8.8**	**10**	**6.7 J+**	**6.8 J+**	**10 J+**	**4.4 J+**	**256**	**109**	**122**	**128**	**130**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.00 UJ	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.0 U	10.0 U	10.0 UJ	10.0 UJ	13 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.00 U	**1.2**	**1.1**	**1.2 J+**	**1.4 J+**	1.0 U	**1.4**	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	2.50 UJ	2.50 U	2.50 U	2.5 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**17.4**	**16.9**	**23**	**24**	**18**	**19**	**23**	**200**	**468**	**256**	**408**	**413**	**400**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U
Vinyl chloride	**2**	**2**	50000	100000	**22.3 J**	**11.4 J-**	**14**	**15**	**13**	**13**	**13**	**16**	1.0 UJ	**5.25**	**9.05**	**8.05**	**5.8**
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	10 U	10 U	10 U	5.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A											
Location ID:					AE102RR-2	AE102RR-2	AE102RR-3	AE102RR-4	AE102RR-4	AE102RR-4	AE102RR-4	AE102RR-4	AE102RR-4	AE102RR-5	AE102RR-5	AE102RR-5
Sample ID:					20A-AE102RR2-090920-1	21A-AE102RR2-090721-1	21A-AE102RR3-090721-1	16A-AE102RR4-061416-1	17A-AE102RR4-100317-1	18A-AE102RR4-091918-1	19A-AE102RR4-092419-1	20A-AE102RR4-090920-1	21A-AE102RR4-090721-1	16A-AE102RR5-061416-1	17A-AE102RR5-100317-1	18A-AE102RR5-091918-1
Sample Date:					09/09/2020	09/07/2021	09/07/2021	06/14/2016	10/03/2017	09/19/2018	09/24/2019	09/09/2020	09/07/2021	06/14/2016	10/03/2017	09/19/2018
Depth Interval:					75 - 80 ft	75 - 80 ft	111 - 116 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	141 - 146 ft	141 - 146 ft	141 - 146 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)												
Volatile Organic Compounds (ug/l)																
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 UJ	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.5 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	25.0 U	25.0 U	50.0 U
1,1,2-Trichloroethane	**5**	900	50000	100000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,1-Dichloroethane	**70**	2000	20000	100000	**11**	**12**	**13**	20.0 U	20.0 U	20.0 U	**13**	**12**	**26**	50.0 U	50.0 U	100 U
1,1-Dichloroethene	**7**	**80**	30000	100000	5.0 U	**3.1**	**2.2**	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	**6.1**	50.0 U	50.0 U	100 U
1,1-Dichloropropene	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,2,3-Trichloropropane	NE	NE	NE	NE	2.5 U	1.0 U	1.0 U	20.0 U	20.0 U	20.0 U	5.0 U	2.5 U	2.5 U	50.0 U	50.0 U	100 U
1,2,4-Trichlorobenzene	70	200	50000	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.0 U	2.0 UJ	2.0 UJ	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	50.0 U	100 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.5 UJ	1.0 U	1.0 U	40.0 U	40.0 U	40.0 UJ	R	2.5 UJ	2.5 U	100 U	100 U	200 UJ
1,2-Dibromoethane	0.02	2	50000	100000	2.5 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	25.0 U	25.0 U	50.0 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,2-Dichloroethane	5	5	20000	100000	3.0 U	1.2 U	1.2 U	20.0 U	20.0 U	20.0 U	3.0 U	3.0 U	3.0 U	50.0 U	50.0 U	100 U
1,2-Dichloropropane	5	3	50000	100000	3.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	3.0 U	3.0 U	3.0 U	50.0 U	50.0 U	100 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,3-Dichloropropane	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,4-Dichlorobenzene	5	60	8000	80000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
1,4-Dioxane	**0.3**	6000	50000	100000	500 U	200 U	200 U	NS	400 U	400 UJ	200 U	500 U	500 U	NS	1000 U	2000 UJ
2,2-Dichloropropane	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 UJ	100 UJ
2-Butanone	4000	50000	50000	100000	25 U	10 U	10 U	200 U	40.0 U	40.0 U	R	25 U	25 U	500 U	100 U	200 U
2-Chlorotoluene	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
2-Hexanone	NE	NE	NE	NE	25 U	10 U	10 U	200 U	40.0 U	40.0 U	R	25 U	25 U	500 U	100 U	200 UJ
2-Phenylbutane	NE	NE	NE	NE	5.0 U	2.0 UJ	2.0 UJ	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	50.0 U	100 U
4-Chlorotoluene	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
4-Methyl-2-pentanone	350	50000	50000	100000	25 U	10 U	10 U	200 U	40.0 U	40.0 U	25 U	25 U	25 U	500 U	100 U	200 U
Acetone	6300	50000	50000	100000	130 UJ	50 U	50 U	200 UJ	200 U	200 UJ	R	130 UJ	130 U	500 UJ	500 U	1000 UJ
Benzene	5	1000	10000	100000	3.5 U	1.4 U	1.4 U	20.0 U	20.0 U	20.0 U	3.5 U	3.5 U	3.5 U	50.0 U	50.0 U	100 U
Bromobenzene	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
Bromochloromethane	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
Bromodichloromethane	3	6	50000	100000	2.5 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	25.0 U	25.0 U	50.0 U
Bromoform	4	700	50000	100000	4.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 UJ	R	4.0 U	4.0 U	50.0 U	50.0 U	100 UJ
Bromomethane	10	7	800	8000	5.0 UJ	2.0 U	2.0 U	40.0 UJ	40.0 U	40.0 U	5.0 U	5.0 UJ	5.0 U	100 UJ	100 U	200 UJ
Carbon Disulfide	NE	NE	NE	NE	25 U	10 U	10 U	40.0 U	40.0 UJ	40.0 U	25 U	25 U	25 U	100 U	100 UJ	200 U
Carbon tetrachloride	5	2	5000	50000	2.5 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 UJ	2.5 U	2.5 U	2.5 U	50.0 U	50.0 U	100 UJ
Chlorobenzene	100	200	1000	10000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
Chloroethane	NE	NE	NE	NE	5.0 UJ	2.0 U	2.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 UJ	5.0 U	100 U	100 U	200 U
Chloroform	70	50	20000	100000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
chloromethane	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	40.0 U	40.0 UJ	40.0 UJ	5.0 U	5.0 U	5.0 U	100 U	100 UJ	200 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**170**	**150**	**170**	**64.8**	**74.4**	**91.8**	**83**	**61**	**100**	**122**	**125**	**127**
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	1.0 U	1.0 U	10.0 U	10.0 UJ	10.0 U	2.5 U	2.5 U	2.5 U	25.0 U	25.0 UJ	50.0 U
Cymene	NE	NE	NE	NE	5.0 U	2.0 UJ	2.0 UJ	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	50.0 U	100 U
Dibromochloromethane	2	20	50000	100000	2.5 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 UJ	2.5 U	2.5 U	2.5 U	25.0 U	25.0 U	50.0 UJ
Dibromomethane	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	5.0 U	100 U	100 U	200 U
Diethyl Ether	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
Diisopropyl Ether	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 UJ	100 U
Ethylbenzene	700	20000	5000	100000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	2.5 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	25.0 U	25.0 U	50.0 U
Isopropylbenzene	NE	NE	NE	NE	5.0 U	2.0 UJ	2.0 UJ	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	50.0 U	100 U
Methyl tert-butyl ether	NE	NE	NE	100000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 UJ	100 U
Methylene Chloride	5	2000	50000	100000	5.0 UJ	2.0 U	2.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 UJ	5.0 U	100 U	100 U	200 U
mp-xylene	10000	3000	5000	NE	5.0 U	2.0 U	2.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	5.0 U	100 U	100 U	200 U
Naphthalene	140	700	20000	100000	5.0 U	2.0 UJ	2.0 UJ	20.0 UJ	20.0 U	40.0 U	5.0 U	5.0 U	5.0 UJ	50.0 UJ	50.0 U	200 U
N-Butylbenzene	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
N-Propylbenzene	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
o-Xylene	10000	3000	5000	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
Styrene	100	100	6000	60000	5.0 U	2.0 UJ	2.0 UJ	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	50.0 U	100 U
Tert-Butylbenzene	NE	NE	NE	NE	5.0 U	2.0 UJ	2.0 UJ	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	50.0 U	100 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**93 J+**	**120 J+**	**110 J+**	**657**	**414**	**548**	**340**	**310 J+**	**650 J+**	**1750**	**1200**	**1320**
Tetrahydrofuran	NE	NE	NE	NE	13 U	5.0 U	5.0 U	40.0 U	40.0 U	40.0 U	13 U	13 U	13 U	100 U	100 U	200 U
Toluene	**1000**	50000	40000	100000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	1.0 U	1.0 U	10.0 U	10.0 UJ	10.0 U	2.5 U	2.5 U	2.5 U	25.0 U	25.0 UJ	50.0 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**370**	**420**	**370**	**970**	**606**	**864 J-**	**550**	**490 J**	**1100**	**2360**	**1650**	**2060**
Trichlorofluoromethane	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 UJ
Vinyl chloride	**2**	**2**	50000	100000	**12**	**9.0**	**5.5**	20.0 U	20.0 UJ	20.0 U	2.5 U	2.5 U	2.5 U	50.0 U	50.0 UJ	100 U
Xylenes (Total)	10000	3000	5000	NE	5.0 U	2 U	2 U	40 U	40 U	40 U	5.0 U	5.0 U	5 U	100 U	100 U	200 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A												
Location ID:					AE102RR-5	AE102RR-5	AE102RR-5	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE102S	AE103D	AE103D	AE103D
Sample ID:					19A-AE102RR5-092419-1	20A-AE102RR5-090920-1	21A-AE102RR5-090721-1	16A-AE102RR6-061416-1	17A-AE102RR6-100317-1	18A-AE102RR6-091918-1	19A-AE102RR6-092419-1	20A-AE102RR6-090920-1	21A-AE102RR6-090721-1	21A-AE102S-091521-1	16A-AE103D-061316-1	17A-AE103D-100317-1	18A-AE103D-092418-1
Sample Date:					09/24/2019	09/09/2020	09/07/2021	06/14/2016	10/03/2017	09/19/2018	09/24/2019	09/09/2020	09/07/2021	09/15/2021	06/13/2016	10/03/2017	09/24/2018
Depth Interval:					141 - 146 ft	141 - 146 ft	141 - 146 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	13 - 18 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	10 U	10 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	10 U	10 U	5.0 U	50.0 U	50.0 U	100 U	10 U	10 U	10 U	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	10 U	10 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	**47**	**38**	**58**	100 U	100 U	200 U	**80**	**61**	**83**	1.0 U	**1.9**	**2.31**	**2.15**
1,1-Dichloroethene	**7**	**80**	30000	100000	**11**	**11**	**14**	100 U	100 U	200 U	**23**	**19**	**22**	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	20 U	10 U	7.0 U	100 U	100 U	200 U	20 U	10 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	20 U	10 U	5.0 U	100 U	100 U	200 U	20 U	10 U	10 U	0.50 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	20 U	20 U	10 UJ	100 U	100 U	200 U	20 U	20 U	20 UJ	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	20 U	10 UJ	5.0 U	200 U	200 U	400 UJ	20 U	10 UJ	10 U	0.50 UJ	2.0 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	10 U	10 U	5.0 U	50.0 U	50.0 U	100 U	10 U	10 U	10 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	10 U	10 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	0.60 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	10 U	10 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	10 U	10 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	2000 U	1000 U	NS	2000 U	4000 UJ	2000 U	2000 U	2000 U	100 U	NS	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 UJ	200 UJ	20 U	20 U	20 U	1.0 U	1.0 U	1.00 UJ	1.00 U
2-Butanone	4000	50000	50000	100000	100 U	100 U	50 U	1000 U	200 U	400 U	100 U	100 U	100 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	100 U	100 U	50 U	1000 U	200 U	400 UJ	100 U	100 U	100 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	20 U	20 U	10 UJ	100 U	100 U	200 U	20 U	20 U	20 UJ	1.0 U	1.0 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	100 U	100 U	50 U	1000 U	200 U	400 U	100 U	100 U	100 U	5.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	500 U	500 UJ	250 U	1000 UJ	1000 U	2000 UJ	500 U	500 UJ	500 U	25 UJ	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	10 U	10 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	0.70 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	10 U	10 U	5.0 U	50.0 U	50.0 U	100 U	10 U	10 U	10 U	0.50 U	0.5 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	10 U	10 U	5.0 U	100 U	100 U	200 UJ	10 U	10 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromomethane	10	7	800	8000	10 U	10 UJ	7.0 U	200 UJ	200 U	400 UJ	10 U	10 UJ	10 U	1.0 U	2.0 U	2.00 U	2.00 U
Carbon Disulfide	NE	NE	NE	NE	100 U	100 U	50 U	200 U	200 UJ	400 U	100 U	100 U	100 U	5.0 U	2.0 U	2.00 UJ	2.00 U
Carbon tetrachloride	5	2	5000	50000	10 U	10 U	5.0 U	100 U	100 U	200 UJ	10 U	10 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U
Chlorobenzene	100	200	1000	10000	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	20 U	20 UJ	10 U	200 U	200 U	400 U	20 U	20 UJ	20 U	1.0 UJ	2.0 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
chloromethane	NE	NE	NE	NE	20 U	20 U	10 U	200 U	200 UJ	400 U	20 U	20 U	20 U	1.0 U	2.0 U	2.00 UJ	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**180**	**130**	**160**	**229**	**215**	**202**	**240**	**120**	**120**	**4.8**	**3.9**	**4.99**	**5.20**
cis-1,3-Dichloropropene	NE	NE	NE	NE	10 U	10 U	5.0 U	50.0 U	50.0 UJ	100 U	10 U	10 U	10 U	0.40 U	0.5 U	0.50 UJ	0.50 U
Cymene	NE	NE	NE	NE	20 U	20 U	10 UJ	100 U	100 U	200 U	20 U	20 U	20 UJ	1.0 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	10 U	10 U	5.0 U	50.0 U	50.0 U	100 UJ	10 U	10 U	10 U	0.50 U	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	20 U	10 U	8.3 U	100 U	100 U	200 U	20 U	10 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	20 U	20 U	10 U	200 U	200 U	400 U	20 U	20 U	20 U	1.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 UJ	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Ethylbenzene	700	20000	5000	100000	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	10 U	10 U	5.0 U	50.0 U	50.0 U	100 U	10 U	10 U	10 U	0.40 U	0.5 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	20 U	20 U	10 UJ	100 U	100 U	200 U	20 U	20 U	20 UJ	1.0 U	1.0 U	1.00 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	20 U	20 U	10 U	100 U	100 UJ	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Methylene Chloride	5	2000	50000	100000	10 U	20 UJ	50 U	200 U	200 U	400 U	10 U	20 UJ	100 U	1.0 U	2.0 U	2.00 U	2.00 U
mp-xylene	10000	3000	5000	NE	20 U	20 U	10 U	200 U	200 U	400 U	20 U	20 U	20 U	1.0 U	2.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	20 U	20 U	10 UJ	100 UJ	100 U	400 U	20 U	20 U	20 UJ	1.0 U	1.0 UJ	1.00 U	2.00 U
N-Butylbenzene	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	20 U	20 U	10 UJ	100 U	100 U	200 U	20 U	20 U	20 UJ	1.0 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	20 U	20 U	10 UJ	100 U	100 U	200 U	20 U	20 U	20 UJ	**2.3**	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**1200**	**1400 J+**	**1800 J+**	**3940**	**2910**	**3230**	**3200**	**3600 J+**	**4000 J+**	1.0 UJ	**5.7**	**78.3 J-**	**45.9**
Tetrahydrofuran	NE	NE	NE	NE	50 U	50 U	25 U	200 U	200 U	400 U	50 U	50 U	50 U	2.5 U	2.0 U	2.00 U	2.00 UJ
Toluene	**1000**	50000	40000	100000	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	20 U	20 U	10 U	100 U	100 U	200 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	10 U	10 U	5.0 U	50.0 U	50.0 UJ	100 U	10 U	10 U	10 U	0.40 U	0.5 U	0.50 UJ	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**2100**	**1800**	**2700**	**5310**	**3680**	**4540**	**4300**	**4600**	**4700**	**2.0**	**28.1**	**94.4**	**99.4 J**
Trichlorofluoromethane	NE	NE	NE	NE	20 U	20 U	10 U	100 U	100 U	200 UJ	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	10 U	10 U	5.0 U	100 U	100 UJ	200 U	10 U	10 U	10 U	**2.3 J+**	1.0 U	1.00 UJ	1.00 U
Xylenes (Total)	10000	3000	5000	NE	20 U	20 U	10 U	200 U	200 U	400 U	20 U	20 U	20 U	1 U	2.0 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A												
Location ID:					AE103D	AE103D	AE103D	AE103D	AE103M	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-2	AE103R-2	AE103R-2
Sample ID:					18A-AE103D-092418-2	19A-AE103D-091919-1	20A-AE103D-091020-1	21A-AE103D-091421-1	21A-AE103M-091621-1	16A-AE103R1-061516-1	17A-AE103R1-100217-1	18A-AE103R1-092518-1	19A-AE103R1-091819-1	20A-AE103R1-091020-1	21A-AE103R1-090921-1	16A-AE103R2-061516-1	17A-AE103R2-100217-1	21A-AE103R2-090921-1
Sample Date:					09/24/2018	09/19/2019	09/10/2020	09/14/2021	09/16/2021	06/15/2016	10/02/2017	09/25/2018	09/18/2019	09/10/2020	09/09/2021	06/15/2016	10/02/2017	09/09/2021
Depth Interval:					35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	25 - 30 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	62 - 67 ft	62 - 67 ft	62 - 67 ft
Sample Type:					FD	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 UJ	10 U	5.0 U	5.0 U	200 U	100 U	10 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 UJ	20.0 U	20 U	10 U	10 U	200 U	100 UJ	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	25.0 U	10.0 U	10 U	5.0 U	5.0 U	100 U	50.0 U	10 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	5.0 U	5.0 U	200 U	100 U	10 U
1,1-Dichloroethane	**70**	2000	20000	100000	**2.35 J**	**1.6**	**1.9**	**1.6**	1.0 U	100 U	50.0 U	**29.0**	**28**	**21**	**34**	200 U	100 U	**80**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	7.0 U	**11**	200 U	100 U	**29 J**
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 UJ	20 U	10 U	10 U	200 U	100 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	7.0 U	7.0 U	200 U	100 U	10 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	100 U	50.0 U	20.0 U	10 U	5.0 U	5.0 U	200 U	100 U	10 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	R	0.50 UJ	0.50 UJ	0.50 UJ	200 U	100 UJ	40.0 U	R	5.0 UJ	5.0 UJ	400 UJ	200 UJ	10 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	25.0 U	10.0 U	10 U	5.0 U	5.0 U	100 U	50.0 U	10 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
1,2-Dichloroethane	5	5	20000	100000	1.00 UJ	0.60 U	0.60 U	0.60 U	0.60 U	100 U	50.0 U	20.0 U	10 U	5.0 U	5.0 U	200 U	100 U	10 U
1,2-Dichloropropane	5	3	50000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	5.0 U	5.0 U	200 U	100 U	10 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	5.0 U	5.0 U	200 U	100 U	10 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	40 U	100 U	100 U	100 U	NS	1000 U	400 UJ	800 U	1000 U	1000 U	NS	2000 U	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 UJ	20.0 U	20 U	10 U	10 U	200 U	100 UJ	20 U
2-Butanone	4000	50000	50000	100000	2.00 U	R	5.0 U	5.0 U	5.0 U	1000 UJ	100 U	40.0 U	R	50 U	50 U	2000 U	200 U	100 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
2-Hexanone	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	1000 U	100 U	40.0 UJ	40 U	50 U	50 U	2000 U	200 U	100 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	1000 U	100 U	40.0 UJ	100 U	50 U	50 U	2000 U	200 U	100 U
Acetone	6300	50000	50000	100000	10.0 U	R	25 UJ	25 UJ	25 UJ	1000 UJ	500 U	200 U	R	250 UJ	250 UJ	2000 U	1000 U	500 UJ
Benzene	5	1000	10000	100000	1.00 U	**0.75**	0.70 U	0.70 U	0.70 U	100 U	50.0 U	20.0 U	10 U	5.0 U	5.0 U	200 U	100 U	10 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Bromochloromethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	25.0 UJ	10.0 U	10 U	5.0 U	5.0 U	100 U	50.0 UJ	10 U
Bromoform	4	700	50000	100000	1.00 U	R	1.0 U	1.0 U	1.0 U	100 U	50.0 UJ	20.0 UJ	R	5.0 U	5.0 U	200 U	100 UJ	10 U
Bromomethane	10	7	800	8000	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	200 UJ	100 UJ	40.0 U	10 U	7.0 UJ	7.0 U	400 U	200 UJ	10 U
Carbon Disulfide	NE	NE	NE	NE	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	200 U	100 UJ	40.0 U	100 U	50 U	50 U	400 U	200 UJ	100 U
Carbon tetrachloride	5	2	5000	50000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 UJ	20.0 U	10 U	5.0 U	5.0 U	200 U	100 UJ	10 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Chloroethane	NE	NE	NE	NE	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	200 U	100 U	40.0 U	20 U	10 UJ	10 U	400 U	200 U	20 U
Chloroform	70	50	20000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
chloromethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 UJ	100 U	40.0 U	20 U	10 U	10 U	400 U	200 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**5.74 J**	**3.2**	**3.2**	**3.5**	1.0 U	**1830**	**630**	**336**	**360**	**340**	**320**	**2320**	**373**	**210**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	50.0 U	25.0 U	10.0 U	10 U	5.0 U	5.0 U	100 U	50.0 U	10 U
Cymene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	25.0 UJ	10.0 U	10 UJ	5.0 U	5.0 U	100 U	50.0 UJ	10 U
Dibromomethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	8.3 U	8.3 U	200 U	100 U	10 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	40.0 U	20 U	10 U	10 U	400 U	200 U	20 UJ
Diethyl Ether	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 UJ	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 UJ	20.0 U	20 U	10 U	10 U	200 U	100 UJ	20 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 UJ
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	50.0 U	25.0 U	10.0 U	10 U	5.0 U	5.0 U	100 U	50.0 U	10 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 UJ	20.0 U	20 U	10 U	10 U	200 U	100 UJ	20 U
Methylene Chloride	5	2000	50000	100000	2.00 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	200 U	100 U	40.0 U	10 U	10 UJ	50 U	400 U	200 U	100 U
mp-xylene	10000	3000	5000	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	40.0 U	20 U	10 U	10 U	400 U	200 U	20 U
Naphthalene	140	700	20000	100000	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	40.0 U	20 U	10 U	10 U	200 UJ	100 U	20 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**49.4**	**28**	**42 J+**	**47 J+**	1.0 UJ	**1620**	**1480**	**1130**	**870**	**980 J+**	**1200 J+**	**4550**	**2790**	**2600 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U	200 U	100 U	40.0 U	50 U	25 U	25 U	400 U	200 U	50 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	50.0 U	25.0 U	10.0 U	10 U	5.0 U	5.0 U	100 U	50.0 U	10 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**58.8 J**	**53**	**75**	**77**	1.0 U	**3880**	**2080**	**1590**	**1400**	**1200**	**1800**	**7840**	**3970**	**4300**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	10 U	200 U	100 U	20 UJ
Vinyl chloride	**2**	**2**	50000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	**112**	**74.5**	**49.2**	**23**	**23**	**18**	200 UJ	100 U	**33**
Xylenes (Total)	10000	3000	5000	NE	2.0 U	1.0 U	1.0 U	1 U	1 U	200 U	100 U	40 U	20 U	10 U	10 U	400 U	200 U	20 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	AE103R-3	AE103R-3	AE103R-3	AE103R-3	AE103R-3	AE103R-3	AE103R-4	AE103R-4	AE103R-4	AE103R-4	AE103R-4	AE103R-5
					Sample ID:	16A-AE103R3-061516-1	17A-AE103R3-100217-1	18A-AE103R3-092518-1	19A-AE103R3-091819-1	20A-AE103R3-091020-1	21A-AE103R3-090921-1	16A-AE103R4-061516-1	17A-AE103R4-100217-1	18A-AE103R4-092518-1	19A-AE103R4-091819-1	20A-AE103R4-091020-1	21A-AE103R4-090921-1	16A-AE103R5-061516-1
					Sample Date:	06/15/2016	10/02/2017	09/25/2018	09/18/2019	09/10/2020	09/09/2021	06/15/2016	10/02/2017	09/25/2018	09/18/2019	09/10/2020	09/09/2021	06/15/2016
					Depth Interval:	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	98 - 105 ft	98 - 105 ft	98 - 105 ft	98 - 105 ft	98 - 105 ft	98 - 105 ft	122 - 128 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 U	100 U	20.0 U	10 U	5.0 U	10 U	200 U	200 UJ	200 UJ	50 U	50 U	20 U	200 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 U	100 UJ	20.0 U	20 U	10 U	20 U	200 U	200 UJ	200 U	100 U	100 U	40 U	200 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	50.0 U	10.0 U	10 U	5.0 U	10 U	100 U	100 U	100 U	50 U	50 U	20 U	100 U
1,1,2-Trichloroethane	**5**	900	50000	100000	200 U	100 U	20.0 U	10 U	5.0 U	10 U	200 U	200 U	200 U	50 U	50 U	20 U	200 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	100 U	**66.6**	**77 J+**	**32**	**110**	200 U	200 U	200 U	**140**	**100**	**110**	200 U
1,1-Dichloroethene	**7**	**80**	30000	100000	200 U	100 U	20.0 U	**20 J+**	**7.3**	**39 J**	200 U	200 U	200 U	50 U	50 U	**32**	200 U
1,1-Dichloropropene	NE	NE	NE	NE	200 U	100 U	20.0 UJ	20 U	10 U	20 U	200 U	200 U	200 UJ	100 U	100 U	40 U	200 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	100 U	20.0 U	10 U	7.0 U	10 U	200 U	200 U	200 U	50 U	50 U	20 U	200 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	100 U	20.0 U	10 U	5.0 U	10 U	200 U	200 U	200 U	50 U	50 U	20 U	200 U
1,2,4-Trichlorobenzene	70	200	50000	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	70 U	70 U	40 U	200 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	56 U	56 U	40 U	200 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	400 UJ	200 UJ	40.0 U	R	5.0 UJ	10 U	400 UJ	400 U	400 U	R	50 U	20 UJ	400 UJ
1,2-Dibromoethane	0.02	2	50000	100000	100 U	50.0 U	10.0 U	10 U	5.0 U	10 U	100 U	100 U	100 U	50 U	50 U	20 U	100 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
1,2-Dichloroethane	5	5	20000	100000	200 U	100 U	20.0 U	10 U	5.0 U	10 U	200 U	200 U	200 U	50 U	50 U	20 U	200 U
1,2-Dichloropropane	5	3	50000	100000	200 U	100 U	20.0 U	10 U	5.0 U	10 U	200 U	200 U	200 U	50 U	50 U	20 U	200 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	60 U	60 U	40 U	200 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	50 U	50 U	40 U	200 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	100 U	20.0 U	10 U	5.0 U	10 U	200 U	200 U	200 U	50 U	50 U	20 U	200 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	2000 U	400 UJ	800 U	1000 U	2000 U	NS	4000 U	4000 UJ	4000 U	10000 U	4000 U	NS
2,2-Dichloropropane	NE	NE	NE	NE	200 U	100 UJ	20.0 U	20 U	10 U	20 U	200 U	200 UJ	200 U	100 U	100 U	40 U	200 U
2-Butanone	4000	50000	50000	100000	2000 U	200 U	40.0 UJ	R	50 U	100 U	2000 U	400 U	400 U	R	500 U	200 U	2000 U
2-Chlorotoluene	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
2-Hexanone	NE	NE	NE	NE	2000 U	200 U	40.0 UJ	40 U	50 U	100 U	2000 U	400 U	400 UJ	200 U	500 U	200 U	2000 U
2-Phenylbutane	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
4-Methyl-2-pentanone	350	50000	50000	100000	2000 U	200 U	40.0 U	100 U	50 U	100 U	2000 U	400 U	400 UJ	350 U	500 U	200 U	2000 U
Acetone	6300	50000	50000	100000	2000 U	1000 U	200 U	R	250 UJ	500 UJ	2000 U	2000 U	2000 U	R	2500 U	1000 UJ	2000 U
Benzene	5	1000	10000	100000	200 U	100 U	20.0 U	10 U	5.0 U	10 U	200 U	200 U	200 U	50 U	50 U	20 U	200 U
Bromobenzene	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 UJ	200 U	62 U	62 U	40 U	200 U
Bromochloromethane	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	83 U	83 U	40 U	200 U
Bromodichloromethane	3	6	50000	100000	100 U	50.0 UJ	10.0 U	10 U	5.0 U	10 U	100 U	100 UJ	100 U	50 U	50 U	20 U	100 U
Bromoform	4	700	50000	100000	200 U	100 UJ	20.0 U	R	5.0 U	10 U	200 U	200 UJ	200 UJ	R	50 U	20 U	200 U
Bromomethane	10	7	800	8000	400 U	200 UJ	40.0 UJ	10 U	7.0 UJ	10 U	400 U	400 UJ	400 U	50 U	50 U	20 U	400 U
Carbon Disulfide	NE	NE	NE	NE	400 U	200 UJ	40.0 U	100 U	50 U	100 U	400 U	400 U	400 U	500 U	500 U	200 U	400 U
Carbon tetrachloride	5	2	5000	50000	200 U	100 UJ	20.0 U	10 U	5.0 U	10 U	200 U	200 UJ	200 U	50 U	50 U	20 U	200 U
Chlorobenzene	100	200	1000	10000	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Chloroethane	NE	NE	NE	NE	400 U	200 U	40.0 U	20 U	10 UJ	20 U	400 U	400 U	400 U	100 U	100 UJ	40 U	400 U
Chloroform	70	50	20000	100000	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	50 U	50 U	40 U	200 U
chloromethane	NE	NE	NE	NE	400 U	200 U	40.0 U	20 U	10 U	20 U	400 U	400 U	400 U	100 U	100 U	40 U	400 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**3130**	**511**	**436**	**330 J+**	**140**	**480**	**1080**	**1290**	**888**	**700**	**690**	**510**	**882**
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 U	50.0 U	10.0 U	10 U	5.0 U	10 U	100 U	100 U	100 U	50 U	50 U	20 U	100 U
Cymene	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Dibromochloromethane	2	20	50000	100000	100 U	50.0 UJ	10.0 U	10 UJ	5.0 U	10 U	100 U	100 UJ	100 U	50 UJ	50 U	20 U	100 U
Dibromomethane	NE	NE	NE	NE	200 U	100 U	20.0 U	10 U	8.3 U	10 U	200 U	200 U	200 U	50 U	50 U	20 U	200 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	200 U	40.0 U	20 U	10 U	20 UJ	400 U	400 U	400 U	100 U	100 U	40 U	400 U
Diethyl Ether	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 U	100 UJ	20.0 U	20 U	10 U	20 U	200 U	200 UJ	200 U	100 U	100 U	40 U	200 U
Ethylbenzene	700	20000	5000	100000	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 UJ	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	100 U	50.0 U	10.0 U	10 U	5.0 U	10 U	100 U	100 U	100 U	50 U	50 U	20 U	100 U
Isopropylbenzene	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Methyl tert-butyl ether	NE	NE	NE	100000	200 U	100 UJ	20.0 U	20 U	10 U	20 U	200 U	200 UJ	200 U	70 U	70 U	40 U	200 U
Methylene Chloride	5	2000	50000	100000	400 U	200 U	40.0 U	10 U	10 UJ	100 U	400 U	400 U	400 U	50 U	100 U	200 U	400 U
mp-xylene	10000	3000	5000	NE	400 U	200 U	40.0 U	20 U	10 U	20 U	400 U	400 U	400 U	100 U	100 U	40 U	400 U
Naphthalene	140	700	20000	100000	200 UJ	100 U	40.0 U	20 U	10 U	20 U	200 UJ	200 U	400 U	100 U	100 U	40 U	200 UJ
N-Butylbenzene	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
N-Propylbenzene	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
o-Xylene	10000	3000	5000	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Styrene	100	100	6000	60000	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3290**	**2950**	**1730**	**1700**	**950 J+**	**3400 J+**	**7170**	**6190 J**	**4700**	**4100**	**3200**	**4900 J+**	**7620**
Tetrahydrofuran	NE	NE	NE	NE	400 U	200 U	40.0 U	50 U	25 U	50 U	400 U	400 U	400 U	250 U	250 U	100 U	400 U
Toluene	**1000**	50000	40000	100000	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	100 U	100 U	40 U	200 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	100 U	20.0 U	20 U	10 U	20 U	200 U	200 U	200 U	80 U	80 U	40 U	200 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	100 U	50.0 U	10.0 U	10 U	5.0 U	10 U	100 U	100 U	100 U	50 U	50 U	20 U	100 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**6430**	**4450**	**3190**	**3200**	**1300**	**6000**	**13500**	**9660**	**8890**	**7400**	**6000**	**8000**	**12800**
Trichlorofluoromethane	NE	NE	NE	NE	200 U	100 U	20.0 U	20 U	10 U	20 UJ	200 U	200 U	200 U	100 U	100 U	40 U	200 U
Vinyl chloride	**2**	**2**	50000	100000	**268 J**	**139**	**147**	**100 J+**	**36**	**110**	200 UJ	200 UJ	200 U	**100**	**150**	**59**	200 UJ
Xylenes (Total)	10000	3000	5000	NE	400 U	200 U	40 U	20 U	10 U	20 U	400 U	400 U	400 U	100 U	100 U	40 U	400 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	AE103R-5	AE103R-5	AE103R-5	AE103R-5	AE103R-5	AE103R-6	AE103R-6	AE103R-6	AE103R-7	AE103R-7	AE103R-7	AE103R-7	AE103R-7
					Sample ID:	17A-AE103R5-100217-1	18A-AE103R5-092518-1	19A-AE103R5-091819-1	20A-AE103R5-091020-1	21A-AE103R5-090921-1	16A-AE103R6-061516-1	17A-AE103R6-100217-1	21A-AE103R6-090921-1	16A-AE103R7-061516-1	17A-AE103R7-100217-1	18A-AE103R7-092518-1	19A-AE103R7-091819-1	20A-AE103R7-091020-1
					Sample Date:	10/02/2017	09/25/2018	09/18/2019	09/10/2020	09/09/2021	06/15/2016	10/02/2017	09/09/2021	06/15/2016	10/02/2017	09/25/2018	09/18/2019	09/10/2020
					Depth Interval:	122 - 128 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	138 - 144 ft	138 - 144 ft	138 - 144 ft	162.5 - 168 ft	162.5 - 168 ft	162.5 - 168 ft	162.5 - 168 ft	162.5 - 168 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 UJ	200 UJ	50 U	50 U	20 U	200 U	200 UJ	10 U	100 U	100 UJ	100 UJ	10 U	10 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 UJ	200 U	100 U	100 U	40 U	200 U	200 UJ	20 U	100 U	100 UJ	100 U	20 U	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	100 U	50 U	50 U	20 U	100 U	100 U	10 U	50.0 U	50.0 U	50.0 U	10 U	10 U
1,1,2-Trichloroethane	**5**	900	50000	100000	200 U	200 U	50 U	50 U	20 U	200 U	200 U	10 U	100 U	100 U	100 U	10 U	10 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	200 U	**120**	**110**	**89**	200 U	200 U	**110**	100 U	100 U	100 U	**66**	**50**
1,1-Dichloroethene	**7**	**80**	30000	100000	200 U	200 U	50 U	50 U	**26**	200 U	200 U	**34 J**	100 U	100 U	100 U	**17**	**10**
1,1-Dichloropropene	NE	NE	NE	NE	200 U	200 UJ	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 UJ	20 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	200 U	50 U	50 U	20 U	200 U	200 U	10 U	100 U	100 U	100 U	10 U	10 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	200 U	50 U	50 U	20 U	200 U	200 U	10 U	100 U	100 U	100 U	10 U	10 U
1,2,4-Trichlorobenzene	70	200	50000	NE	200 U	200 U	70 U	70 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	200 U	56 U	56 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	400 U	400 U	R	50 U	20 UJ	400 UJ	400 U	10 U	200 UJ	200 U	200 U	R	10 UJ
1,2-Dibromoethane	0.02	2	50000	100000	100 U	100 U	50 U	50 U	20 U	100 U	100 U	10 U	50.0 U	50.0 U	50.0 U	10 U	10 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
1,2-Dichloroethane	5	5	20000	100000	200 U	200 U	50 U	50 U	20 U	200 U	200 U	10 U	100 U	100 U	100 U	10 U	10 U
1,2-Dichloropropane	5	3	50000	100000	200 U	200 U	50 U	50 U	20 U	200 U	200 U	10 U	100 U	100 U	100 U	10 U	10 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	200 U	60 U	60 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	200 U	50 U	50 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	200 U	50 U	50 U	20 U	200 U	200 U	10 U	100 U	100 U	100 U	10 U	10 U
1,4-Dioxane	**0.3**	6000	50000	100000	4000 U	4000 UJ	4000 U	10000 U	4000 U	NS	4000 U	2000 U	NS	2000 U	2000 UJ	800 U	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	200 UJ	200 U	100 U	100 U	40 U	200 U	200 UJ	20 U	100 U	100 UJ	100 U	20 U	20 U
2-Butanone	4000	50000	50000	100000	400 U	400 U	R	500 U	200 U	2000 U	400 U	100 U	1000 U	200 U	200 U	R	100 U
2-Chlorotoluene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
2-Hexanone	NE	NE	NE	NE	400 U	400 UJ	200 U	500 U	200 U	2000 U	400 U	100 U	1000 U	200 U	200 UJ	40 U	100 U
2-Phenylbutane	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
4-Methyl-2-pentanone	350	50000	50000	100000	400 U	400 UJ	350 U	500 U	200 U	2000 U	400 U	100 U	1000 U	200 U	200 UJ	100 U	100 U
Acetone	6300	50000	50000	100000	2000 U	2000 U	R	2500 U	1000 UJ	2000 U	2000 U	500 UJ	1000 U	1000 U	1000 U	R	500 UJ
Benzene	5	1000	10000	100000	200 U	200 U	50 U	50 U	20 U	200 U	200 U	10 U	100 U	100 U	100 U	10 U	10 U
Bromobenzene	NE	NE	NE	NE	200 UJ	200 U	62 U	62 U	40 U	200 U	200 UJ	20 U	100 U	100 UJ	100 U	20 U	20 U
Bromochloromethane	NE	NE	NE	NE	200 U	200 U	83 U	83 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Bromodichloromethane	3	6	50000	100000	100 UJ	100 U	50 U	50 U	20 U	100 U	100 UJ	10 U	50.0 U	50.0 UJ	50.0 U	10 U	10 U
Bromoform	4	700	50000	100000	200 UJ	200 UJ	R	50 U	20 U	200 U	200 UJ	10 U	100 U	100 UJ	100 UJ	R	10 U
Bromomethane	10	7	800	8000	400 UJ	400 U	50 U	50 U	20 U	400 U	400 UJ	10 U	200 U	200 UJ	200 U	10 U	10 UJ
Carbon Disulfide	NE	NE	NE	NE	400 U	400 U	500 U	500 U	200 U	400 U	400 U	100 U	200 U	200 U	200 U	100 U	100 U
Carbon tetrachloride	5	2	5000	50000	200 UJ	200 U	50 U	50 U	20 U	200 U	200 UJ	10 U	100 U	100 UJ	100 U	10 U	10 U
Chlorobenzene	100	200	1000	10000	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Chloroethane	NE	NE	NE	NE	400 U	400 U	100 U	100 UJ	40 U	400 U	400 U	20 U	200 U	200 U	200 U	20 U	20 UJ
Chloroform	70	50	20000	100000	200 U	200 U	50 U	50 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
chloromethane	NE	NE	NE	NE	400 U	400 U	100 U	100 U	40 U	400 U	400 U	20 U	200 U	200 U	200 U	20 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**936**	**1190**	**1100**	**1000**	**510**	**2140**	**3490**	**1100**	**286**	**341**	**381**	**390**	**400**
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 U	100 U	50 U	50 U	20 U	100 U	100 U	10 U	50.0 U	50.0 U	50.0 U	10 U	10 U
Cymene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Dibromochloromethane	2	20	50000	100000	100 UJ	100 U	50 UJ	50 U	20 U	100 U	100 UJ	10 U	50.0 U	50.0 UJ	50.0 U	10 UJ	10 U
Dibromomethane	NE	NE	NE	NE	200 U	200 U	50 U	50 U	20 U	200 U	200 U	10 U	100 U	100 U	100 U	10 U	10 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	400 U	100 U	100 U	40 U	400 U	400 U	20 UJ	200 U	200 U	200 U	20 U	20 U
Diethyl Ether	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 UJ	200 U	100 U	100 U	40 U	200 U	200 UJ	20 U	100 U	100 UJ	100 U	20 U	20 U
Ethylbenzene	700	20000	5000	100000	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 UJ	100 U	100 U	100 U	20 U	20 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	100 U	100 U	50 U	50 U	20 U	100 U	100 U	10 U	50.0 U	50.0 U	50.0 U	10 U	10 U
Isopropylbenzene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Methyl tert-butyl ether	NE	NE	NE	100000	200 UJ	200 U	70 U	70 U	40 U	200 U	200 UJ	20 U	100 U	100 UJ	100 U	20 U	20 U
Methylene Chloride	5	2000	50000	100000	400 U	400 U	50 U	100 U	200 U	400 U	400 U	100 U	200 U	200 U	200 U	10 U	20 UJ
mp-xylene	10000	3000	5000	NE	400 U	400 U	100 U	100 U	40 U	400 U	400 U	20 U	200 U	200 U	200 U	20 U	20 U
Naphthalene	140	700	20000	100000	200 U	400 U	100 U	100 U	40 U	200 UJ	200 U	20 U	100 UJ	100 U	200 U	20 U	20 U
N-Butylbenzene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
N-Propylbenzene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
o-Xylene	10000	3000	5000	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Styrene	100	100	6000	60000	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**7030 J**	**5960**	**5500**	**4700**	**5000 J+**	**2450**	**2080 J**	**3100 J+**	**3590**	**3600 J**	**2690**	**2100**	**2000**
Tetrahydrofuran	NE	NE	NE	NE	400 U	400 U	250 U	250 U	100 U	400 U	400 U	50 U	200 U	200 U	200 U	50 U	50 U
Toluene	**1000**	50000	40000	100000	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 U	100 U	100 U	100 U	20 U	20 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	200 U	80 U	80 U	40 U	200 U	200 U	**39**	100 U	100 U	100 U	20 U	**20**
trans-1,3-Dichloropropene	NE	NE	NE	NE	100 U	100 U	50 U	50 U	20 U	100 U	100 U	10 U	50.0 U	50.0 U	50.0 U	10 U	10 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**9980**	**9710**	**9200**	**7600**	**6900**	**8020**	**7500**	**6800**	**5170**	**4710**	**4380**	**4000**	**3200**
Trichlorofluoromethane	NE	NE	NE	NE	200 U	200 U	100 U	100 U	40 U	200 U	200 U	20 UJ	100 U	100 U	100 U	20 U	20 U
Vinyl chloride	**2**	**2**	50000	100000	200 UJ	200 U	**190**	**270**	**64**	200 UJ	200 UJ	**210**	100 UJ	100 UJ	100 U	**42**	**68**
Xylenes (Total)	10000	3000	5000	NE	400 U	400 U	100 U	100 U	40 U	400 U	400 U	20 U	200 U	200 U	200 U	20 U	20 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A												
Location ID:					AE103R-7	AE103S	AE103S	AE103S	AE103S	AE103S	AE103S	AE104D	AE104D	AE104D	AE104D	AE104D	AE104M
Sample ID:					21A-AE103R7-090921-1	16A-AE103S-061516-1	17A-AE103S-100317-1	18A-AE103S-092418-1	19A-AE103S-091919-1	20A-AE103S-091020-1	21A-AE103S-091621-1	16A-AE104D-061316-1	17A-AE104D-101017-1	18A-AE104D-092618-1	19A-AE104D-092019-1	20A-AE104D-091620-1	21A-AE104D-092221-1	21A-AE104M-092221-1
Sample Date:					09/09/2021	06/15/2016	10/03/2017	09/24/2018	09/19/2019	09/10/2020	09/16/2021	06/13/2016	10/10/2017	09/26/2018	09/20/2019	09/16/2020	09/22/2021	09/22/2021
Depth Interval:					162.5 - 168 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	25 - 30 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.0**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**82**	**1.2**	**1.68**	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	**29 J**	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	10 U	2.0 U	2.00 UJ	2.00 U	R	0.50 UJ	0.50 UJ	2.0 UJ	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	10 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	10 U	1.0 U	1.00 U	1.00 UJ	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	10 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	NS	20.0 U	20.0 U	40 U	100 U	100 U	NS	20.0 U	20.0 U	40 U	100 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	20 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	100 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	100 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	100 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	500 UJ	10.0 U	10.0 U	10.0 U	R	R	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 U	25 U
Benzene	5	1000	10000	100000	10 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	10 U	1.0 U	1.00 UJ	1.00 U	R	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	10 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	100 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	20 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ
Chloroform	70	50	20000	100000	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	20 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**280**	**3.0**	**8.08**	1.00 UJ	1.0 U	1.0 U	1.0 U	**1.2**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	10 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	10 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	20 UJ	2.0 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	20 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	20 UJ	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	10 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	NE	20 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	100 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	20 U	1.0 UJ	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	20 U	**1.8**	**1.49**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	20 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3700 J+**	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 UJ	**18.1**	**12.6**	**3.25**	1.0 U	1.0 U	**1.7 J+**	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	50 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	10 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**5200**	1.0 U	**1.08**	1.00 U	1.0 U	1.0 U	1.0 U	**10.6**	**7.94**	**3.37**	**2.2**	**1.4**	**1.8**	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	20 UJ	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	**31**	**2.9**	**7.44 J**	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	20 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	AE104R-1	AE104R-1	AE104R-1	AE104R-1	AE104R-1	AE104R-1	AE104R-2	AE104R-3	AE104R-3	AE104R-3	AE104R-3	AE104R-3
					Sample ID:	16A-AE104R1-061416-1	17A-AE104R1-100317-1	18A-AE104R1-092618-1	19A-AE104R1-091819-1	20A-AE104R1-091120-1	21A-AE104R1-090221-1	21A-AE104R2-090221-1	16A-AE104R3-061416-1	17A-AE104R3-100317-1	18A-AE104R3-092618-1	19A-AE104R3-091819-1	20A-AE104R3-091120-1	21A-AE104R3-090221-1
					Sample Date:	06/14/2016	10/03/2017	09/26/2018	09/18/2019	09/11/2020	09/02/2021	09/02/2021	06/14/2016	10/03/2017	09/26/2018	09/18/2019	09/11/2020	09/02/2021
					Depth Interval:	48 - 54 ft	48 - 54 ft	48 - 54 ft	48 - 54 ft	48 - 54 ft	48 - 54 ft	62 - 68 ft	97 - 102 ft	97 - 102 ft	97 - 102 ft	97 - 102 ft	97 - 102 ft	97 - 102 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	100 U	100 U	10 U	5.0 U	5.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	5.0 U	50.0 U	50.0 U	50.0 U	R	2.5 U	5.0 U
1,1,2-Trichloroethane	**5**	900	50000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	100 U	100 U	10 U	5.0 U	5.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**36.8**	**38.6**	**39.4**	**26**	**27**	**49**	**45**	100 U	100 U	100 U	**49**	**45**	**49**
1,1-Dichloroethene	**7**	**80**	30000	100000	20.0 U	20.0 U	20.0 U	5.0 U	**5.1**	**10**	**8.6**	100 U	100 U	100 UJ	**12**	**12**	**12**
1,1-Dichloropropene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 UJ	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	7.0 UJ	100 U	100 U	100 U	10 U	5.0 U	7.0 UJ
1,2,3-Trichloropropane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	2.5 U	2.5 U	2.5 U	5.0 U	100 U	100 U	100 U	10 U	2.5 U	5.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	10 UJ	100 U	100 U	100 U	20 U	5.0 U	10 UJ
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	40.0 UJ	40.0 U	40.0 U	R	2.5 U	2.5 U	5.0 U	200 U	200 U	200 U	R	2.5 U	5.0 U
1,2-Dibromoethane	0.02	2	50000	100000	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	5.0 U	50.0 U	50.0 U	50.0 U	10 U	2.5 U	5.0 U
1,2-Dichlorobenzene	600	8000	2000	80000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
1,2-Dichloroethane	5	5	20000	100000	20.0 U	20.0 U	20.0 U	3.0 U	3.0 U	3.0 U	5.0 U	100 U	100 U	100 U	10 U	3.0 U	5.0 U
1,2-Dichloropropane	5	3	50000	100000	20.0 U	20.0 U	20.0 U	3.0 U	3.0 U	3.0 U	5.0 U	100 U	100 U	100 U	10 U	3.0 U	5.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
1,3-Dichlorobenzene	100	6000	50000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
1,3-Dichloropropane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
1,4-Dichlorobenzene	5	60	8000	80000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	100 U	100 U	10 U	5.0 U	5.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	400 U	400 UJ	200 U	500 U	500 U	1000 U	NS	2000 U	2000 U	800 U	500 U	1000 U
2,2-Dichloropropane	NE	NE	NE	NE	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 UJ	100 U	20 U	5.0 U	10 U
2-Butanone	4000	50000	50000	100000	200 U	40.0 U	40.0 U	R	25 U	25 U	50 U	1000 U	200 U	200 U	R	25 U	50 U
2-Chlorotoluene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 UJ	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
2-Hexanone	NE	NE	NE	NE	200 U	40.0 U	40.0 UJ	25 U	25 U	25 U	50 U	1000 U	200 U	200 U	R	25 U	50 U
2-Phenylbutane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	10 UJ	100 U	100 U	100 U	20 U	5.0 U	10 UJ
4-Chlorotoluene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
4-Methyl-2-pentanone	350	50000	50000	100000	200 U	40.0 U	40.0 UJ	25 U	25 U	25 U	50 U	1000 U	200 U	200 U	R	25 U	50 U
Acetone	6300	50000	50000	100000	200 U	200 U	200 U	R	130 U	130 UJ	250 U	1000 UJ	1000 U	1000 U	R	130 U	250 U
Benzene	5	1000	10000	100000	20.0 U	20.0 U	20.0 U	3.5 U	3.5 U	3.5 U	5.0 U	100 U	100 U	100 U	10 U	3.5 U	5.0 U
Bromobenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 UJ	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
Bromochloromethane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
Bromodichloromethane	3	6	50000	100000	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	5.0 U	50.0 U	50.0 U	50.0 UJ	10 U	2.5 U	5.0 U
Bromoform	4	700	50000	100000	20.0 U	20.0 U	20.0 UJ	R	4.0 U	4.0 U	5.0 U	100 U	100 U	100 U	10 U	4.0 U	5.0 U
Bromomethane	10	7	800	8000	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	5.0 U	7.0 U	200 UJ	200 U	200 UJ	R	5.0 U	7.0 U
Carbon Disulfide	NE	NE	NE	NE	40.0 U	40.0 UJ	40.0 U	25 U	25 U	25 U	50 U	200 U	200 UJ	200 UJ	100 U	25 U	50 U
Carbon tetrachloride	5	2	5000	50000	20.0 U	20.0 U	20.0 U	2.5 U	2.5 U	2.5 U	5.0 U	100 U	100 U	100 U	10 U	2.5 U	5.0 U
Chlorobenzene	100	200	1000	10000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
Chloroethane	NE	NE	NE	NE	40.0 U	40.0 U	40.0 U	5.0 U	5.0 UJ	5.0 U	10 U	200 U	200 U	200 U	20 U	5.0 UJ	10 U
Chloroform	70	50	20000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
chloromethane	NE	NE	NE	NE	40.0 U	40.0 UJ	40.0 U	5.0 U	5.0 U	5.0 U	10 U	200 U	200 UJ	200 U	20 U	5.0 U	10 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**78.6**	**122**	**166**	**240**	**220**	**170**	**270**	**149**	**136**	**139**	**230**	**140**	**150**
cis-1,3-Dichloropropene	NE	NE	NE	NE	10.0 UJ	10.0 UJ	10.0 UJ	2.5 U	2.5 U	2.5 U	5.0 U	50.0 U	50.0 UJ	50.0 U	10 U	2.5 U	5.0 U
Cymene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	10 UJ	100 U	100 U	100 U	20 U	5.0 U	10 UJ
Dibromochloromethane	2	20	50000	100000	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	5.0 U	50.0 U	50.0 U	50.0 U	10 U	2.5 U	5.0 U
Dibromomethane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	8.3 U	100 U	100 U	100 U	10 U	5.0 U	8.3 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	40.0 U	40.0 U	40.0 UJ	5.0 U	5.0 U	5.0 U	10 U	200 U	200 U	200 U	20 U	5.0 U	10 U
Diethyl Ether	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
Diisopropyl Ether	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 UJ	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 UJ	100 U	20 U	5.0 U	10 U
Ethylbenzene	700	20000	5000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 UJ	20 U	5.0 U	10 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	5.0 U	50.0 U	50.0 U	50.0 U	10 U	2.5 U	5.0 U
Isopropylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	10 UJ	100 U	100 U	100 U	20 U	5.0 U	10 UJ
Methyl tert-butyl ether	NE	NE	NE	100000	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 UJ	100 U	20 U	5.0 U	10 U
Methylene Chloride	5	2000	50000	100000	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	5.0 U	50 U	200 U	200 U	200 UJ	10 U	5.0 U	50 U
mp-xylene	10000	3000	5000	NE	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	5.0 U	10 U	200 U	200 U	200 U	20 U	5.0 U	10 U
Naphthalene	140	700	20000	100000	20.0 UJ	20.0 U	40.0 UJ	5.0 U	5.0 U	5.0 UJ	10 UJ	100 UJ	100 U	200 U	20 U	5.0 U	10 UJ
N-Butylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
N-Propylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
o-Xylene	10000	3000	5000	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
Styrene	100	100	6000	60000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	10 UJ	100 U	100 U	100 U	20 U	5.0 U	10 UJ
Tert-Butylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	10 UJ	100 U	100 U	100 U	20 U	5.0 U	10 UJ
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**469**	**477**	**315**	**130**	**220**	**410 J+**	**290 J+**	**3850**	**3300**	**2410**	**1800**	**1300 J+**	**1600 J+**
Tetrahydrofuran	NE	NE	NE	NE	40.0 U	40.0 U	40.0 U	13 U	13 U	13 U	25 U	200 U	200 U	200 U	R	13 U	25 U
Toluene	**1000**	50000	40000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	20.0 U	20.0 U	20.0 U	5.0 U	**6.0**	**6.1**	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	10.0 UJ	10.0 UJ	10.0 U	2.5 U	2.5 U	2.5 U	5.0 U	50.0 U	50.0 UJ	50.0 U	10 U	2.5 U	5.0 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**1320**	**1500**	**1280**	**540**	**700**	**1200**	**1600**	**5860**	**4790**	**4340**	**3500**	**2200**	**2800**
Trichlorofluoromethane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	10 U	100 U	100 U	100 U	20 U	5.0 U	10 U
Vinyl chloride	**2**	**2**	50000	100000	20.0 UJ	20.0 UJ	**26.2 J**	**29**	**34**	**18**	**26**	100 U	100 UJ	100 UJ	**16**	**11**	**6.3**
Xylenes (Total)	10000	3000	5000	NE	40 U	40 U	40 U	5.0 U	5.0 U	5 U	10 U	200 U	200 U	200 U	20 U	5.0 U	10 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	AE104R-4	AE104R-4	AE104R-4	AE104R-4	AE104R-4	AE104R-4	AE104R-5	AE104R-5	AE104R-5	AE104R-5	AE104R-5	AE104R-6
					Sample ID:	16A-AE104R4-061416-1	17A-AE104R4-100317-1	18A-AE104R4-092618-1	19A-AE104R4-091819-1	20A-AE104R4-091120-1	21A-AE104R4-090221-1	16A-AE104R5-061416-1	17A-AE104R5-100317-1	18A-AE104R5-092618-1	19A-AE104R5-091819-1	20A-AE104R5-091120-1	21A-AE104R5-090221-1	16A-AE104R6-061416-1
					Sample Date:	06/14/2016	10/03/2017	09/26/2018	09/18/2019	09/11/2020	09/02/2021	06/14/2016	10/03/2017	09/26/2018	09/18/2019	09/11/2020	09/02/2021	06/14/2016
					Depth Interval:	128 - 133 ft	128 - 133 ft	128 - 133 ft	128 - 133 ft	128 - 133 ft	128 - 133 ft	156 - 162 ft	156 - 162 ft	156 - 162 ft	156 - 162 ft	156 - 162 ft	156 - 162 ft	168 - 174 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 U	100 U	100 U	25 U	10 U	10 U	200 U	100 U	100 U	25 U	10 U	10 U	200 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	50.0 U	50.0 U	R	10 U	10 U	100 U	50.0 U	50.0 U	R	10 U	10 U	100 U
1,1,2-Trichloroethane	**5**	900	50000	100000	200 U	100 U	100 U	25 U	10 U	10 U	200 U	100 U	100 U	25 U	10 U	10 U	200 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	100 U	100 U	**75**	**57**	**69**	200 U	100 U	100 U	**66**	**63**	**71**	200 U
1,1-Dichloroethene	**7**	**80**	30000	100000	200 U	100 U	100 UJ	25 U	**14**	**15**	200 U	100 U	100 UJ	25 U	**17**	**18**	200 U
1,1-Dichloropropene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	100 U	100 U	25 U	10 U	10 U	200 U	100 U	100 U	25 U	10 U	10 U	200 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	100 U	100 U	25 U	10 U	10 U	200 U	100 U	100 U	25 U	10 U	10 U	200 U
1,2,4-Trichlorobenzene	70	200	50000	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	400 UJ	200 U	200 U	R	10 UJ	10 U	400 UJ	200 U	200 U	R	10 UJ	10 U	400 UJ
1,2-Dibromoethane	0.02	2	50000	100000	100 U	50.0 U	50.0 U	25 U	10 U	10 U	100 U	50.0 U	50.0 U	25 U	10 U	10 U	100 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
1,2-Dichloroethane	5	5	20000	100000	200 U	100 UJ	100 U	25 U	10 U	10 U	200 U	100 UJ	100 U	25 U	10 U	10 U	200 U
1,2-Dichloropropane	5	3	50000	100000	200 U	100 U	100 U	25 U	10 U	10 U	200 U	100 U	100 U	25 U	10 U	10 U	200 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	100 UJ	100 U	40 U	20 U	20 U	200 U	100 UJ	100 U	40 U	20 U	20 U	200 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	100 U	100 U	25 U	10 U	10 U	200 U	100 U	100 U	25 U	10 U	10 U	200 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	2000 U	2000 U	2000 U	2000 U	2000 U	NS	2000 U	2000 U	2000 U	2000 U	2000 U	NS
2,2-Dichloropropane	NE	NE	NE	NE	200 U	100 UJ	100 U	50 U	20 U	20 U	200 U	100 UJ	100 U	50 U	20 U	20 U	200 U
2-Butanone	4000	50000	50000	100000	2000 U	200 U	200 U	R	100 U	100 U	2000 U	200 U	200 U	R	100 U	100 U	2000 U
2-Chlorotoluene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
2-Hexanone	NE	NE	NE	NE	2000 U	200 U	200 U	R	100 U	100 U	2000 U	200 U	200 U	R	100 U	100 U	2000 U
2-Phenylbutane	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	100 UJ	100 U	50 U	20 U	20 U	200 U	100 UJ	100 U	50 U	20 U	20 U	200 U
4-Methyl-2-pentanone	350	50000	50000	100000	2000 U	200 U	200 U	R	100 U	100 U	2000 U	200 U	200 U	R	100 U	100 U	2000 U
Acetone	6300	50000	50000	100000	2000 U	1000 U	1000 U	R	500 UJ	500 U	2000 U	1000 U	1000 U	R	500 UJ	500 U	2000 U
Benzene	5	1000	10000	100000	200 U	100 U	100 U	25 U	10 U	10 U	200 U	100 U	100 U	25 U	10 U	10 U	200 U
Bromobenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
Bromochloromethane	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
Bromodichloromethane	3	6	50000	100000	100 U	50.0 U	50.0 UJ	25 U	10 U	10 U	100 U	50.0 U	50.0 UJ	25 U	10 U	10 U	100 U
Bromoform	4	700	50000	100000	200 U	100 U	100 U	25 U	10 U	10 U	200 U	100 U	100 U	25 U	10 U	10 U	200 U
Bromomethane	10	7	800	8000	400 U	200 U	200 UJ	R	10 UJ	10 U	400 U	200 U	200 UJ	R	10 UJ	10 U	400 U
Carbon Disulfide	NE	NE	NE	NE	400 U	200 U	200 UJ	250 U	100 U	100 U	400 U	200 U	200 UJ	250 U	100 U	100 U	400 U
Carbon tetrachloride	5	2	5000	50000	200 U	100 U	100 U	25 U	10 U	10 U	200 U	100 U	100 U	25 U	10 U	10 U	200 U
Chlorobenzene	100	200	1000	10000	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
Chloroethane	NE	NE	NE	NE	400 U	200 U	200 U	50 U	20 UJ	20 U	400 U	200 U	200 U	50 U	20 UJ	20 U	400 U
Chloroform	70	50	20000	100000	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
chloromethane	NE	NE	NE	NE	400 U	200 U	200 U	50 U	20 U	20 U	400 U	200 U	200 U	50 U	20 U	20 U	400 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	200 U	**224**	**218**	**490**	**550**	**430**	200 U	**291**	**280**	**520**	**590**	**500**	200 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 UJ	50.0 U	50.0 U	25 U	10 U	10 U	100 UJ	50.0 U	50.0 U	25 U	10 U	10 U	100 UJ
Cymene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U
Dibromochloromethane	2	20	50000	100000	100 U	50.0 U	50.0 U	25 U	10 U	10 U	100 U	50.0 U	50.0 U	25 U	10 U	10 U	100 U
Dibromomethane	NE	NE	NE	NE	200 U	100 U	100 U	25 U	10 U	10 U	200 U	100 U	100 U	25 U	10 U	10 U	200 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	200 U	200 U	50 U	20 U	20 U	400 U	200 U	200 U	50 U	20 U	20 U	400 U
Diethyl Ether	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 U	100 UJ	100 U	50 U	20 U	20 U	200 U	100 UJ	100 U	50 U	20 U	20 U	200 U
Ethylbenzene	700	20000	5000	100000	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	100 U	100 UJ	50 U	20 U	20 U	200 U	100 U	100 UJ	50 U	20 U	20 U	200 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	100 U	50.0 U	50.0 U	25 U	10 U	10 U	100 U	50.0 U	50.0 U	25 U	10 U	10 U	100 U
Isopropylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U
Methyl tert-butyl ether	NE	NE	NE	100000	200 U	100 UJ	100 U	50 U	20 U	20 U	200 U	100 UJ	100 U	50 U	20 U	20 U	200 U
Methylene Chloride	5	2000	50000	100000	400 U	200 U	200 UJ	25 U	20 UJ	100 U	400 U	200 U	200 UJ	25 U	20 UJ	100 U	400 U
mp-xylene	10000	3000	5000	NE	400 U	200 U	200 U	50 U	20 U	20 U	400 U	200 U	200 U	50 U	20 U	20 U	400 U
Naphthalene	140	700	20000	100000	200 UJ	100 U	200 U	50 U	20 U	20 UJ	200 UJ	100 U	200 U	50 U	20 U	20 UJ	200 UJ
N-Butylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
N-Propylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
o-Xylene	10000	3000	5000	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
Styrene	100	100	6000	60000	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U	100 U	100 U	50 U	20 U	20 UJ	200 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	100 UJ	100 U	50 U	20 U	20 U	200 U	100 UJ	100 U	50 U	20 U	20 U	200 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**4610**	**3800**	**3100**	**2100**	**1400 J+**	**1500 J+**	**3980**	**3890**	**2800**	**2400**	**2100**	**1300 J+**	**4180**
Tetrahydrofuran	NE	NE	NE	NE	400 U	200 U	200 U	R	50 U	50 U	400 U	200 U	200 U	R	50 U	50 U	400 U
Toluene	**1000**	50000	40000	100000	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	**28**	20 U	200 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	100 UJ	50.0 UJ	50.0 U	25 U	10 U	10 U	100 UJ	50.0 UJ	50.0 U	25 U	10 U	10 U	100 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**7150**	**5820**	**5650**	**4200**	**3100**	**3400**	**6390**	**5600**	**5440**	**4400**	**4200**	**2700**	**6540**
Trichlorofluoromethane	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	200 U	100 U	100 U	50 U	20 U	20 U	200 U
Vinyl chloride	**2**	**2**	50000	100000	200 UJ	100 U	100 UJ	**49**	**63**	**27**	200 UJ	100 U	100 UJ	**71**	**91**	**43**	200 UJ
Xylenes (Total)	10000	3000	5000	NE	400 U	200 U	200 U	50 U	20 U	20 U	400 U	200 U	200 U	50 U	20 U	20 U	400 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A													
Location ID:					AE104R-6	AE104R-6	AE104R-6	AE104R-6	AE104R-6	AE104S	AE104S	AE104S	AE104S	AE104S	AE104S	AE108R-1	AE108R-1	AE108R-1
Sample ID:					17A-AE104R6-100317-1	18A-AE104R6-092618-1	19A-AE104R6-091819-1	20A-AE104R6-091120-1	21A-AE104R6-090221-1	16A-AE104S-061316-1	17A-AE104S-101017-1	18A-AE104S-100118-1	19A-AE104S-092019-1	20A-AE104S-091620-1	21A-AE104S-092221-1	16A-AE108R1-061616-1	16A-AE108R1-061616-2	17A-AE108R1-100917-1
Sample Date:					10/03/2017	09/26/2018	09/18/2019	09/11/2020	09/02/2021	06/13/2016	10/10/2017	10/01/2018	09/20/2019	09/16/2020	09/22/2021	06/16/2016	06/16/2016	10/09/2017
Depth Interval:					168 - 174 ft	168 - 174 ft	168 - 174 ft	168 - 174 ft	168 - 174 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	FD	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 U	200 U	25 U	10 U	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	100 U	R	10 U	5.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	200 U	200 U	25 U	10 U	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	200 U	**68**	**71**	**57**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.2**	1.0 U	**1.13**
1,1-Dichloroethene	**7**	**80**	30000	100000	200 U	200 UJ	25 U	**19**	**11**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	200 U	25 U	10 U	7.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	200 U	25 U	10 U	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	400 U	400 U	R	10 UJ	5.0 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 U	2.0 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	100 U	100 U	25 U	10 U	5.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	200 U	200 U	25 U	10 U	5.0 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.0 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	200 U	200 U	25 U	10 U	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	200 U	40 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	200 U	25 U	10 U	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	4000 U	4000 U	2000 U	2000 U	1000 U	NS	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	200 UJ	200 U	50 U	20 U	10 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
2-Butanone	4000	50000	50000	100000	400 U	400 U	R	100 U	50 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
2-Hexanone	NE	NE	NE	NE	400 U	400 U	R	100 U	50 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	400 U	400 U	R	100 U	50 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U
Acetone	6300	50000	50000	100000	2000 U	2000 U	R	500 UJ	250 U	10.0 U	10.0 U	10.0 UJ	R	25 U	25 U	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	200 U	200 U	25 U	10 U	5.0 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.0 U	1.00 U
Bromobenzene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromodichloromethane	3	6	50000	100000	100 U	100 UJ	25 U	10 U	5.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 UJ
Bromoform	4	700	50000	100000	200 U	200 U	25 U	10 U	5.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Bromomethane	10	7	800	8000	400 U	400 UJ	R	10 UJ	7.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U
Carbon Disulfide	NE	NE	NE	NE	400 UJ	400 UJ	250 U	100 U	50 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.0 U	2.00 U
Carbon tetrachloride	5	2	5000	50000	200 U	200 U	25 U	10 U	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Chlorobenzene	100	200	1000	10000	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Chloroethane	NE	NE	NE	NE	400 U	400 U	50 U	20 UJ	10 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 UJ	2.0 UJ	2.00 U
Chloroform	70	50	20000	100000	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
chloromethane	NE	NE	NE	NE	400 UJ	400 U	50 U	20 U	10 U	2.0 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 UJ	2.0 UJ	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**324**	**338**	**490**	**520**	**330**	**6.4**	**1.86**	1.00 U	1.0 U	1.0 U	1.0 U	**15.1**	**12.8**	**21.9**
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 UJ	100 U	25 U	10 U	5.0 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U
Cymene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Dibromochloromethane	2	20	50000	100000	100 U	100 U	25 U	10 U	5.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 UJ
Dibromomethane	NE	NE	NE	NE	200 U	200 U	25 U	10 U	8.3 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	400 U	50 U	20 U	10 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 UJ
Diethyl Ether	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 UJ	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Ethylbenzene	700	20000	5000	100000	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	200 UJ	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	100 U	100 U	25 U	10 U	5.0 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	200 UJ	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Methylene Chloride	5	2000	50000	100000	400 U	400 UJ	25 U	20 UJ	50 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U
mp-xylene	10000	3000	5000	NE	400 U	400 U	50 U	20 U	10 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U
Naphthalene	140	700	20000	100000	200 U	400 U	50 U	20 U	10 UJ	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
N-Butylbenzene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
N-Propylbenzene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
o-Xylene	10000	3000	5000	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Styrene	100	100	6000	60000	200 U	200 U	50 U	20 U	10 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 UJ	**1.3**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**4120**	**3570**	**2400**	**2400**	**1300 J+**	**3.8**	**1.19**	1.00 U	1.0 U	1.0 U	1.0 UJ	**1.4**	**1.3**	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	400 U	400 U	R	50 U	25 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	**2.9**	**3.6**	2.00 U
Toluene	**1000**	50000	40000	100000	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**48.8 J**	**77.7 J**	**9.80**
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	200 U	50 U	**41**	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	100 UJ	100 U	25 U	10 U	5.0 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**6130**	**6770**	**4600**	**4900**	**2800**	**4.0**	**1.13**	1.00 U	1.0 U	1.0 U	1.0 U	**7.6**	**6.5**	**5.12**
Trichlorofluoromethane	NE	NE	NE	NE	200 U	200 U	50 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	200 UJ	200 UJ	**56**	**75**	**20**	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Xylenes (Total)	10000	3000	5000	NE	400 U	400 U	50 U	20 U	10 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-2	AE108R-2	AE108R-2	AE108R-3	AE108R-3	AE108R-3	AE108R-3	AE108R-3
					Sample ID:	18A-AE108R1-091918-1	19A-AE108R1-092419-1	20A-AE108R1-090920-1	21A-AE108R1-090921-1	16A-AE108R2-061616-1	17A-AE108R2-100917-1	21A-AE108R2-090921-1	16A-AE108R3-061616-1	17A-AE108R3-100917-1	18A-AE108R3-091918-1	18A-AE108R3-091918-2	19A-AE108R3-092419-1	20A-AE108R3-090920-1
					Sample Date:	09/19/2018	09/24/2019	09/09/2020	09/09/2021	06/16/2016	10/09/2017	09/09/2021	06/16/2016	10/09/2017	09/19/2018	09/19/2018	09/24/2019	09/09/2020
					Depth Interval:	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	68 - 73 ft	68 - 73 ft	68 - 73 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	FD	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**1.82**	**1.3**	**1.2**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	R	0.50 UJ	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 U	20.0 U	10 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	R	R	25 U	10.0 U	10.0 U	25 UJ	10.0 U	10.0 U	10.0 U	10.0 U	25 U	R
Benzene	5	1000	10000	100000	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	R	1.0 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	5.0 UJ	2.0 U	2.00 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 UJ	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 UJ	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**38.0**	**24**	**23**	1.0 U	**6.6**	**7.45**	**10**	**2.3**	**2.89**	**8.44**	**8.28**	**7.6**	**9.4**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.00 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 UJ	2.0 U	2.00 UJ	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	2.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.00 U	1.0 U	1.0 R	1.0 UJ	**10.3**	**17.8**	**36 J+**	**14.8**	**21.5**	**37.3**	**36.9**	**35**	**49 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.00 UJ	**3.1 J-**	2.5 U	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	**4.51**	**1.0**	**1.2**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**6.55**	**4.9 J-**	**4.4**	1.0 U	**11.1**	**16.8**	**28**	**9.4**	**12.7**	**29.2**	**28.8**	**23**	**30**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A													
Location ID:					AE108R-3	AE108R-4	AE108R-4	AE108R-4	AE108R-5	AE108R-5	AE108R-5	AE108R-5	AE108R-5	AE109D	AE109D	AE109D	AE109D
Sample ID:					21A-AE108R3-090921-1	16A-AE108R4-061616-1	17A-AE108R4-100917-1	21A-AE108R4-090921-1	16A-AE108R5-061616-1	17A-AE108R5-100917-1	18A-AE108R5-091918-1	19A-AE108R5-092419-1	20A-AE108R5-090920-1	21A-AE108R5-090921-1	16A-AE109D-062116-1	16A-AE109D-062116-2	17A-AE109D-101317-1	18A-AE109D-092618-1
Sample Date:					09/09/2021	06/16/2016	10/09/2017	09/09/2021	06/16/2016	10/09/2017	09/19/2018	09/24/2019	09/09/2020	09/09/2021	06/21/2016	06/21/2016	10/13/2017	09/26/2018
Depth Interval:					84 - 89 ft	145 - 150 ft	145 - 150 ft	145 - 150 ft	163 - 168 ft	163 - 168 ft	163 - 168 ft	163 - 168 ft	163 - 168 ft	163 - 168 ft	18 - 23 ft	18 - 23 ft	18 - 23 ft	18 - 23 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	FD	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	**2.2**	**2.59**	**2.9**	**1.3**	**1.63**	**2.93**	**2.5**	**2.7**	**3.0**	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	2.00 U	1.0 U	0.50 UJ	0.50 U	2.0 U	2.0 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 U	10 U	100 U	100 U	NS	NS	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U
2-Butanone	4000	50000	50000	100000	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 UJ	10.0 UJ	2.00 U	2.00 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	2.00 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	25 U	10.0 U	10.0 U	25 UJ	10.0 U	10.0 U	10.0 U	25 U	R	25 U	10.0 U	10.0 U	10.0 U	10.0 UJ
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.5 U	0.50 UJ	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Bromomethane	10	7	800	8000	1.0 UJ	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.0 U	2.00 UJ	2.00 U
Carbon Disulfide	NE	NE	NE	NE	5.0 UJ	2.0 U	2.00 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 UJ	2.0 U	2.0 U	2.00 U	2.00 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
chloromethane	NE	NE	NE	NE	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.0 UJ	2.00 UJ	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**7.5**	**19.1**	**27.4**	**34**	**10.5**	**14.2**	**25.8**	**23**	**27**	**35**	1.0 U	1.0 U	1.00 U	1.00 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.5 U	0.50 UJ	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	2.00 UJ	1.0 UJ	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U
mp-xylene	10000	3000	5000	NE	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	2.00 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**41 J+**	**14.8**	**14.2**	**20 J+**	**8.9**	**9.33**	**15.2**	**24**	**19 J+**	**21 J+**	1.0 U	1.0 U	1.00 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.00 U	2.00 UJ	2.5 U	2.5 U	2.5 U	2.0 U	2.0 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.0 U	**2.2**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**24**	**29.6**	**37.1**	**50**	**14.1**	**21.5**	**47.8 J+**	**54**	**51**	**51**	**1.0**	**1.1**	**1.36**	1.00 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	NE	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A													
Location ID:					AE109D	AE109D	AE109D	AE109R-1	AE109R-1	AE109R-1	AE109R-1	AE109R-1	AE109R-1	AE109R-2	AE109R-2	AE109R-2	AE109R-2	AE109R-2
Sample ID:					19A-AE109D-092019-1	20A-AE109D-091620-1	21A-AE109D-090721-1	16A-AE109R1-061616-1	17A-AE109R1-101017-1	18A-AE109R1-100218-1	19A-AE109R1-091819-1	20A-AE109R1-091620-1	21A-AE109R1-090221-1	16A-AE109R2-061616-1	17A-AE109R2-101017-1	18A-AE109R2-100218-1	19A-AE109R2-091819-1	20A-AE109R2-091620-1
Sample Date:					09/20/2019	09/16/2020	09/07/2021	06/16/2016	10/10/2017	10/02/2018	09/18/2019	09/16/2020	09/02/2021	06/16/2016	10/10/2017	10/02/2018	09/18/2019	09/16/2020
Depth Interval:					18 - 23 ft	18 - 23 ft	18 - 23 ft	38 - 43 ft	38 - 43 ft	38 - 43 ft	38 - 43 ft	38 - 43 ft	38 - 43 ft	66 - 76 ft	66 - 76 ft	66 - 76 ft	66 - 76 ft	66 - 76 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	R	0.50 U	0.50 U	2.0 U	2.00 UJ	2.00 U	R	0.50 U	0.50 U	2.0 U	2.00 UJ	2.00 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	100 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	R	5.0 U	5.0 U	**10.6**	**3.24**	2.00 U	R	5.0 U	5.0 U	**17.1**	**5.00**	2.00 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	R	25 U	25 U	10.0 U	10.0 U	10.0 U	R	25 U	25 U	10.0 U	10.0 U	10.0 U	R	25 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	R	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	R	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	R	1.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	1.0 U	**2.9**	**3.66**	**2.80**	**3.1**	**2.6**	**2.4**	**2.0**	**2.01**	**2.07**	**2.3**	**2.7**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 UJ	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 UJ	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.0 U	1.0 UJ	**3.2**	1.00 U	1.00 U	R	1.0 U	1.0 UJ	**3.2**	1.00 U	1.00 U	1.0 U	R
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	2.5 U	**5.8**	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	**6.9**	2.00 U	2.00 U	**2.9**	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	**30.5**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**62.8**	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	1.0 U	**6.1**	**3.68**	**1.76**	**1.5**	**1.2**	**1.1**	**6.0**	**2.87**	**1.53**	**1.4**	**1.2**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	AE109R-2	AE109R-2	AE109R-3	AE109R-3	AE109R-3	AE109R-3	AE109R-3	AE109R-3	AE109R-4	AE109R-4	AE109R-4	AE109R-4	AE109R-4
					Sample ID:	21A-AE109R2-090221-1	21A-AE109R2-090221-2	16A-AE109R3-061616-1	17A-AE109R3-101017-1	18A-AE109R3-100218-1	19A-AE109R3-091819-1	20A-AE109R3-091620-1	21A-AE109R3-090221-1	16A-AE109R4-061616-1	17A-AE109R4-101017-1	18A-AE109R4-100218-1	19A-AE109R4-091819-1	20A-AE109R4-091620-1
					Sample Date:	09/02/2021	09/02/2021	06/16/2016	10/10/2017	10/02/2018	09/18/2019	09/16/2020	09/02/2021	06/16/2016	10/10/2017	10/02/2018	09/18/2019	09/16/2020
					Depth Interval:	66 - 76 ft	66 - 76 ft	126 - 136 ft	126 - 136 ft	126 - 136 ft	126 - 136 ft	126 - 136 ft	126 - 136 ft	174 - 180.5 ft	174 - 180.5 ft	174 - 180.5 ft	174 - 180.5 ft	174 - 180.5 ft
					Sample Type:	N	FD	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	5.00 U	1.0 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	5.0 U	**2.07**	**1.04**	1.0 U	1.0 U	1.0 U	**7.8**	**16.2**	10.0 U	**3.5**	**3.3**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 UJ	2.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	5.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	5.0 U	5.00 U	10.0 U	1.0 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	0.50 U	10.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	10.0 U	10.0 UJ	20.0 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	5.00 U	1.0 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	5.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	5.0 U	5.00 U	10.0 U	1.2 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	100 U	100 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	100 U	200 U	80 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 UJ	5.00 UJ	10.0 U	2.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 U	50.0 U	**4.73**	2.00 U	R	5.0 U	5.0 U	50.0 U	10.0 U	20.0 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	50.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	50.0 U	10.0 U	20.0 U	10 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 UJ	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	50.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	50.0 U	10.0 U	20.0 U	10 U	5.0 U
Acetone	6300	50000	50000	100000	25 U	25 U	50.0 U	10.0 U	10.0 U	R	25 U	25 U	50.0 U	50.0 U	100 U	R	25 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	5.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	5.0 U	5.00 U	10.0 U	1.4 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 UJ	5.00 U	1.0 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	R	1.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	20.0 U	10 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 U	10.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	10.0 UJ	10.0 U	20.0 U	2.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	10.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	20.0 U	2.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**3.6**	**3.8**	5.0 U	**31.6**	**27.4**	**14**	**17**	**7.9**	**36.0**	**439**	**299**	**200**	**170**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	2.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	5.00 U	1.0 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 UJ	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 UJ	0.50 U	0.50 U	2.5 U	2.50 UJ	5.00 U	1.0 UJ	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	2.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	5.00 U	1.0 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 UJ	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	5.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 UJ	5.00 UJ	10.0 U	2.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.0 UJ	5.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	20.0 U	2.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 UJ	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 UJ	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 UJ	1.0 UJ	5.0 U	1.00 U	1.00 U	1.0 U	R	1.0 UJ	**159**	**112**	10.0 U	2.0 U	**2.1 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	**24.8**	2.00 U	2.00 U	**5.2**	2.5 U	2.5 U	**13.3**	10.0 U	20.0 U	5.0 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	**132**	**8.28**	1.00 U	1.0 U	1.0 U	1.0 U	**22.7**	5.00 U	10.0 U	2.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	**7.35**	10.0 U	**3.5**	**3.6**
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	2.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 UJ	5.00 U	1.0 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**1.3**	**1.2**	**15.7**	**18.1**	**2.93**	**1.1**	**5.3**	1.0 U	**366**	**453**	**75.9**	**20**	**21**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	1 U	1 U	10 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	10 U	10 U	20 U	2.0 U	1.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A											
Location ID:					AE109R-4	AE109R-5	AE109R-5	AE109R-5	AE109R-5	AE109R-5	AE109R-5	AE109R-6	AE109R-6	AE109R-6	AE109R-6	AE109R-6	AE109R-6
Sample ID:					21A-AE109R4-090221-1	16A-AE109R5-061616-1	17A-AE109R5-101017-1	18A-AE109R5-100218-1	19A-AE109R5-091819-1	20A-AE109R5-091620-1	21A-AE109R5-090221-1	16A-AE109R6-061616-1	17A-AE109R6-101017-1	18A-AE109R6-100218-1	19A-AE109R6-091819-1	20A-AE109R6-091620-1	21A-AE109R6-090221-1
Sample Date:					09/02/2021	06/16/2016	10/10/2017	10/02/2018	09/18/2019	09/16/2020	09/02/2021	06/16/2016	10/10/2017	10/02/2018	09/18/2019	09/16/2020	09/02/2021
Depth Interval:					174 - 180.5 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	196 - 201 ft	196 - 201 ft	196 - 201 ft	196 - 201 ft	196 - 201 ft	196 - 201 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	10.0 U	10.0 UJ	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	10.0 U	10.0 UJ	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	5.0 U	5.00 U	10.0 U	2.5 U	0.50 U	0.50 U	2.5 U	2.50 U	5.00 U	2.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**2.5**	**11.6**	**19.6**	20.0 U	**10**	**9.8**	**7.0**	**6.4**	**8.75**	10.0 U	**6.5**	**6.7**	**6.1**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	10.0 U	10.0 U	20.0 UJ	5.0 U	**2.3**	**1.4**	5.0 U	5.00 U	10.0 UJ	5.0 U	**1.6**	**1.4**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	10.0 U	10.0 U	20.0 U	2.5 U	0.50 U	0.50 U	5.0 U	5.00 U	10.0 U	2.5 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	20.0 U	20.0 UJ	40.0 U	R	0.50 U	0.50 U	10.0 U	10.0 UJ	20.0 U	R	0.50 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	5.0 U	5.00 U	10.0 U	2.5 U	0.50 U	0.50 U	2.5 U	2.50 U	5.00 U	2.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	10.0 U	10.0 U	20.0 U	3.0 U	0.60 U	0.60 U	5.0 U	5.00 U	10.0 U	3.0 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	10.0 U	10.0 U	20.0 U	3.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	3.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	NS	200 U	400 UJ	200 U	100 U	100 U	NS	100 U	200 U	200 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	10.0 U	10.0 UJ	20.0 U	5.0 U	1.0 UJ	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 UJ	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	100 U	20.0 U	40.0 U	R	5.0 U	5.0 U	50.0 U	10.0 U	20.0 U	R	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	100 U	20.0 U	40.0 U	25 U	5.0 U	5.0 U	50.0 U	10.0 U	20.0 U	25 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 UJ	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	100 U	20.0 U	40.0 U	25 U	5.0 U	5.0 U	50.0 U	10.0 U	20.0 U	25 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	25 U	100 U	100 U	200 U	R	25 U	25 UJ	50.0 U	50.0 U	100 U	R	25 U	25 UJ
Benzene	5	1000	10000	100000	0.70 U	10.0 U	10.0 U	20.0 U	3.5 U	0.70 U	0.70 U	5.0 U	5.00 U	10.0 U	3.5 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	5.0 U	5.00 UJ	10.0 U	2.5 U	0.50 U	0.50 U	2.5 U	2.50 UJ	5.00 U	2.5 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	10.0 U	10.0 UJ	20.0 U	R	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	R	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	20.0 UJ	20.0 U	40.0 U	5.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	20.0 U	20.0 U	40.0 U	25 U	5.0 U	5.0 U	10.0 U	10.0 U	20.0 U	25 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	10.0 U	10.0 UJ	20.0 U	2.5 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.5 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	20.0 U	20.0 U	40.0 U	5.0 U	1.0 UJ	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 UJ	1.0 U
Chloroform	70	50	20000	100000	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	20.0 U	20.0 U	40.0 U	5.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**140**	**53.2**	**230**	**351**	**240**	**220**	**170**	**26.8**	**121**	**159**	**180**	**170**	**170**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	5.0 U	5.00 U	10.0 U	2.5 U	0.40 U	0.40 U	2.5 U	2.50 U	5.00 U	2.5 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 UJ	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ
Dibromochloromethane	2	20	50000	100000	0.50 U	5.0 U	5.00 UJ	10.0 U	2.5 UJ	0.50 U	0.50 U	2.5 U	2.50 UJ	5.00 U	2.5 UJ	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	20.0 U	20.0 U	40.0 U	5.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	10.0 U	10.0 UJ	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	5.0 U	5.00 U	10.0 U	2.5 U	0.40 U	0.40 U	2.5 U	2.50 U	5.00 U	2.5 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 UJ	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	10.0 U	10.0 UJ	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	20.0 U	20.0 U	40.0 U	5.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	20.0 U	20.0 U	40.0 U	5.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	10.0 UJ	10.0 U	40.0 U	5.0 U	1.0 U	1.0 UJ	5.0 UJ	5.00 U	20.0 U	5.0 U	1.0 U	1.0 UJ
N-Butylbenzene	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 UJ	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ
Tert-Butylbenzene	NE	NE	NE	NE	1.0 UJ	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	10.0 U	10.0 UJ	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 UJ	**318**	**293**	**127**	**77**	**71 J+**	**44 J+**	**97.6**	**58.0**	**20.0**	**18**	**12 J+**	**6.1 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	20.0 U	20.0 U	40.0 U	13 U	2.5 U	2.5 U	10.0 U	10.0 U	20.0 U	13 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	**11.4**	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	**26.3**	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**2.3**	10.0 U	10.0 U	20.0 U	5.0 U	**4.5**	**2.8**	5.0 U	5.00 U	10.0 U	5.0 U	**3.4**	**3.3**
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	5.0 U	5.00 UJ	10.0 U	2.5 U	0.40 U	0.40 U	2.5 U	2.50 UJ	5.00 U	2.5 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**10**	**832**	**1190**	**739**	**360**	**390**	**240**	**342**	**377**	**237**	**200**	**180**	**110**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	10.0 U	10.0 U	20.0 U	2.5 U	1.0 U	**1.3**	5.0 U	5.00 U	10.0 U	2.5 U	**3.7**	**6.2**
Xylenes (Total)	10000	3000	5000	NE	1 U	20 U	20 U	40 U	5.0 U	1.0 U	1 U	10 U	10 U	20 U	5.0 U	1.0 U	1 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	AE109R-7	AE109R-7	AE109R-7	AE109R-7	AE109R-7	AE109R-7	AE109R-7	AE109R-7	AE109R-8	AE109R-8	AE109R-8	AE109R-8	AE109R-8
					Sample ID:	16A-AE109R7-061616-1	17A-AE109R7-101017-1	18A-AE109R7-100218-1	19A-AE109R7-091819-1	19A-AE109R7-091819-2	20A-AE109R7-091620-1	20A-AE109R7-091620-2	21A-AE109R7-090221-1	16A-AE109R8-061616-1	17A-AE109R8-101017-1	18A-AE109R8-100218-1	19A-AE109R8-091819-1	20A-AE109R8-091620-1
					Sample Date:	06/16/2016	10/10/2017	10/02/2018	09/18/2019	09/18/2019	09/16/2020	09/16/2020	09/02/2021	06/16/2016	10/10/2017	10/02/2018	09/18/2019	09/16/2020
					Depth Interval:	204 - 214 ft	204 - 214 ft	204 - 214 ft	204 - 214 ft	204 - 214 ft	204 - 214 ft	204 - 214 ft	204 - 214 ft	245 - 250 ft	245 - 250 ft	245 - 250 ft	245 - 250 ft	245 - 250 ft
					Sample Type:	N	N	N	N	FD	N	FD	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.5 U	2.50 U	1.00 U	R	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	5.0 U	5.00 U	**3.06**	**2.9**	**2.8**	**2.4**	**2.4**	**2.3**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	5.0 U	5.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	10.0 U	10.0 UJ	4.00 U	R	R	0.50 U	0.50 U	0.50 U	2.0 U	2.00 UJ	2.00 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	2.5 U	2.50 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	5.0 U	5.00 U	2.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	100 U	40.0 U	40 U	40 U	100 U	100 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	50.0 U	10.0 U	4.00 U	R	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	50.0 U	10.0 U	4.00 U	R	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	50.0 U	10.0 U	4.00 U	R	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	50.0 U	50.0 U	20.0 U	R	R	25 U	25 U	25 U	10.0 U	10.0 U	10.0 U	R	25 U
Benzene	5	1000	10000	100000	5.0 U	5.00 U	2.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	2.5 U	2.50 UJ	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	R	1.0 U
Bromomethane	10	7	800	8000	10.0 UJ	10.0 U	4.00 U	R	R	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	10.0 U	10.0 U	4.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**15.6**	**96.0**	**138**	**130**	**130**	**89**	**92**	**66**	**2.8**	**2.22**	**3.75**	**4.7**	**4.6**
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	2.50 U	1.00 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	2.5 U	2.50 UJ	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 UJ	0.50 U
Dibromomethane	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	2.5 U	2.50 U	1.00 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	5.0 UJ	5.00 U	4.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**41.6**	5.00 U	2.00 U	1.0 U	1.0 U	R	R	1.0 UJ	**10.6**	**2.36**	**1.04**	1.0 U	R
Tetrahydrofuran	NE	NE	NE	NE	20.0 U	10.0 U	4.00 U	R	R	2.5 U	2.5 U	2.5 U	5.0 U	2.00 U	2.00 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	**18.1**	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**3.4**	**1.48**	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	5.0 U	5.00 U	2.00 U	**1.7**	**1.7**	**1.9**	**1.8**	**1.6**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	2.50 UJ	1.00 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**150**	**56.8**	**28.9**	**12 J**	**7.9 J**	**9.2**	**10**	**3.6**	**30.4**	**11.4**	**6.88**	**5.0**	**2.9**
Trichlorofluoromethane	NE	NE	NE	NE	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	**11**	**11**	**3.8**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	10 U	10 U	4 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A											
Location ID:					AE109R-8	AE110R-1	AE110R-1	AE110R-1	AE110R-1	AE110R-1	AE110R-1	AE110R-2	AE110R-2	AE110R-2	AE110R-2	AE110R-2	AE110R-2
Sample ID:					21A-AE109R8-090221-1	16A-AE110R1-061716-1	17A-AE110R1-101117-1	18A-AE110R1-092518-1	19A-AE110R1-091319-1	20A-AE110R1-091620-1	21A-AE110R1-090221-1	16A-AE110R2-061716-1	17A-AE110R2-101117-1	18A-AE110R2-092518-1	19A-AE110R2-091319-1	20A-AE110R2-091620-1	21A-AE110R2-090221-1
Sample Date:					09/02/2021	06/17/2016	10/11/2017	09/25/2018	09/13/2019	09/16/2020	09/02/2021	06/17/2016	10/11/2017	09/25/2018	09/13/2019	09/16/2020	09/02/2021
Depth Interval:					245 - 250 ft	34 - 44 ft	34 - 44 ft	34 - 44 ft	34 - 44 ft	34 - 44 ft	34 - 44 ft	70 - 80 ft	70 - 80 ft	70 - 80 ft	70 - 80 ft	70 - 80 ft	70 - 80 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	100 U	20.0 U	20.0 U	**67.3 J**	40 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	**26.9**	**8.88**	**3.43**	R	5.0 U	5.0 U	**97.1**	**12.9**	**16.7**	R	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	25 U	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	10.0 U	10.0 U	**50.0**	R	25 U	25 U
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	**0.8**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	**0.5**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	**5.1**	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U
Chloroform	70	50	20000	100000	1.0 U	**1.9**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.3**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**4.9**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
Dibromochloromethane	2	20	50000	100000	0.50 U	**0.7**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	**0.6**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
Tert-Butylbenzene	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.00 U	2.00 U	**15**	2.5 U	2.5 U	**3.4**	**2.07**	2.00 U	**30**	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	**238**	**1.13**	1.00 U	1.0 U	1.0 U	1.0 U	**204**	1.00 U	**3.57**	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**1.9**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	AE110R-3	AE110R-3	AE110R-3	AE110R-4	AE110R-4	AE110R-4	AE110R-4	AE110R-4	AE110R-4	AE110R-5	AE110R-5	AE110R-5	AE110R-6
					Sample ID:	16A-AE110R3-061716-1	17A-AE110R3-101117-1	21A-AE110R3-090221-1	16A-AE110R4-061716-1	17A-AE110R4-101117-1	18A-AE110R4-092518-1	19A-AE110R4-091319-1	20A-AE110R4-091620-1	21A-AE110R4-090221-1	16A-AE110R5-061716-1	17A-AE110R5-101117-1	21A-AE110R5-090221-1	16A-AE110R6-061716-1
					Sample Date:	06/17/2016	10/11/2017	09/02/2021	06/17/2016	10/11/2017	09/25/2018	09/13/2019	09/16/2020	09/02/2021	06/17/2016	10/11/2017	09/02/2021	06/17/2016
					Depth Interval:	128 - 138 ft	128 - 138 ft	128 - 138 ft	158 - 168 ft	158 - 168 ft	158 - 168 ft	158 - 168 ft	158 - 168 ft	158 - 168 ft	171 - 182 ft	171 - 182 ft	171 - 182 ft	190 - 200 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.00 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 UJ	1.0 UJ
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	100 U	20.0 U	20.0 U	100 U	NS
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ
2-Butanone	4000	50000	50000	100000	**17.5**	**2.96**	5.0 U	10.0 U	**2.49**	2.00 U	R	5.0 U	5.0 U	**12.0**	**2.20**	5.0 U	**36.6 J+**
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 U	10.0 U	10.0 U	25 U	10.0 U
Benzene	5	1000	10000	100000	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	**0.5**	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	5.0 U	2.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U
Chloroform	70	50	20000	100000	**1.2**	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	**1.6**	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.40 U	0.5 UJ
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000	**0.5**	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	**3.1**	2.00 U	2.5 U	**5.8**	2.00 U	2.00 U	**15**	2.5 U	2.5 U	**7.1**	2.00 U	2.5 U	**6.7**
Toluene	**1000**	50000	40000	100000	**154**	1.00 U	1.0 U	**97.0**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**30.8**	1.00 U	1.0 U	**89.8**
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.40 U	0.5 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	AE110R-6	AE110R-6	AE110R-6	AE110R-6	AE110R-6	AE110R-7	AE110R-7	AE110R-7	AE110R-7	EMW-10D	EMW-10D	EMW-10D	EMW-10D
					Sample ID:	17A-AE110R6-101117-1	18A-AE110R6-092518-1	19A-AE110R6-091319-1	20A-AE110R6-091620-1	21A-AE110R6-090221-1	16A-AE110R7-061716-1	16A-AE110R7-061716-2	17A-AE110R7-101117-1	21A-AE110R7-090221-1	16A-EMW10D-061316-1	17A-EMW10D-101117-1	17A-EMW10D-101117-2	18A-EMW10D-092018-1
					Sample Date:	10/11/2017	09/25/2018	09/13/2019	09/16/2020	09/02/2021	06/17/2016	06/17/2016	10/11/2017	09/02/2021	06/13/2016	10/11/2017	10/11/2017	09/20/2018
					Depth Interval:	190 - 200 ft	190 - 200 ft	190 - 200 ft	190 - 200 ft	190 - 200 ft	224 - 234 ft	224 - 234 ft	224 - 234 ft	224 - 234 ft	19 - 29 ft	18.49 - 28.49 ft	18.49 - 28.49 ft	19 - 29 ft
					Sample Type:	N	N	N	N	N	N	FD	N	N	N	N	FD	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 U	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	2.00 U	2.00 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 UJ	40 U	100 U	100 U	NS	NS	20.0 U	100 U	20.0 U	20.0 U	20.0 U	20.0 UJ
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ
2-Butanone	4000	50000	50000	100000	**12.2**	**2.71**	R	5.0 U	5.0 U	**25.2**	**24.4**	**9.35**	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	10.0 U	**31.8**	R	25 U	25 U	10.0 U	10.0 U	10.0 U	25 U	10.0 U	10.0 U	10.0 U	10.0 UJ
Benzene	5	1000	10000	100000	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	**0.7**	**0.5**	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ
Bromomethane	10	7	800	8000	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U
Carbon Disulfide	NE	NE	NE	NE	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.0 U	2.00 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 U
Carbon tetrachloride	5	2	5000	50000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ
Chlorobenzene	100	200	1000	10000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.0**	**1.1**	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
chloromethane	NE	NE	NE	NE	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 UJ
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.00 U	**3.99**	**1.5**	**1.5**	**1.8**	1.0 U	1.0 U	1.00 U	**1.7**	**9.8**	**17.9**	**18.5**	**15.0**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.5 UJ	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	**0.6**	**0.5**	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Methylene Chloride	5	2000	50000	100000	2.00 U	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U
mp-xylene	10000	3000	5000	NE	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	2.00 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.00 U	**2.61**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	**9.5**	**71.4**	**71.2**	**76.1**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.00 U	**9.1**	2.5 U	2.5 U	**6.6**	**8.2**	2.00 U	2.5 U	2.0 U	2.00 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	**1.28**	**1.59**	1.0 U	1.0 U	1.0 U	**146**	**142**	**5.04**	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.5 UJ	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	1.00 U	**10.1**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	**12.5**	**42.3**	**42.6**	**34.8**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**1.78**	**1.70**	**1.75**
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A											
					Location ID:	EMW-10D	EMW-10D	EMW-10D	EMW-10R	EMW-10R	EMW-10R	EMW-10R	EMW-10R	EMW-10R	EMW-10R	EMW-11D	EMW-11D	EMW-11D
					Sample ID:	19A-EMW10D-093019-1	20A-EMW10D-091120-1	21A-EMW10D-090821-1	16A-EMW10R-061316-1	17A-EMW10R-101117-1	18A-EMW10R-092018-1	18A-EMW10R-092018-2	19A-EMW10R-093019-1	20A-EMW10R-091120-1	21A-EMW10R-090821-1	16A-EMW11D-061316-1	17A-EMW11D-101117-1	18A-EMW11D-092018-1
					Sample Date:	09/30/2019	09/11/2020	09/08/2021	06/13/2016	10/11/2017	09/20/2018	09/20/2018	09/30/2019	09/11/2020	09/08/2021	06/13/2016	10/11/2017	09/20/2018
					Depth Interval:	19 - 29 ft	19 - 29 ft	19 - 29 ft	42 - 52 ft	42 - 52 ft	42 - 52 ft	42 - 52 ft	42 - 52 ft	42 - 52 ft	42 - 52 ft	22 - 32 ft	20.68 - 30.68 ft	22 - 32 ft
					Sample Type:	N	N	N	N	N	N	FD	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	R	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	**1.4**	**1.4**	**5.5**	**8.23**	**4.51 J**	**4.85 J**	**5.6**	**8.5**	**3.3**	**3.4**	**1.41**	1.00 UJ
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.1**	1.00 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	R	0.50 UJ	0.50 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	R	0.50 UJ	0.50 U	2.0 U	2.00 U	2.00 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	100 U	100 U	20.0 U	20.0 U	20.0 UJ	20.0 UJ	40 U	100 U	100 U	20.0 U	20.0 U	20.0 UJ
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ
2-Butanone	4000	50000	50000	100000	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	R	R	25 U	10.0 U	10.0 U	10.0 UJ	10.0 UJ	R	25 UJ	25 UJ	10.0 U	10.0 U	10.0 UJ
Benzene	5	1000	10000	100000	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ
Bromomethane	10	7	800	8000	1.0 UJ	1.0 UJ	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 UJ	R	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**16**	**21**	**19**	**37.2**	**56.4**	**38.4**	**41.8**	**29**	**56**	**6.7**	**75.1**	**22.4**	**13.1**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 UJ	0.50 UJ	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	0.40 UJ	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 UJ	2.00 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	2.00 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	**1.1**	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	**2.5**	**2.94**	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**99**	**110 J+**	**130 J+**	**2.0**	**24.9**	**9.29**	**11.5**	**8.0**	**34 J+**	**3.2 J+**	**7.5**	**1.26**	**1.92**
Tetrahydrofuran	NE	NE	NE	NE	R	2.5 U	2.5 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	R	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.3**	1.00 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 UJ	0.50 UJ	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**28**	**36**	**33**	**5.9**	**63.0**	**29.3**	**34.5**	**23**	**81**	**11**	**60.9**	**6.92**	**7.66**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	**2.1**	**5.7**	**2.9**	**4.5**	**6.23**	**12.7 J-**	**14.8 J-**	**17**	**11**	1.0 U	**39.1**	**10.8**	**3.90**
Xylenes (Total)	10000	3000	5000	NE	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect A											
Location ID:					EMW-11D	EMW-11D	EMW-11D	EMW-11R1	EMW-11R1	EMW-11R1	EMW-11R1	EMW-11R1	EMW-11R1	EMW-11R2	EMW-11R2	EMW-11R2	EMW-11R2
Sample ID:					19A-EMW11D-091919-1	20A-EMW11D-091120-1	21A-EMW11D-090821-1	16A-EMW11R1-061316-1	17A-EMW11R1-101117-1	18A-EMW11R1-092418-1	19A-EMW11R1-091719-1	20A-EMW11R1-092120-1	21A-EMW11R1-090821-1	16A-EMW11R2-062116-1	17A-EMW11R2-101017-1	18A-EMW11R2-092418-1	19A-EMW11R2-091719-1
Sample Date:					09/19/2019	09/11/2020	09/08/2021	06/13/2016	10/11/2017	09/24/2018	09/17/2019	09/21/2020	09/08/2021	06/21/2016	10/10/2017	09/24/2018	09/17/2019
Depth Interval:					22 - 32 ft	22 - 32 ft	22 - 32 ft	79 - 89 ft	77.63 - 87.63 ft	79 - 89 ft	79 - 89 ft	79 - 89 ft	79 - 89 ft	104 - 114 ft	102.63 - 112.63 ft	104 - 114 ft	104 - 114 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	10 U	10 U	10 U	200 U	200 UJ	200 U	50 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 UJ	200 U	100 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	12.5 U	25.0 U	0.50 U	R	10 U	10 U	100 U	100 U	100 U	R
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	10 U	10 U	10 U	200 U	200 U	200 U	50 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	**50.0**	**54.5**	**95.5 J**	**64**	**70**	**97**	200 U	200 U	200 UJ	**130**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	**26.5 J**	**18**	**20**	**25**	200 U	200 U	200 UJ	50 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	100 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	10 U	10 U	10 U	200 U	200 U	200 U	50 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	0.50 U	25.0 U	50.0 U	1.00 U	10 U	10 U	10 U	200 U	200 U	200 U	50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	70 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 UJ	200 U	200 U	200 U	56 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	R	0.50 UJ	0.50 U	50.0 U	100 U	2.00 U	R	10 U	10 U	400 U	400 UJ	400 U	R
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	12.5 U	25.0 U	0.50 UJ	10 U	10 U	10 U	100 U	100 U	100 UJ	50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	100 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	0.60 U	25.0 U	50.0 U	1.00 UJ	10 U	10 U	10 U	200 U	200 U	200 UJ	50 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	10 U	10 U	10 U	200 U	200 U	200 UJ	50 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	60 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	50 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U	20 U	20 U	200 U	200 U	200 UJ	100 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	10 U	10 U	10 U	200 U	200 U	200 U	50 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	100 U	100 U	500 U	1000 U	20.0 U	800 U	2000 U	2000 U	4000 UJ	4000 U	4000 U	4000 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	25.0 U	50.0 U	1.00 UJ	20 U	20 U	20 U	200 U	200 UJ	200 UJ	100 U
2-Butanone	4000	50000	50000	100000	R	5.0 U	5.0 U	250 U	100 U	2.00 U	R	100 U	100 U	2000 U	400 U	400 U	R
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	100 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	250 U	100 U	2.00 U	R	100 U	100 U	2000 U	400 U	400 U	R
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 UJ	200 U	200 U	200 U	100 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	100 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	5.0 U	250 U	100 U	2.00 UJ	R	100 U	100 U	2000 U	400 U	400 UJ	R
Acetone	6300	50000	50000	100000	R	R	25 U	250 U	500 U	10.0 U	R	500 U	500 U	2000 U	2000 U	2000 U	R
Benzene	5	1000	10000	100000	0.70 U	0.70 U	0.70 U	25.0 U	50.0 U	1.00 U	10 U	10 U	10 U	200 U	200 U	200 U	50 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	62 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U	20 U	20 U	200 U	200 U	200 UJ	83 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	12.5 U	25.0 U	0.50 U	10 U	10 U	10 U	100 U	100 UJ	100 U	50 U
Bromoform	4	700	50000	100000	R	1.0 UJ	1.0 U	25.0 U	50.0 U	1.00 U	10 U	10 U	10 U	200 U	200 UJ	200 U	50 U
Bromomethane	10	7	800	8000	1.0 U	1.0 UJ	1.0 UJ	50.0 U	100 U	2.00 U	10 UJ	10 U	10 U	400 UJ	400 U	400 U	R
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	5.0 UJ	50.0 U	100 U	2.00 UJ	100 U	100 U	100 U	400 U	400 U	400 UJ	500 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	10 U	10 U	10 U	200 U	200 UJ	200 U	50 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	100 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	50.0 U	100 U	2.00 UJ	20 U	20 UJ	20 U	400 U	400 U	400 UJ	100 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U	20 U	20 U	200 U	200 U	200 UJ	50 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	50.0 U	100 U	2.00 U	20 U	20 U	20 U	400 U	400 U	400 U	100 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**4.6**	**5.3**	**5.2**	**234**	**330**	**609**	**420**	**300**	**280**	**844**	**1320**	**1430 J**	**1500**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	12.5 U	25.0 U	0.50 U	10 U	10 U	10 U	100 U	100 U	100 U	50 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	25.0 U	50.0 U	1.00 U	20 U	20 U	20 UJ	200 U	200 U	200 U	100 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	12.5 U	25.0 U	0.50 U	10 U	10 U	10 U	100 U	100 UJ	100 U	50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	10 U	10 U	10 U	200 U	200 U	200 UJ	50 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	50.0 U	100 U	**3.27 J**	20 U	20 U	20 U	400 U	400 U	400 UJ	100 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U	20 U	20 U	200 U	200 U	200 UJ	100 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U	20 U	20 U	200 U	200 U	200 UJ	100 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U	20 U	20 U	200 U	200 UJ	200 UJ	100 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	100 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	25.0 U	50.0 U	1.00 UJ	20 U	20 U	20 UJ	200 U	200 U	200 UJ	100 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	0.40 U	12.5 U	25.0 U	0.50 U	10 U	10 U	10 UJ	100 U	100 U	100 U	50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	25.0 U	50.0 U	1.00 U	20 U	20 U	20 UJ	200 U	200 U	200 U	100 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U	20 U	20 U	200 U	200 UJ	200 UJ	70 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	1.0 U	50.0 U	100 UJ	2.00 UJ	10 U	20 U	100 U	400 U	400 U	400 UJ	50 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	50.0 U	100 U	2.00 U	20 U	20 U	20 U	400 U	400 U	400 U	100 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 UJ	25.0 UJ	50.0 U	2.00 UJ	20 U	20 U	20 UJ	200 UJ	200 U	400 UJ	100 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	100 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	100 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	100 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 UJ	200 U	200 U	200 U	100 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 UJ	200 U	200 U	200 U	100 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 UJ	200 U	100 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	R	**1.8 J+**	**1240**	**1450**	**1250**	**2400**	**2100**	**2700 J+**	**4390**	**3200**	**4500**	**4200**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	2.5 U	50.0 U	100 U	2.00 U	R	50 U	50 U	400 U	400 U	400 U	R
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U	20 U	20 U	200 U	200 U	200 U	100 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	**15.3 J**	20 U	20 U	20 U	200 U	200 U	200 UJ	80 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	12.5 U	25.0 U	0.50 U	10 U	10 U	10 U	100 U	100 UJ	100 U	50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**2.5**	1.0 U	**7.2**	**2780 J+**	**3400**	**3470**	**5300**	**4000**	**5100**	**8820**	**11500**	**12400**	**11000**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U	20 U	20 U	200 U	200 U	200 UJ	100 U
Vinyl chloride	**2**	**2**	50000	100000	**1.2**	**2.3**	**1.7**	25.0 U	50.0 U	1.00 UJ	**71**	**50**	**31**	200 UJ	200 U	**234 J**	**140**
Xylenes (Total)	10000	3000	5000	NE	1.0 U	1.0 U	1 U	50 U	100 U	2.0 U	20 U	20 U	20 U	400 U	400 U	400 U	100 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect A								Transect B				
					Location ID:	EMW-11R2	EMW-11R2	EMW-11R3	EMW-11R3	EMW-11R3	EMW-11R3	EMW-11R3	EMW-11R3	AE105D	AE105D	AE105D	AE105D	AE105D
					Sample ID:	20A-EMW11R2-092120-1	21A-EMW11R2-090821-1	16A-EMW11R3-061316-1	17A-EMW11R3-101317-1	18A-EMW11R3-092418-1	19A-EMW11R3-091719-1	20A-EMW11R3-092120-1	21A-EMW11R3-090821-1	16A-AE105D-062216-1	17A-AE105D-101217-1	18A-AE105D-100318-1	19A-AE105D-091619-1	20A-AE105D-091720-1
					Sample Date:	09/21/2020	09/08/2021	06/13/2016	10/13/2017	09/24/2018	09/17/2019	09/21/2020	09/08/2021	06/22/2016	10/12/2017	10/03/2018	09/16/2019	09/17/2020
					Depth Interval:	104 - 114 ft	104 - 114 ft	158 - 168 ft	156.63 - 166.63 ft	158 - 168 ft	158 - 168 ft	158 - 168 ft	158 - 168 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	50 U	20 U	50.0 U	50.0 U	50.0 U	R	20 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**100**	**110**	100 U	100 U	100 U	**100**	**67**	**85**	**1.0**	1.00 U	**1.27**	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	50 U	**26**	100 U	100 U	100 U	**25**	20 U	**21**	**1.1**	1.00 U	**1.07 J**	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	70 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	56 U	40 UJ	100 U	100 U	100 U	40 U	40 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	50 U	20 U	200 UJ	200 U	200 U	R	20 U	10 U	2.0 UJ	2.00 U	2.00 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	50 U	20 U	50.0 U	50.0 U	50.0 U	20 U	20 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	60 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	50 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	10000 U	4000 U	2000 U	2000 U	2000 U	1600 U	4000 U	2000 U	NS	20.0 U	20.0 U	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	100 UJ	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 UJ
2-Butanone	4000	50000	50000	100000	500 U	200 U	1000 U	200 U	200 UJ	R	200 U	100 U	10.0 U	2.00 U	2.00 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	500 U	200 U	1000 U	200 U	200 UJ	R	200 U	100 U	10.0 UJ	2.00 U	2.00 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	100 U	40 UJ	100 U	100 U	100 U	40 U	40 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	500 U	200 U	1000 U	200 U	200 U	R	200 U	100 U	10.0 UJ	2.00 U	2.00 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	2500 U	1000 U	1000 UJ	1000 U	1000 UJ	R	1000 U	500 U	10.0 UJ	10.0 U	10.0 U	R	25 U
Benzene	5	1000	10000	100000	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	62 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	83 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	50 U	20 U	50.0 U	50.0 U	50.0 U	20 U	20 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	R	1.0 U
Bromomethane	10	7	800	8000	50 U	20 U	200 U	200 UJ	200 U	R	20 U	10 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	500 U	200 U	200 U	200 U	200 U	200 U	200 U	100 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	100 UJ	40 U	200 U	200 U	200 U	40 U	40 UJ	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	50 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	100 U	40 U	200 U	200 UJ	200 U	40 U	40 U	20 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**750**	**420**	**242**	**429**	**432**	**840**	**600**	**370**	**50.1 J-**	**32.1**	**40.9**	**29**	**18**
cis-1,3-Dichloropropene	NE	NE	NE	NE	50 U	20 U	50.0 UJ	50.0 U	50.0 U	20 U	20 U	10 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	100 U	40 UJ	100 U	100 U	100 U	40 U	40 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	50 U	20 U	50.0 U	50.0 U	50.0 U	20 U	20 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	50 U	20 U	100 U	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	100 U	40 U	200 U	200 U	200 U	40 U	40 U	20 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	100 U	40 UJ	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	50 U	20 UJ	50.0 U	50.0 U	50.0 U	20 U	20 U	10 UJ	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	100 U	40 UJ	100 U	100 U	100 U	40 U	40 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	70 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 UJ	**1.83**	**1.81**	**2.6**	**2.4**
Methylene Chloride	5	2000	50000	100000	100 U	200 U	200 U	200 U	200 U	20 U	40 U	100 U	2.0 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U
mp-xylene	10000	3000	5000	NE	100 U	40 U	200 U	200 U	200 U	40 U	40 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	100 U	40 UJ	100 UJ	100 U	200 U	40 U	40 U	20 UJ	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	100 U	40 UJ	100 U	100 U	100 U	40 U	40 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	100 U	40 UJ	100 U	100 U	100 U	40 U	40 U	20 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3600 J+**	**3600 J+**	**3450**	**3180**	**2560**	**3300**	**2300 J+**	**2900 J+**	1.0 U	1.00 U	1.00 U	1.0 U	R
Tetrahydrofuran	NE	NE	NE	NE	250 U	100 U	200 U	200 U	200 U	R	100 U	50 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	80 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	50 U	20 U	50.0 UJ	50.0 U	50.0 U	20 U	20 U	10 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**7100**	**6300**	**4720**	**4410**	**4040**	**5100**	**3700**	**4400**	**5.4**	**8.61**	**27.6**	**12**	**6.8**
Trichlorofluoromethane	NE	NE	NE	NE	100 U	40 U	100 U	100 U	100 U	40 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	**120**	**36**	100 UJ	100 U	100 U	20 U	20 U	10 U	1.0 U	1.00 U	**1.23**	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	100 U	40 U	200 U	200 U	200 U	40 U	40 U	20 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect B													
Location ID:					AE105D	AE105M	AE105R-1	AE105R-1	AE105R-1	AE105R-1	AE105R-1	AE105R-1	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2
Sample ID:					21A-AE105D-091721-1	21A-AE105M-091721-1	16A-AE105R1-062016-1	17A-AE105R1-101217-1	18A-AE105R1-100318-1	19A-AE105R1-091619-1	20A-AE105R1-091720-1	21A-AE105R1-091321-1	16A-AE105R2-062016-1	17A-AE105R2-101217-1	18A-AE105R2-100318-1	19A-AE105R2-091619-1	20A-AE105R2-091720-1
Sample Date:					09/17/2021	09/17/2021	06/20/2016	10/12/2017	10/03/2018	09/16/2019	09/17/2020	09/13/2021	06/20/2016	10/12/2017	10/03/2018	09/16/2019	09/17/2020
Depth Interval:					73 - 78 ft	52 - 57 ft	90.5 - 95.5 ft	90.5 - 95.5 ft	90.5 - 95.5 ft	90.5 - 95.5 ft	90.5 - 95.5 ft	90.5 - 95.5 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	**3.3**	**3.2**	**3.2**	5.0 U	**5.00**	5.00 U	**3.9**	**3.7**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	**2.3**	**2.4**	**2.0**	5.0 U	5.00 U	5.00 U	**2.8**	**2.7**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	5.0 U	5.00 U	5.00 U	0.50 U	0.50 U	0.50 U	5.0 U	5.00 U	5.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 UJ	0.50 U	10.0 U	10.0 U	10.0 U	R	0.50 U	0.50 UJ	10.0 U	10.0 U	10.0 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	5.0 U	5.00 U	5.00 U	0.60 U	0.60 U	0.60 U	5.0 U	5.00 U	5.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	50 U	100 U	100 U	100 U	40 U	100 U	100 U	100 U	100 U	100 U	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 UJ	1.0 U	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 UJ
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	R	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	5.0 U	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	5.0 U	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	25 UJ	25 UJ	50.0 U	50.0 U	50.0 U	R	25 U	25 UJ	50.0 U	50.0 U	50.0 U	R	25 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	5.0 U	5.00 U	5.00 U	0.70 U	0.70 U	0.70 U	5.0 U	5.00 U	5.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	R	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	R	1.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	1.0 UJ	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 UJ	1.0 UJ	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**16**	**5.2**	**17.2**	**25.0**	**23.4**	**26**	**26**	**31**	**15.3**	**25.1**	**20.8**	**30**	**28**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 UJ	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 UJ	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	**2.7**	1.0 U	5.0 UJ	5.00 U	5.00 U	**1.8**	**1.8**	**1.8**	5.0 UJ	5.00 U	5.00 U	**2.3**	**2.4**
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	10.0 U	10.0 UJ	10.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 UJ	10.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 UJ	1.0 U	**41.2**	**50.6**	**28.7**	**34**	**31 J+**	**26 J+**	**46.0**	**70.5**	**28.0**	**52**	**41 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	**12.2**	10.0 U	10.0 U	2.5 UJ	2.5 U	2.5 U	**10.0**	10.0 U	10.0 U	2.5 UJ	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	**132**	**192**	**143**	**140**	**110**	**110**	**130**	**246**	**120**	**170**	**130**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	**4.6 J+**	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	**1.1**	**1.3**	5.0 U	5.00 U	5.00 U	1.0 U	**1.4**
Xylenes (Total)	10000	3000	5000	NE	1 U	1 U	10 U	10 U	10 U	1.0 U	1.0 U	1 U	10 U	10 U	10 U	1.0 U	1.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect B												
Location ID:					AE105R-2	AE105R-3	AE105R-4	AE105R-4	AE105R-4	AE105R-4	AE105R-4	AE105R-4	AE105R-5	AE105R-5	AE105R-5	AE105R-5	AE105R-5
Sample ID:					21A-AE105R2-091321-1	21A-AE105R3-091321-1	16A-AE105R4-062016-1	17A-AE105R4-101217-1	18A-AE105R4-100318-1	19A-AE105R4-091619-1	20A-AE105R4-091720-1	21A-AE105R4-091321-1	17A-AE105R5-101217-1	18A-AE105R5-100318-1	19A-AE105R5-091619-1	20A-AE105R5-091720-1	21A-AE105R5-091321-1
Sample Date:					09/13/2021	09/13/2021	06/20/2016	10/12/2017	10/03/2018	09/16/2019	09/17/2020	09/13/2021	10/12/2017	10/03/2018	09/16/2019	09/17/2020	09/13/2021
Depth Interval:					98 - 103 ft	107.5 - 112.5 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	143 - 148 ft	143 - 148 ft	143 - 148 ft	143 - 148 ft	143 - 148 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U	0.50 U	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**4.2**	**4.6**	5.0 U	5.00 U	5.00 U	**3.9**	**3.9**	**4.4**	5.00 U	**2.07**	**3.7**	**3.5**	**4.1**
1,1-Dichloroethene	**7**	**80**	30000	100000	**3.1**	**3.6**	5.0 U	5.00 U	5.00 U	**2.7**	**3.2**	**3.5**	5.00 U	**1.36**	**3.0**	**2.7**	**3.4**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	5.0 U	5.00 U	5.00 U	1.0 U	0.50 U	0.50 U	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 UJ	0.50 UJ	10.0 U	10.0 U	10.0 U	R	0.50 U	0.50 UJ	10.0 U	2.00 U	R	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U	0.50 U	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	5.0 U	5.00 U	5.00 U	1.2 U	0.60 U	0.60 U	5.00 U	1.00 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	100 U	100 U	100 U	100 U	80 U	100 U	100 U	100 U	20.0 UJ	40 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 UJ	5.00 U	5.00 U	2.0 U	1.0 UJ	1.0 U	5.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	R	5.0 U	5.0 U	10.0 U	2.00 U	R	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	10 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	10 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	25 UJ	25 UJ	50.0 U	50.0 U	50.0 U	R	25 U	25 UJ	50.0 U	10.0 U	R	25 U	25 UJ
Benzene	5	1000	10000	100000	0.70 U	0.70 U	5.0 U	5.00 U	5.00 U	1.4 U	0.70 U	0.70 U	5.00 U	1.00 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U	0.50 U	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	R	1.0 U	1.0 U	5.00 U	1.00 U	R	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.0 U	1.0 U	1.0 U	10.0 U	2.00 UJ	1.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	10 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	1.0 UJ	10.0 UJ	10.0 U	10.0 U	2.0 U	1.0 UJ	1.0 UJ	10.0 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	2.0 U	1.0 U	1.0 U	10.0 U	**3.45**	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**35**	**38**	**20.0**	**24.0**	**32.0**	**37**	**36**	**44**	**18.8**	**18.4**	**41**	**37**	**45**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	1.0 U	0.40 U	0.40 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U	0.50 U	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.0 U	1.0 U	1.0 U	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 UJ	1.0 U	1.0 U	5.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	1.0 U	0.40 U	0.40 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	**2.6**	**3.2**	5.0 UJ	5.00 U	5.00 U	**2.5**	**2.4**	**2.8**	5.00 U	1.00 U	**1.9**	**1.7**	**2.2**
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	10.0 U	10.0 UJ	10.0 U	2.0 U	1.0 U	1.0 U	10.0 UJ	2.00 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.0 U	1.0 U	1.0 U	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**45 J+**	**53 J+**	**58.2**	**67.2**	**47.2**	**55**	**52 J+**	**51 J+**	**56.2**	**18.3**	**50**	**43 J+**	**46 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	5.0 UJ	2.5 U	2.5 U	10.0 U	2.00 U	2.5 UJ	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	1.0 U	0.40 U	0.40 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**140**	**150**	**166**	**230**	**187**	**190**	**150**	**170**	**193**	**88.3**	**150**	**120**	**150**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	**2.0**	**1.9**	5.0 U	5.00 U	5.00 U	2.0 U	**1.2**	**1.6**	5.00 U	1.00 U	1.0 U	1.0 U	**1.1**
Xylenes (Total)	10000	3000	5000	NE	1 U	1 U	10 U	10 U	10 U	2.0 U	1.0 U	1 U	10 U	2.0 U	1.0 U	1.0 U	1 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect B												
					Location ID:	AE105S	AE105S	AE105S	AE105S	AE105S	AE105S	AE106D	AE106D	AE106D	AE106D	AE106D	AE106D	AE106M	AE106R-1
					Sample ID:	16A-AE105S-062216-1	17A-AE105S-101217-1	18A-AE105S-100318-1	19A-AE105S-091619-1	20A-AE105S-091720-1	21A-AE105S-091721-1	16A-AE106D-062016-1	17A-AE106D-101217-1	18A-AE106D-100318-1	19A-AE106D-091719-1	20A-AE106D-091720-1	21A-AE106D-091321-1	21A-AE106M-091321-1	16A-AE106R1-062016-1
					Sample Date:	06/22/2016	10/12/2017	10/03/2018	09/16/2019	09/17/2020	09/17/2021	06/20/2016	10/12/2017	10/03/2018	09/17/2019	09/17/2020	09/13/2021	09/13/2021	06/20/2016
					Depth Interval:	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	22.5 - 27.5 ft	47 - 52 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	R	0.50 U	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ	2.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 UJ	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 UJ	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	25 UJ	10.0 U
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	2.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**17.7**	**11.1**	**10.2**	**13**	**8.7**	**7.8**	**3.1**	**1.75**	**1.56**	1.0 U	1.0 U	1.0 U	**9.2**	**5.5**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 UJ	**2.24**	**3.12**	**1.8**	**2.2**	**2.4**	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 UJ	**11.3**	**5.99**	**4.25**	**3.6**	**2.3 J+**	**2.7 J+**	**26 J+**	**11.6**
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	**3.5**	2.5 U	2.5 U	**7.5**	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U	2.6 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.1**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**8.6**
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**10.3**	**7.19**	**6.28**	**5.8**	**3.9**	**4.8**	**35**	**11.6**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect B											
					Location ID:	AE106R-1	AE106R-1	AE106R-1	AE106R-1	AE106R-1	AE106R-2	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-4
					Sample ID:	17A-AE106R1-101217-1	18A-AE106R1-100318-1	19A-AE106R1-091619-1	20A-AE106R1-091720-1	21A-AE106R1-091321-1	21A-AE106R2-091321-1	16A-AE106R3-062016-1	17A-AE106R3-101217-1	18A-AE106R3-100318-1	19A-AE106R3-091619-1	20A-AE106R3-091720-1	21A-AE106R3-091321-1	21A-AE106R4-091321-1
					Sample Date:	10/12/2017	10/03/2018	09/16/2019	09/17/2020	09/13/2021	09/13/2021	06/20/2016	10/12/2017	10/03/2018	09/16/2019	09/17/2020	09/13/2021	09/13/2021
					Depth Interval:	47 - 52 ft	47 - 52 ft	47 - 52 ft	47 - 52 ft	47 - 52 ft	69.5 - 74.5 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	144.5 - 150.5 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	**1.28**	**1.3**	**1.1**	**1.3**	**1.5**	**1.2**	**1.26**	**1.74**	**1.4**	**1.3**	**1.5**	**1.1**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	40 U	100 U	100 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	R	25 U	25 UJ	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	25 UJ
Benzene	5	1000	10000	100000	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.00 U	2.00 UJ	R	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	R	1.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**4.98**	**18.0**	**28**	**14**	**18**	**22**	**13.9**	**14.2**	**41.8**	**33**	**19**	**23**	**18**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**9.40**	**10.0**	**2.9**	**2.3 J+**	**1.8 J+**	**1.7 J+**	**24.5**	**25.3**	**7.77**	**2.3**	**2.5 J+**	**2.2 J+**	**1.2 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**8.9**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**9.01**	**13.6**	**4.6**	**4.9**	**5.3**	**6.0**	**27.0**	**34.3**	**19.0**	**4.8**	**5.5**	**8.6**	**14**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.00 U	**1.25**	1.0 U	1.0 U	1.0 U	**1.4**	**1.7**	**1.54**	**1.32**	**1.6**	**1.6**	**1.1**	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect B													
Location ID:					AE106R-5	AE106R-5	AE106R-5	AE106R-5	AE106R-5	AE106S	AE106S	AE106S	AE106S	AE106S	AE106S	AE111R-1	AE111R-1	AE111R-1
Sample ID:					17A-AE106R5-101217-1	18A-AE106R5-100318-1	19A-AE106R5-091619-1	20A-AE106R5-091720-1	21A-AE106R5-091321-1	16A-AE106S-062916-1	17A-AE106S-101217-1	18A-AE106S-100318-1	19A-AE106S-091619-1	20A-AE106S-091720-1	21A-AE106S-091321-1	16B-AE111R1-061716-1	17A-AE111R1-100517-1	17A-AE111R1-100517-2
Sample Date:					10/12/2017	10/03/2018	09/16/2019	09/17/2020	09/13/2021	06/29/2016	10/12/2017	10/03/2018	09/16/2019	09/17/2020	09/13/2021	06/17/2016	10/05/2017	10/05/2017
Depth Interval:					164 - 169 ft	164 - 169 ft	164 - 169 ft	164 - 169 ft	164 - 169 ft	12 - 17 ft	12 - 17 ft	12 - 17 ft	12 - 17 ft	12 - 17 ft	12 - 17 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	FD
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	R	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	**1.81**	**1.86**	**1.4**	**1.3**	**1.6**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.0**	1.0 UJ	1.00 U	1.00 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	2.00 U	R	0.50 U	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 UJ	2.0 U	2.00 UJ	2.00 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U
2-Butanone	4000	50000	50000	100000	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	R	25 U	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ
Bromomethane	10	7	800	8000	2.00 U	2.00 UJ	R	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Carbon Disulfide	NE	NE	NE	NE	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 UJ
Carbon tetrachloride	5	2	5000	50000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ
Chlorobenzene	100	200	1000	10000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
chloromethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**10.7**	**11.9**	**15**	**17**	**13**	**13.5**	**12.7**	**6.21**	**8.5**	**25**	**11**	1.0 U	1.00 U	1.00 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 UJ
Dibromomethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	**1.0**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**9.1**	**7.70**	**6.23**	**3.5**	**2.0**	**1.5**	1.0 UJ	1.00 U	1.00 U
Methylene Chloride	5	2000	50000	100000	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ
mp-xylene	10000	3000	5000	NE	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**5.79**	**3.02**	**1.6**	R	**1.8 J+**	**6.2**	**3.48**	**11.6**	**12**	**4.9 J+**	**24 J+**	1.0 U	1.00 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.00 U	R	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	**9.9**	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**65.6**	**1.30**	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**60.8**	**57.7**	**36**	**26**	**40**	**7.2**	**4.97**	**17.6**	**17**	**3.5**	**33**	1.0 U	1.00 U	1.00 U
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.2 J**	1.00 U	1.00 U	1.0 U	**3.6**	1.0 U	1.0 U	1.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect B												
Location ID:					AE111R-1	AE111R-1	AE111R-1	AE111R-1	AE111R-1	AE111R-2	AE111R-2	AE111R-2	AE111R-3	AE111R-3	AE111R-3	AE111R-3	AE111R-3
Sample ID:					18A-AE111R1-100218-1	19A-AE111R1-092519-1	20A-AE111R1-091620-1	21A-AE111R1-090721-1	21A-AE111R1-090721-2	16B-AE111R2-061716-1	16B-AE111R2-061716-2	17A-AE111R2-100517-1	21A-AE111R2-090721-1	16B-AE111R3-061716-1	17A-AE111R3-100517-1	18A-AE111R3-100218-1	19A-AE111R3-092519-1
Sample Date:					10/02/2018	09/25/2019	09/16/2020	09/07/2021	09/07/2021	06/17/2016	06/17/2016	10/05/2017	09/07/2021	06/17/2016	10/05/2017	10/02/2018	09/25/2019
Depth Interval:					44 - 54 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft	66 - 74 ft	66 - 74 ft	66 - 74 ft	66 - 74 ft	95 - 103 ft	95 - 103 ft	95 - 103 ft	95 - 103 ft
Sample Type:					N	N	N	N	FD	N	FD	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 UJ	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 UJ	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	R	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.00 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	R	0.50 U	0.50 U	0.50 U	2.0 U	2.0 U	2.00 UJ	0.50 U	2.0 U	2.00 UJ	2.00 U	R
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	40 U	100 U	100 U	100 U	20.0 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
2-Butanone	4000	50000	50000	100000	2.00 UJ	R	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 UJ	R
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2.00 UJ	R	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 UJ	R
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R
Acetone	6300	50000	50000	100000	10.0 UJ	R	25 U	25 U	25 UJ	10.0 U	10.0 U	10.0 U	25 UJ	10.0 U	10.0 U	10.0 UJ	R
Benzene	5	1000	10000	100000	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U
Bromomethane	10	7	800	8000	2.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 UJ	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	**2.2**	**2.3**	1.0 U	1.0 U	1.00 U	**2.5**	1.0 U	1.00 U	1.00 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U
Chloroform	70	50	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
chloromethane	NE	NE	NE	NE	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.5 UJ	0.50 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U
Cymene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 UJ	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U
Naphthalene	140	700	20000	100000	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	R	2.5 U	2.5 U	2.5 U	**9.7**	**7.9**	2.00 U	2.5 U	**5.5**	2.00 U	2.00 U	R
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**5.5 J**	**8.6 J**	**6.14**	**1.9**	**9.5**	**15.8**	**18.4**	**8.6**
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.5 UJ	0.50 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect B											
					Location ID:	AE111R-3	AE111R-3	AE111R-4	AE111R-4	AE111R-4	AE111R-5	AE111R-5	AE111R-5	AE111R-5	AE111R-5	AE111R-6	AE111R-6
					Sample ID:	20A-AE111R3-091620-1	21A-AE111R3-090721-1	16B-AE111R4-061716-1	17A-AE111R4-100517-1	21A-AE111R4-090721-1	16B-AE111R5-061716-1	17A-AE111R5-100517-1	18A-AE111R5-100218-1	19A-AE111R5-092519-1	20A-AE111R5-091620-1	21A-AE111R5-090721-1	16B-AE111R6-061716-1	17A-AE111R6-100517-1
					Sample Date:	09/16/2020	09/07/2021	06/17/2016	10/05/2017	09/07/2021	06/17/2016	10/05/2017	10/02/2018	09/25/2019	09/16/2020	09/07/2021	06/17/2016	10/05/2017
					Depth Interval:	95 - 103 ft	95 - 103 ft	140 - 150 ft	140 - 150 ft	140 - 150 ft	155 - 165 ft	155 - 165 ft	155 - 165 ft	155 - 165 ft	155 - 165 ft	155 - 165 ft	168 - 173 ft	168 - 173 ft
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.5 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	1.0 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	0.50 U	2.0 U	2.00 UJ	0.50 U	2.0 U	2.00 UJ	2.00 U	R	0.50 U	0.50 U	2.0 U	2.00 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	100 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	R	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 U	**18.2 J-**	**10.7**	5.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U
Acetone	6300	50000	50000	100000	25 U	25 U	10.0 U	10.0 U	25 U	10.0 U	10.0 U	10.0 UJ	R	25 U	25 UJ	10.0 U	10.0 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Bromomethane	10	7	800	8000	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ
Chlorobenzene	100	200	1000	10000	1.0 U	**1.5**	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 UJ	0.50 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 UJ	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	0.5 U	0.50 U	0.40 UJ	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	**8.2 J+**	2.00 U	2.5 U	**4.6**	2.00 U	2.00 U	R	2.5 U	2.5 U	**4.2**	2.00 U
Toluene	**1000**	50000	40000	100000	**1.1**	1.0 U	**74.0 J-**	**52.9**	**1.0**	**13.5**	**1.61**	**3.69**	**3.4**	1.0 U	1.0 U	**8.2**	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 UJ	0.50 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**1.23**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.10**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Xylenes (Total)	10000	3000	5000	NE	1.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect B											
Location ID:					AE111R-6	AE111R-6	AE111R-6	AE111R-6	AE111R-7	AE111R-7	AE111R-7	TRC-301R-1	TRC-301R-1	TRC-301R-1	TRC-301R-2	TRC-301R-2	TRC-301R-2
Sample ID:					18A-AE111R6-100218-1	19A-AE111R6-092519-1	20A-AE111R6-091620-1	21A-AE111R6-090721-1	16B-AE111R7-061716-1	17A-AE111R7-100517-1	21A-AE111R7-090721-1	16A-TRC301R1-062216-1	17A-TRC301R1-102317-1	21A-TRC301R1-091321-1	16A-TRC301R2-062216-1	17A-TRC301R2-102317-1	18A-TRC301R2-092718-1
Sample Date:					10/02/2018	09/25/2019	09/16/2020	09/07/2021	06/17/2016	10/05/2017	09/07/2021	06/22/2016	10/23/2017	09/13/2021	06/22/2016	10/23/2017	09/27/2018
Depth Interval:					168 - 173 ft	168 - 173 ft	168 - 173 ft	168 - 173 ft	181 - 191 ft	181 - 191 ft	181 - 191 ft	96.5 - 100.5 ft	96.5 - 100.5 ft	96.5 - 100.5 ft	81.5 - 85.5 ft	81.5 - 85.5 ft	81.5 - 85.5 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	R	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	**2.0**	**1.89**	**2.0**	5.0 U	5.00 U	5.00 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	**1.6**	**1.50**	1.0 U	5.0 U	5.00 U	5.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 UJ	1.0 U	5.0 U	5.00 UJ	5.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	0.50 U	5.0 U	5.00 U	5.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	2.00 U	1.0 U	5.0 U	10.0 U	5.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	R	0.50 U	0.50 U	2.0 U	2.00 UJ	0.50 U	2.0 U	2.00 U	0.50 UJ	10.0 U	10.0 U	10.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	0.60 U	5.0 U	5.00 U	5.00 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	100 U	100 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U	1.00 U	1.0 UJ	5.0 U	5.00 U	5.00 U
2-Butanone	4000	50000	50000	100000	2.00 U	R	5.0 U	5.0 U	**36.6**	2.00 U	5.0 U	10.0 U	2.00 UJ	5.0 U	50.0 U	10.0 UJ	10.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
2-Hexanone	NE	NE	NE	NE	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	5.0 U	50.0 U	10.0 U	10.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	5.0 U	50.0 U	10.0 U	10.0 UJ
Acetone	6300	50000	50000	100000	10.0 U	R	25 U	25 UJ	10.0 U	10.0 U	25 U	10.0 U	10.0 U	25 UJ	50.0 U	50.0 U	50.0 UJ
Benzene	5	1000	10000	100000	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	0.70 U	5.0 U	5.00 U	5.00 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U
Bromoform	4	700	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Bromomethane	10	7	800	8000	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	1.0 U	10.0 U	10.0 U	10.0 U
Carbon Disulfide	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	5.0 U	2.0 U	2.00 UJ	5.0 U	10.0 U	10.0 UJ	10.0 U
Carbon tetrachloride	5	2	5000	50000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.0 U	5.0 U	5.00 UJ	5.00 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Chloroethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 U	2.00 U	1.0 U	10.0 U	10.0 U	10.0 UJ
Chloroform	70	50	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
chloromethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	2.0 UJ	2.00 U	1.0 U	10.0 UJ	10.0 U	10.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	**17.3**	**19.0**	**17**	**22.2**	**26.0**	**18.8**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.40 U	2.5 U	2.50 U	2.50 U
Cymene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.5 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	1.0 U	10.0 U	10.0 U	10.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 UJ	5.0 U	5.00 U	5.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.0 U	5.0 UJ	5.00 U	5.00 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 UJ	1.0 U	1.00 UJ	1.0 U	5.0 U	5.00 UJ	5.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 UJ	0.5 U	0.50 UJ	0.40 U	2.5 U	2.50 UJ	2.50 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	**1.9 J**	**2.38**	**1.2**	5.0 UJ	**6.50**	5.00 U
Methylene Chloride	5	2000	50000	100000	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 U	1.0 U	10.0 U	10.0 U	10.0 U
mp-xylene	10000	3000	5000	NE	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	1.0 U	10.0 U	10.0 U	10.0 U
Naphthalene	140	700	20000	100000	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	2.00 U	1.0 U	5.0 U	10.0 U	10.0 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.0 U	5.0 UJ	5.00 U	5.00 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	**33.4**	**28.7 J**	**16 J+**	**50.6**	**56.2 J**	**41.2**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	R	2.5 U	2.5 U	**10.5**	2.00 U	2.5 U	2.0 U	2.00 U	2.5 U	10.0 U	10.0 U	10.0 UJ
Toluene	**1000**	50000	40000	100000	1.00 U	**1.5**	1.0 U	1.0 U	**98.4**	**18.9**	**5.0**	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	5.0 U	5.00 U	5.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 UJ	0.50 U	0.40 U	2.5 UJ	2.50 U	2.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	**63.5**	**68.7**	**61**	**102**	**144**	**101**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 UJ	1.0 U	5.0 U	5.00 UJ	5.00 U
Vinyl chloride	**2**	**2**	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	**1.4**	**1.29**	**1.7**	5.0 U	5.00 U	5.00 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	1 U	10 U	10 U	10 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect B											
Location ID:					TRC-301R-2	TRC-301R-2	TRC-301R-2	TRC-301R-3	TRC-301R-3	TRC-301R-3	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4
Sample ID:					19A-TRC301R2-091719-1	20A-TRC301R2-091520-1	21A-TRC301R2-091321-1	16A-TRC301R3-062216-1	17A-TRC301R3-102317	21A-TRC301R3-091321-1	16A-TRC301R4-062216-1	17A-TRC301R4-102317-1	18A-TRC301R4-092718-1	19A-TRC301R4-091719-1	20A-TRC301R4-091520-1	21A-TRC301R4-091321-1
Sample Date:					09/17/2019	09/15/2020	09/13/2021	06/22/2016	10/23/2017	09/13/2021	06/22/2016	10/23/2017	09/27/2018	09/17/2019	09/15/2020	09/13/2021
Depth Interval:					81.5 - 85.5 ft	81.5 - 85.5 ft	81.5 - 85.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)												
Volatile Organic Compounds (ug/l)																
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**2.9**	**3.0**	**3.5**	5.0 U	5.00 U	**3.2**	**1.5**	**1.56**	**1.65**	**1.2**	**1.2**	**1.4**
1,1-Dichloroethene	**7**	**80**	30000	100000	**1.6**	**1.9**	**2.1**	5.0 U	5.00 U	**1.7**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	0.50 U	5.0 U	5.00 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	10.0 U	1.0 U	1.0 U	2.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	R	0.50 U	0.50 UJ	10.0 U	10.0 U	0.50 UJ	2.0 UJ	2.00 U	2.00 U	R	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	0.60 U	5.0 U	5.00 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	100 U	100 U	100 U	100 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	R	5.0 U	5.0 U	50.0 U	10.0 UJ	5.0 U	10.0 U	2.00 UJ	2.00 UJ	R	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	50.0 U	10.0 U	5.0 U	10.0 UJ	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	5.0 U	50.0 U	10.0 U	5.0 U	10.0 UJ	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	R	25 U	25 UJ	50.0 U	50.0 U	25 UJ	10.0 U	10.0 U	10.0 UJ	R	25 U	25 UJ
Benzene	5	1000	10000	100000	0.70 U	0.70 U	0.70 U	5.0 U	5.00 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	R	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	10.0 U	10.0 UJ	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 UJ	10.0 U	10.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**17**	**18**	**20**	**26.0**	**26.2**	**18**	**17.3**	**21.7**	**19.2**	**14**	**17**	**20**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 UJ	5.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	0.40 U	2.5 U	2.50 UJ	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	**5.6**	**6.1**	**6.3**	5.0 UJ	**7.25**	**5.8**	**4.8 J**	**5.36**	**5.10**	**5.8**	**5.7**	**6.2**
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 U	5.0 U	10.0 U	1.0 U	1.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	5.0 UJ	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**43**	**37**	**41 J+**	**59.9**	**57.6 J**	**40 J+**	**15.6**	**12.9 J**	**14.1**	**13**	**10**	**8.7 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	2.5 U	2.0 U	2.00 U	2.00 UJ	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	2.5 UJ	2.50 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**110**	**87**	**97**	**118**	**139**	**100**	**35.1**	**35.5**	**36.3**	**27**	**27**	**27**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	**1.9**	**2.3**	**1.9**	5.0 U	5.00 U	**1.8**	**5.9**	**9.11**	**6.75**	**7.9**	**8.8**	**10**
Xylenes (Total)	10000	3000	5000	NE	1.0 U	1.0 U	1 U	10 U	10 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect B 1/2												
Location ID:					AE112D	AE112D	AE112D	AE112D	AE112D	AE112D	AE112R-1	AE112R-1	AE112R-1	AE112R-1	AE112R-1	AE112R-2	AE112R-2
Sample ID:					16B-AE112D-062716-1	17A-AE112D-101717-1	18A-AE112D-092618-1	19A-AE112D-091319-1	20A-AE112D-091120-1	21A-AE112D-091021-1	16B-AE112R1-062116-1	17A-AE112R1-101717-1	18A-AE112R1-092618-1	19A-AE112R1-091319-1	20A-AE112R1-091120-1	21A-AE112R1-091621-1	16B-AE112R2-062116-1	17A-AE112R2-101717-1
Sample Date:					06/27/2016	10/17/2017	09/26/2018	09/13/2019	09/11/2020	09/10/2021	06/21/2016	10/17/2017	09/26/2018	09/13/2019	09/11/2020	09/16/2021	06/21/2016	10/17/2017
Depth Interval:					24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	41 - 51 ft	41 - 51 ft	41 - 51 ft	41 - 51 ft	41 - 51 ft	41 - 51 ft	62 - 72 ft	62 - 72 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 UJ	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 UJ	0.50 UJ	2.0 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 UJ	R	R	25 UJ	10.0 U	10.0 U	10.0 U	R	R	25 UJ	10.0 U	10.0 U
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 UJ	1.0 U	1.0 U	1.00 U
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 U	2.0 UJ	2.00 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 UJ	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Chloroethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Styrene	100	100	6000	60000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.0 U	**1.5 J+**	**1.0 J+**	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 UJ	1.0 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	**6.6**	2.5 U	2.5 U	2.0 U	2.00 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**5.0**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**91.5**	**1.37**
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect B 1/2												
Location ID:					AE112R-2	AE112R-3	AE112R-3	AE112R-3	AE112R-3	AE112R-3	AE112R-3	AE112R-4	AE112R-4	AE112R-4	AE112R-5	AE112R-5	AE112R-5
Sample ID:					21A-AE112R2-091621-1	16B-AE112R3-062116-1	17A-AE112R3-101717-1	18A-AE112R3-092618-1	19A-AE112R3-091319-1	20A-AE112R3-091120-1	21A-AE112R3-091621-1	16B-AE112R4-062116-1	17A-AE112R4-101717-1	21A-AE112R4-091621-1	16B-AE112R5-062116-1	17A-AE112R5-101717-1	17A-AE112R5-101717-2
Sample Date:					09/16/2021	06/21/2016	10/17/2017	09/26/2018	09/13/2019	09/11/2020	09/16/2021	06/21/2016	10/17/2017	09/16/2021	06/21/2016	10/17/2017	10/17/2017
Depth Interval:					62 - 72 ft	91 - 101 ft	91 - 101 ft	91 - 101 ft	91 - 101 ft	91 - 101 ft	91 - 101 ft	113 - 123 ft	113 - 123 ft	113 - 123 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	FD
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 UJ
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 UJ	0.50 UJ	2.0 U	2.00 U	0.50 UJ	2.0 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.00 UJ	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 UJ	0.60 U	1.0 U	1.00 UJ	1.00 UJ
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 UJ
2-Butanone	4000	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	**3.79**	5.0 U	10.0 U	2.00 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	25 UJ	10.0 U	10.0 U	10.0 U	R	R	25 UJ	10.0 U	10.0 U	25 UJ	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromomethane	10	7	800	8000	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 UJ	1.0 U	2.0 UJ	2.00 UJ	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ
Carbon Disulfide	NE	NE	NE	NE	5.0 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	5.0 U	2.0 U	2.00 U	2.00 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 UJ
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	1.0 UJ	2.0 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
chloromethane	NE	NE	NE	NE	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 UJ
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	**1.9**	**2.3**	**3.8**	1.0 U	**3.19**	**7.6**	1.0 U	**3.57**	**3.31**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U
mp-xylene	10000	3000	5000	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 UJ	**2.8**	1.00 U	1.0 UJ	**16.8**	**6.50**	**6.52**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.00 U	2.00 U	**4.4**	2.5 U	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	1.0 U	**11.8**	**1.13**	**1.55**	1.0 U	1.0 U	1.0 U	**78.7**	**14.2**	**1.2**	**1.8**	1.00 U	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 UJ
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	1.00 U	**1.32**	**1.5**	1.0 U	**1.2**	1.0 U	**2.10**	**1.0**	**2.4**	**8.08**	**7.81**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 UJ	1.00 UJ
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	NE	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect B 1/2												
Location ID:					AE112R-5	AE112R-5	AE112R-5	AE112R-5	AE112R-5	AE112R-6	AE112R-6	AE112R-6	AE112R-6	AE112R-6	AE112R-6	AE112R-6	AE112R-7
Sample ID:					18A-AE112R5-092618-1	19A-AE112R5-091319-1	20A-AE112R5-091120-1	21A-AE112R5-091621-1	21A-AE112R5-091621-2	16B-AE112R6-062116-1	17A-AE112R6-101717-1	18A-AE112R6-092618-1	18A-AE112R6-092618-2	19A-AE112R6-091319-1	20A-AE112R6-091120-1	21A-AE112R6-091621-1	16B-AE112R7-062116-1
Sample Date:					09/26/2018	09/13/2019	09/11/2020	09/16/2021	09/16/2021	06/21/2016	10/17/2017	09/26/2018	09/26/2018	09/13/2019	09/11/2020	09/16/2021	06/21/2016
Depth Interval:					136 - 146 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	168 - 175 ft
Sample Type:					N	N	N	N	FD	N	N	N	FD	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)													
Volatile Organic Compounds (ug/l)																	
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	R	0.50 UJ	0.50 UJ	0.50 UJ	2.0 U	2.00 U	2.00 U	2.00 U	R	0.50 UJ	0.50 UJ	2.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 UJ	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	40 U	100 U	100 U	100 U	20.0 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	100 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	**4.09**	2.00 U	**3.51 J**	R	5.0 U	5.0 U	10.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	10.0 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	10.0 U
Acetone	6300	50000	50000	100000	10.0 U	R	R	25 UJ	25 UJ	10.0 U	10.0 U	10.0 U	10.0 U	R	R	25 UJ	10.0 U
Benzene	5	1000	10000	100000	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Bromoform	4	700	50000	100000	1.00 U	R	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	R	1.0 UJ	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.00 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 UJ	1.0 U	2.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	2.0 U
Carbon tetrachloride	5	2	5000	50000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U
Chloroform	70	50	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**11.6**	**14**	**13**	**11**	**12**	1.0 U	**1.96**	**7.03**	**7.00**	**8.6**	**8.3**	**9.3**	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 UJ	0.40 U	0.40 U	0.40 U	0.5 U
Cymene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.00 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U
mp-xylene	10000	3000	5000	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.00 U	1.0 U	R	1.0 UJ	1.0 UJ	**9.0**	**5.59**	1.00 U	**1.01**	1.0 U	R	1.0 UJ	**15.8**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	**3.5**	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.00 U	**5.3**	2.5 U	2.5 U	2.0 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**34.2**	**13.7**	**4.05**	**3.18**	**1.5**	**1.1**	1.0 U	**13.3**
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**3.62**	**3.9**	**2.1**	**5.6**	**5.5**	**1.6**	**4.05**	**2.63**	**2.24**	**1.9**	**1.3**	**1.5**	**2.5**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Xylenes (Total)	10000	3000	5000	NE	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group:	Transect B 1/2		Transect C												
					Location ID:	AE112R-7	AE112R-7	STM-3D	STM-3D	STM-3D	STM-3D	STM-3D	STM-3D	STM-3D	STM-3R	STM-3R	STM-3R	STM-3R	STM-3S	STM-3S
					Sample ID:	17A-AE112R7-101717-1	21A-AE112R7-091621-1	16A-STM3D-062716-1	17A-STM3D-101317-1	18A-STM3D-092818-1	19A-STM3D-092619-1	20A-STM3D-092420-1	21A-STM3D-092221-1	21A-STM3D-092221-2	16A-STM3R-062716-1	17A-STM3R-101317-1	17A-STM3R-101317-2	21A-STM3R-092221-1	16A-STM3S-062716-1	17A-STM3S-101317-1
					Sample Date:	10/17/2017	09/16/2021	06/27/2016	10/13/2017	09/28/2018	09/26/2019	09/24/2020	09/22/2021	09/22/2021	06/27/2016	10/13/2017	10/13/2017	09/22/2021	06/27/2016	10/13/2017
					Depth Interval:	168 - 175 ft	168 - 175 ft	49.8 - 54.8 ft	49.8 - 54.8 ft	49.8 - 54.8 ft	49.8 - 54.8 ft	49.8 - 54.8 ft	49.8 - 54.8 ft	49.8 - 54.8 ft	66.9 - 71.9 ft	66.9 - 71.9 ft	66.9 - 71.9 ft	66.9 - 71.9 ft	5 - 15 ft	5 - 15 ft
					Sample Type:	N	N	N	N	N	N	N	N	FD	N	N	FD	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 UJ
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	1.0 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 U	2.0 U	2.00 U	2.00 U	0.50 U	2.0 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	1.00 UJ	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	1.0 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	20.0 U	20.0 U	20.0 U	100 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 UJ
2-Butanone	4000	50000	50000	100000	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	10.0 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
2-Hexanone	NE	NE	NE	NE	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	10.0 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	10.0 U	2.00 U
Acetone	6300	50000	50000	100000	10.0 U	25 UJ	10.0 UJ	10.0 U	10.0 UJ	R	25 U	25 U	25 U	10.0 UJ	10.0 U	10.0 U	25 U	10.0 UJ	10.0 U
Benzene	5	1000	10000	100000	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	1.0 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 UJ
Bromomethane	10	7	800	8000	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	1.0 U	2.0 U	2.00 UJ
Carbon Disulfide	NE	NE	NE	NE	2.00 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	2.0 U	2.00 U
Carbon tetrachloride	5	2	5000	50000	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 UJ
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Chloroethane	NE	NE	NE	NE	2.00 U	1.0 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 UJ	2.0 U	2.00 U
Chloroform	70	50	20000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
chloromethane	NE	NE	NE	NE	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	1.0 U	2.0 U	2.00 UJ
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**1.71**	15	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.5 U	0.50 U
Cymene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	2.0 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 UJ	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.5 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Methylene Chloride	5	2000	50000	100000	2.00 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	2.0 UJ	2.00 U
mp-xylene	10000	3000	5000	NE	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	2.0 U	2.00 U
Naphthalene	140	700	20000	100000	1.00 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**5.12**	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.0 U	2.00 U
Toluene	**1000**	50000	40000	100000	**1.78**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.5 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**7.00**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Trichlorofluoromethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	**1.6**	**1.91 J**
Vinyl chloride	**2**	**2**	50000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect C													
Location ID:					STM-3S	STM-8D	STM-8D	STM-8D	STM-8D	STM-8D	STM-8D	STM-8M	STM-8M	STM-8M	STM-8R	STM-8R	STM-8R	STM-8R	STM-8R
Sample ID:					21A-STM3S-092221-1	16A-STM8D-063016-1	17A-STM8D-101117-1	18A-STM8D-092818-1	19A-STM8D-092619-1	20A-STM8D-092320-1	21A-STM8D-090821-1	16A-STM8M-062116-1	17A-STM8M-101117-1	21A-STM8M-090821-1	16A-STM8R-063016-1	17A-STM8R-101117-1	18A-STM8R-092818-1	19A-STM8R-092619-1	20A-STM8R-092320-1
Sample Date:					09/22/2021	06/30/2016	10/11/2017	09/28/2018	09/26/2019	09/23/2020	09/08/2021	06/21/2016	10/11/2017	09/08/2021	06/30/2016	10/11/2017	09/28/2018	09/26/2019	09/23/2020
Depth Interval:					5 - 15 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	19.5 - 24.5 ft	19.5 - 24.5 ft	19.5 - 24.5 ft	46.5 - 51.5 ft	46.5 - 51.5 ft	46.5 - 51.5 ft	46.5 - 51.5 ft	46.5 - 51.5 ft
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 U	0.50 U	0.50 UJ	R	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	2.0 U	2.00 U	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	NS	20.0 U	20.0 U	40 U	100 U	100 U	NS	20.0 U	100 U	NS	20.0 U	20.0 U	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U
Acetone	6300	50000	50000	100000	25 U	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	10.0 U	10.0 U	25 U	10.0 U	10.0 U	10.0 UJ	R	25 U
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	2.0 UJ	2.00 UJ	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 UJ	2.00 UJ	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ	1.0 UJ	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	2.0 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	**17.9**	**15.7**	**15.4**	**10**	**4.9**	**3.9**	**7.9**	**17.4**	**2.5**	**7.5**	**6.61**	**5.06**	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 UJ	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	**4.0**	**4.14**	**3.40**	**2.9**	**1.3**	**1.2**	**2.1**	**4.16**	1.0 U	**1.3**	**1.28**	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 UJ	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	**1.7**	**1.71**	**1.50**	**1.3**	R	1.0 UJ	1.0 U	1.00 U	1.0 UJ	**3.1**	**3.29**	1.00 U	1.0 U	R
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.0 U	2.00 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	**1.7**	**1.54**	**1.59**	**1.3**	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	**14.1**	**13.7**	**6.69**	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	2.0 U	2.0 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

Location Group:					Transect C											
				Location ID:	STM-8R	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8S	STM-8S	STM-8S
				Sample ID:	21A-STM8R-090821-1	16A-STM8R1-062816-1	17A-STM8R1-101717-1	17A-STM8R1-101717-2	18A-STM8R1-100218-1	19A-STM8R1-092619-1	20A-STM8R1-092320-1	21A-STM8R1-091621-1	21A-STM8R1-091621-2	16A-STM8S-062116-1	17A-STM8S-101117-1	21A-STM8S-090821-1
				Sample Date:	09/08/2021	06/28/2016	10/17/2017	10/17/2017	10/02/2018	09/26/2019	09/23/2020	09/16/2021	09/16/2021	06/21/2016	10/11/2017	09/08/2021
				Depth Interval:	46.5 - 51.5 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	1 - 11 ft	1 - 11 ft	1 - 11 ft
				Sample Type:	N	N	N	FD	N	N	N	N	FD	N	N	N
Analyte	MCP Method 1 GW-1 Stds	MCP Method 1 GW-2 Stds	MCP Method 1 GW-3 Stds	Upper Concentration Limit (UCL)												
Volatile Organic Compounds (ug/l)																
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 UJ	0.50 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	2.0 U	2.00 U	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ	2.0 U	2.00 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	NS	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	NS	20.0 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U
Acetone	6300	50000	50000	100000	25 U	10.0 U	10.0 U	10.0 U	10.0 UJ	R	25 U	25 UJ	25 UJ	10.0 U	10.0 U	25 U
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Bromomethane	10	7	800	8000	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	2.0 UJ	2.00 UJ	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 UJ	2.0 U	2.00 UJ	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	2.0 UJ	2.00 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**6.6**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ
Dibromochloromethane	2	20	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 UJ
Isopropylbenzene	NE	NE	NE	NE	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ
Methyl tert-butyl ether	NE	NE	NE	100000	**1.4**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.0 UJ	1.00 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 UJ
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**2.0 J+**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 R	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.0 UJ
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.00 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**8.9**	**1.8**	**2.29**	**2.26**	**2.02**	**1.9**	**1.7**	**1.8**	**1.9**	1.0 U	1.00 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	1 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2021 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group:	**Upgradient**						
				Location ID:	**GZA-12**	**GZA-12**	**GZA-12**	**GZA-12**	**GZA-12**	**GZA-12**	
				Sample ID:	16A-GZA12-061416-1	17A-GZA12-101017-1	18A-GZA12-100118-1	19A-GZA12-092619-1	20A-GZA12-092420-1	21A-GZA12-091421-1	
				Sample Date:	06/14/2016	10/10/2017	10/01/2018	09/26/2019	09/24/2020	09/14/2021	
				Depth Interval:	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	
				Sample Type:	N	N	N	N	N	N	
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**							
Volatile Organic Compounds (ug/l)											
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	3.50 U	R	0.50 U	0.50 U	
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	7.00 UJ	1.0 U	1.0 U	1.0 U	
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	0.50 U	0.50 U	
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 UJ	2.00 U	14.0 U	R	0.50 U	0.50 UJ	
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	3.50 U	0.50 U	0.50 U	0.50 U	
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	7.00 U	0.60 U	0.60 U	0.60 U	
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	140 U	40 U	100 U	100 U	
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 UJ	7.00 U	1.0 U	1.0 U	1.0 UJ	
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	14.0 U	R	5.0 U	5.0 U	
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	14.0 U	R	5.0 U	5.0 U	
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	14.0 U	R	5.0 U	5.0 U	
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	70.0 U	R	25 U	25 UJ	
Benzene	5	1000	10000	100000	1.0 U	1.00 U	7.00 U	0.70 U	0.70 U	0.70 U	
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	3.50 U	0.50 U	0.50 U	**0.52**	
Bromoform	4	700	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Bromomethane	10	7	800	8000	2.0 U	2.00 U	14.0 UJ	1.0 UJ	1.0 UJ	1.0 U	
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	14.0 U	5.0 U	5.0 U	5.0 U	
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	1.0 UJ	
Chloroform	70	50	20000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
chloromethane	NE	NE	NE	NE	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	1.0 U	
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	3.50 U	0.40 U	0.40 U	0.40 U	
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	3.50 U	0.50 U	0.50 U	0.50 U	
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	1.0 U	
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 UJ	
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	3.50 U	0.40 U	0.40 U	0.40 U	
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Methyl tert-butyl ether	NE	NE	NE	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	1.0 U	
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	1.0 U	
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	14.0 UJ	1.0 U	1.0 U	1.0 U	
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Styrene	100	100	6000	60000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 R	1.0 UJ	
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	14.0 U	R	2.5 U	2.5 U	
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	3.50 U	0.40 U	0.40 U	0.40 U	
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	14 U	1.0 U	1.0 U	1 U	

Notes:

ft = feet

ug/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased

Detects are bolded

Criteria exceedances are highlighted

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
AE04	Vinyl Chloride	10	3	-14	-14	11	Downward Trend	17	Not Significant
AE100R-1	cis-1,2-Dichloroethene	8	8	2	2	8	Not Significant	12	Not Significant
AE100R-1	Tetrachloroethene	7	5	-2	-2	7	Not Significant	11	Not Significant
AE100R-1	Toluene	8	6	-22	-22	8	Downward Trend	12	Downward Trend
AE100R-1	Trichloroethene	8	6	-1	-1	8	Not Significant	12	Not Significant
AE100R-1	Vinyl Chloride	8	6	14	14	8	Upward Trend	12	Upward Trend
AE100R-2	cis-1,2-Dichloroethene	5	5	4	4	6	Not Significant	8	Not Significant
AE100R-2	Tetrachloroethene	5	5	4	4	6	Not Significant	8	Not Significant
AE100R-2	Toluene	5	3	-2	-2	6	Not Significant	8	Not Significant
AE100R-2	Trichloroethene	5	5	4	4	6	Not Significant	8	Not Significant
AE100R-2	Vinyl Chloride	5	4	4	4	6	Not Significant	8	Not Significant
AE100R-3	cis-1,2-Dichloroethene	8	4	14	14	8	Upward Trend	12	Upward Trend
AE100R-3	Tetrachloroethene	8	8	16	16	8	Upward Trend	12	Upward Trend
AE100R-3	Trichloroethene	8	8	15	15	8	Upward Trend	12	Upward Trend
AE100R-3	1,4-Dioxane	7	7	9	9	7	Upward Trend	11	Not Significant
AE100R-4	cis-1,2-Dichloroethene	8	5	22	22	8	Upward Trend	12	Upward Trend
AE100R-4	Tetrachloroethene	8	8	20	20	8	Upward Trend	12	Upward Trend
AE100R-4	Trichloroethene	8	8	20	20	8	Upward Trend	12	Upward Trend
AE100R-4	1,4-Dioxane	6	6	5	5	7	Not Significant	9	Not Significant
AE100R-5	cis-1,2-Dichloroethene	8	8	24	24	8	Upward Trend	12	Upward Trend
AE100R-5	Tetrachloroethene	8	8	9	9	8	Upward Trend	12	Not Significant
AE100R-5	Trichloroethene	8	8	6	6	8	Not Significant	12	Not Significant
AE100R-5	Vinyl Chloride	8	4	11	11	8	Upward Trend	12	Not Significant
AE100R-6	cis-1,2-Dichloroethene	8	8	2	2	8	Not Significant	12	Not Significant
AE100R-6	Tetrachloroethene	8	8	10	10	8	Upward Trend	12	Not Significant
AE100R-6	Trichloroethene	8	8	10	10	8	Upward Trend	12	Not Significant
AE100R-6	1,4-Dioxane	7	7	-2	-2	7	Not Significant	11	Not Significant
AE101D	cis-1,2-Dichloroethene	8	8	5	5	8	Not Significant	12	Not Significant
AE101D	Tetrachloroethene	8	6	-3	-3	8	Not Significant	12	Not Significant
AE101D	Trichloroethene	8	8	4	4	8	Not Significant	12	Not Significant
AE101D	Vinyl Chloride	8	4	7	7	8	Not Significant	12	Not Significant
AE101R-1	cis-1,2-Dichloroethene	8	8	12	12	8	Upward Trend	12	Upward Trend
AE101R-1	Tetrachloroethene	8	8	12	12	8	Upward Trend	12	Upward Trend
AE101R-1	Trichloroethene	8	8	-10	-10	8	Downward Trend	12	Not Significant
AE101R-1	Vinyl Chloride	8	5	20	20	8	Upward Trend	12	Upward Trend
AE101R-2	cis-1,2-Dichloroethene	8	8	-4	-4	8	Not Significant	12	Not Significant
AE101R-2	Tetrachloroethene	8	8	-6	-6	8	Not Significant	12	Not Significant
AE101R-2	Trichloroethene	8	8	0	0		No Trend		No Trend
AE101R-2	Vinyl Chloride	8	6	12	12	8	Upward Trend	12	Upward Trend
AE101R-2	1,4-Dioxane	7	7	3	3	7	Not Significant	11	Not Significant
AE101R-3	cis-1,2-Dichloroethene	8	8	-14	-14	8	Downward Trend	12	Downward Trend
AE101R-3	Tetrachloroethene	8	8	-22	-22	8	Downward Trend	12	Downward Trend
AE101R-3	Trichloroethene	8	8	-24	-24	8	Downward Trend	12	Downward Trend

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
AE101R-3	Vinyl Chloride	8	6	2	2	8	Not Significant	12	Not Significant
AE101R-3	1,4-Dioxane	6	6	-4	-4	7	Not Significant	9	Not Significant
AE101R-5	cis-1,2-Dichloroethene	8	8	26	26	8	Upward Trend	12	Upward Trend
AE101R-5	Tetrachloroethene	8	8	-6	-6	8	Not Significant	12	Not Significant
AE101R-5	Trichloroethene	8	8	2	2	8	Not Significant	12	Not Significant
AE101R-5	Vinyl Chloride	8	3	-6	-6	8	Not Significant	12	Not Significant
AE101R-5	1,4-Dioxane	6	6	4	4	7	Not Significant	9	Not Significant
AE101R-6	cis-1,2-Dichloroethene	8	8	21	21	8	Upward Trend	12	Upward Trend
AE101R-6	Tetrachloroethene	8	8	-16	-16	8	Downward Trend	12	Downward Trend
AE101R-6	Trichloroethene	8	8	-2	-2	8	Not Significant	12	Not Significant
AE101R-6	Vinyl Chloride	8	5	22	22	8	Upward Trend	12	Upward Trend
AE101R-6	1,4-Dioxane	7	7	13	13	7	Upward Trend	11	Upward Trend
AE101S	cis-1,2-Dichloroethene	8	8	15	15	8	Upward Trend	12	Upward Trend
AE101S	Tetrachloroethene	8	5	9	9	8	Upward Trend	12	Not Significant
AE101S	Trichloroethene	8	7	0	0		No Trend		No Trend
AE102D	cis-1,2-Dichloroethene	8	8	4	4	8	Not Significant	12	Not Significant
AE102D	Tetrachloroethene	8	6	-15	-15	8	Downward Trend	12	Downward Trend
AE102D	Trichloroethene	8	8	-10	-10	8	Downward Trend	12	Not Significant
AE102D	Vinyl Chloride	8	7	2	2	8	Not Significant	12	Not Significant
AE102D	1,4-Dioxane	7	7	-8	-8	7	Downward Trend	11	Not Significant
AE102M	cis-1,2-Dichloroethene	8	8	2	2	8	Not Significant	12	Not Significant
AE102M	Tetrachloroethene	8	8	-13	-13	8	Downward Trend	12	Downward Trend
AE102M	Trichloroethene	8	8	-4	-4	8	Not Significant	12	Not Significant
AE102M	Vinyl Chloride	8	7	5	5	8	Not Significant	12	Not Significant
AE102M	1,4-Dioxane	6	5	4	4	7	Not Significant	9	Not Significant
AE102RR-2	cis-1,2-Dichloroethene	8	8	10	10	8	Upward Trend	12	Not Significant
AE102RR-2	Tetrachloroethene	8	8	-4	-4	8	Not Significant	12	Not Significant
AE102RR-2	Trichloroethene	8	8	2	2	8	Not Significant	12	Not Significant
AE102RR-2	Vinyl Chloride	8	5	17	17	8	Upward Trend	12	Upward Trend
AE102RR-2	1,4-Dioxane	7	7	5	5	7	Not Significant	11	Not Significant
AE102RR-4	cis-1,2-Dichloroethene	8	8	14	14	8	Upward Trend	12	Upward Trend
AE102RR-4	Tetrachloroethene	8	8	-4	-4	8	Not Significant	12	Not Significant
AE102RR-4	Trichloroethene	8	8	-4	-4	8	Not Significant	12	Not Significant
AE102RR-4	1,4-Dioxane	6	6	7	7	7	Upward Trend	9	Not Significant
AE102RR-5	cis-1,2-Dichloroethene	8	8	16	16	8	Upward Trend	12	Upward Trend
AE102RR-5	Tetrachloroethene	8	8	15	15	8	Upward Trend	12	Upward Trend
AE102RR-5	Trichloroethene	8	8	6	6	8	Not Significant	12	Not Significant
AE102RR-6	cis-1,2-Dichloroethene	8	7	-3	-3	8	Not Significant	12	Not Significant
AE102RR-6	Tetrachloroethene	8	8	12	12	8	Upward Trend	12	Upward Trend
AE102RR-6	Trichloroethene	8	8	1	1	8	Not Significant	12	Not Significant
AE102RR-6	1,4-Dioxane	7	7	14	14	7	Upward Trend	11	Upward Trend
AE103D	cis-1,2-Dichloroethene	8	8	-15	-15	8	Downward Trend	12	Downward Trend
AE103D	Tetrachloroethene	8	8	-8	-8	8	Downward Trend	12	Not Significant

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
AE103D	Trichloroethene	8	8	-8	-8	8	Downward Trend	12	Not Significant
AE103D	1,4-Dioxane	7	6	-10	-10	7	Downward Trend	11	Not Significant
AE103R-1	cis-1,2-Dichloroethene	8	8	-10	-10	8	Downward Trend	12	Not Significant
AE103R-1	Tetrachloroethene	8	8	0	0		No Trend		No Trend
AE103R-1	Trichloroethene	8	8	-18	-18	8	Downward Trend	12	Downward Trend
AE103R-1	Vinyl Chloride	8	6	-18	-18	8	Downward Trend	12	Downward Trend
AE103R-1	1,4-Dioxane	7	7	-13	-13	7	Downward Trend	11	Downward Trend
AE103R-2	cis-1,2-Dichloroethene	5	5	0	0		No Trend		No Trend
AE103R-2	Tetrachloroethene	5	5	-2	-2	6	Not Significant	8	Not Significant
AE103R-2	Trichloroethene	5	5	-4	-4	6	Not Significant	8	Not Significant
AE103R-3	cis-1,2-Dichloroethene	8	8	-8	-8	8	Downward Trend	12	Not Significant
AE103R-3	Tetrachloroethene	8	8	-2	-2	8	Not Significant	12	Not Significant
AE103R-3	Trichloroethene	8	8	-12	-12	8	Downward Trend	12	Downward Trend
AE103R-3	Vinyl Chloride	8	6	-3	-3	8	Not Significant	12	Not Significant
AE103R-4	cis-1,2-Dichloroethene	8	8	0	0		No Trend		No Trend
AE103R-4	Tetrachloroethene	8	8	-8	-8	8	Downward Trend	12	Not Significant
AE103R-4	Trichloroethene	8	8	-12	-12	8	Downward Trend	12	Downward Trend
AE103R-4	Vinyl Chloride	8	3	-2	-2	8	Not Significant	12	Not Significant
AE103R-4	1,4-Dioxane	7	7	3	3	7	Not Significant	11	Not Significant
AE103R-5	cis-1,2-Dichloroethene	8	8	12	12	8	Upward Trend	12	Upward Trend
AE103R-5	Tetrachloroethene	8	8	-2	-2	8	Not Significant	12	Not Significant
AE103R-5	Trichloroethene	8	8	-12	-12	8	Downward Trend	12	Downward Trend
AE103R-5	Vinyl Chloride	8	3	5	5	8	Not Significant	12	Not Significant
AE103R-5	1,4-Dioxane	7	7	9	9	7	Upward Trend	11	Not Significant
AE103R-6	cis-1,2-Dichloroethene	5	5	6	6	6	Upward Trend	8	Not Significant
AE103R-6	Tetrachloroethene	5	5	8	8	6	Upward Trend	8	Upward Trend
AE103R-6	Trichloroethene	5	5	-2	-2	6	Not Significant	8	Not Significant
AE103R-7	cis-1,2-Dichloroethene	8	8	12	12	8	Upward Trend	12	Upward Trend
AE103R-7	Tetrachloroethene	8	8	-2	-2	8	Not Significant	12	Not Significant
AE103R-7	Trichloroethene	8	8	-16	-16	8	Downward Trend	12	Downward Trend
AE103R-7	Vinyl Chloride	8	3	-12	-12	8	Downward Trend	12	Downward Trend
AE103S	cis-1,2-Dichloroethene	8	4	-16	-16	8	Downward Trend	12	Downward Trend
AE103S	Vinyl Chloride	8	4	-16	-16	8	Downward Trend	12	Downward Trend
AE104D	cis-1,2-Dichloroethene	8	3	-16	-16	8	Downward Trend	12	Downward Trend
AE104D	Tetrachloroethene	8	6	-21	-21	8	Downward Trend	12	Downward Trend
AE104D	Trichloroethene	8	8	-24	-24	8	Downward Trend	12	Downward Trend
AE104D	1,4-Dioxane	7	6	10	10	7	Upward Trend	11	Not Significant
AE104R-1	cis-1,2-Dichloroethene	8	8	22	22	8	Upward Trend	12	Upward Trend
AE104R-1	Tetrachloroethene	8	8	0	0		No Trend		No Trend
AE104R-1	Trichloroethene	8	8	2	2	8	Not Significant	12	Not Significant
AE104R-1	Vinyl Chloride	8	4	15	15	8	Upward Trend	12	Upward Trend
AE104R-1	1,4-Dioxane	7	7	11	11	7	Upward Trend	11	Upward Trend
AE104R-3	cis-1,2-Dichloroethene	8	7	0	0		No Trend		No Trend

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
AE104R-3	Tetrachloroethene	8	8	-22	-22	8	Downward Trend	12	Downward Trend
AE104R-3	Trichloroethene	8	8	-24	-24	8	Downward Trend	12	Downward Trend
AE104R-3	Vinyl Chloride	8	4	-13	-13	8	Downward Trend	12	Downward Trend
AE104R-3	1,4-Dioxane	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE104R-4	cis-1,2-Dichloroethene	8	7	22	22	8	Upward Trend	12	Upward Trend
AE104R-4	Tetrachloroethene	8	8	-8	-8	8	Downward Trend	12	Not Significant
AE104R-4	Trichloroethene	8	8	-16	-16	8	Downward Trend	12	Downward Trend
AE104R-4	Vinyl Chloride	8	4	-5	-5	8	Not Significant	12	Not Significant
AE104R-4	1,4-Dioxane	7	7	6	6	7	Not Significant	11	Not Significant
AE104R-5	cis-1,2-Dichloroethene	8	7	22	22	8	Upward Trend	12	Upward Trend
AE104R-5	Tetrachloroethene	8	8	-10	-10	8	Downward Trend	12	Not Significant
AE104R-5	Trichloroethene	8	8	-14	-14	8	Downward Trend	12	Downward Trend
AE104R-5	Vinyl Chloride	8	4	-1	-1	8	Not Significant	12	Not Significant
AE104R-6	cis-1,2-Dichloroethene	8	7	22	22	8	Upward Trend	12	Upward Trend
AE104R-6	Tetrachloroethene	8	8	-9	-9	8	Downward Trend	12	Not Significant
AE104R-6	Trichloroethene	8	8	-10	-10	8	Downward Trend	12	Not Significant
AE104R-6	Vinyl Chloride	8	4	-1	-1	8	Not Significant	12	Not Significant
AE104R-6	1,4-Dioxane	7	7	5	5	7	Not Significant	11	Not Significant
AE104S	cis-1,2-Dichloroethene	8	4	-20	-20	8	Downward Trend	12	Downward Trend
AE104S	Tetrachloroethene	8	4	-22	-22	8	Downward Trend	12	Downward Trend
AE104S	Trichloroethene	8	4	-22	-22	8	Downward Trend	12	Downward Trend
AE105D	cis-1,2-Dichloroethene	8	8	-14	-14	8	Downward Trend	12	Downward Trend
AE105D	Trichloroethene	8	7	-16	-16	8	Downward Trend	12	Downward Trend
AE105D	1,4-Dioxane	6	6	-8	-8	7	Downward Trend	9	Not Significant
AE105R-1	cis-1,2-Dichloroethene	8	8	21	21	8	Upward Trend	12	Upward Trend
AE105R-1	Tetrachloroethene	8	8	-1	-1	8	Not Significant	12	Not Significant
AE105R-1	Trichloroethene	8	8	3	3	8	Not Significant	12	Not Significant
AE105R-2	cis-1,2-Dichloroethene	8	8	20	20	8	Upward Trend	12	Upward Trend
AE105R-2	Tetrachloroethene	8	8	4	4	8	Not Significant	12	Not Significant
AE105R-2	Trichloroethene	8	8	-1	-1	8	Not Significant	12	Not Significant
AE105R-2	1,4-Dioxane	6	6	-1	-1	7	Not Significant	9	Not Significant
AE105R-4	cis-1,2-Dichloroethene	8	8	22	22	8	Upward Trend	12	Upward Trend
AE105R-4	Tetrachloroethene	8	8	4	4	8	Not Significant	12	Not Significant
AE105R-4	Trichloroethene	8	8	0	0		No Trend		No Trend
AE105R-4	1,4-Dioxane	5	5	-3	-3	6	Not Significant	8	Not Significant
AE105R-5	cis-1,2-Dichloroethene	7	7	14	14	7	Upward Trend	11	Upward Trend
AE105R-5	Tetrachloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
AE105R-5	Trichloroethene	7	7	2	2	7	Not Significant	11	Not Significant
AE105S	cis-1,2-Dichloroethene	8	8	-20	-20	8	Downward Trend	12	Downward Trend
AE106D	cis-1,2-Dichloroethene	8	5	-25	-25	8	Downward Trend	12	Downward Trend
AE106D	Tetrachloroethene	8	8	-26	-26	8	Downward Trend	12	Downward Trend
AE106D	Trichloroethene	8	8	-24	-24	8	Downward Trend	12	Downward Trend
AE106R-1	cis-1,2-Dichloroethene	8	8	13	13	8	Upward Trend	12	Upward Trend

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
AE106R-1	Tetrachloroethene	8	8	-14	-14	8	Downward Trend	12	Downward Trend
AE106R-1	Toluene	8	3	-18	-18	8	Downward Trend	12	Downward Trend
AE106R-1	Trichloroethene	8	8	-10	-10	8	Downward Trend	12	Not Significant
AE106R-3	cis-1,2-Dichloroethene	8	8	14	14	8	Upward Trend	12	Upward Trend
AE106R-3	Tetrachloroethene	8	8	-14	-14	8	Downward Trend	12	Downward Trend
AE106R-3	Toluene	8	3	-14	-14	8	Downward Trend	12	Downward Trend
AE106R-3	Trichloroethene	8	8	-12	-12	8	Downward Trend	12	Downward Trend
AE106R-3	Vinyl Chloride	8	8	-1	-1	8	Not Significant	12	Not Significant
AE106R-5	cis-1,2-Dichloroethene	7	7	17	17	7	Upward Trend	11	Upward Trend
AE106R-5	Tetrachloroethene	6	6	-7	-7	7	Downward Trend	9	Not Significant
AE106R-5	Trichloroethene	7	7	-1	-1	7	Not Significant	11	Not Significant
AE106R-5	1,4-Dioxane	6	5	6	6	7	Not Significant	9	Not Significant
AE106S	cis-1,2-Dichloroethene	8	8	7	7	8	Not Significant	12	Not Significant
AE106S	Tetrachloroethene	8	8	2	2	8	Not Significant	12	Not Significant
AE106S	Trichloroethene	8	8	1	1	8	Not Significant	12	Not Significant
AE108R-1	cis-1,2-Dichloroethene	8	7	8	8	8	Upward Trend	12	Not Significant
AE108R-1	Tetrachloroethene	7	3	-15	-15	7	Downward Trend	11	Downward Trend
AE108R-1	Toluene	8	7	-23	-23	8	Downward Trend	12	Downward Trend
AE108R-1	Trichloroethene	8	7	-18	-18	8	Downward Trend	12	Downward Trend
AE108R-2	cis-1,2-Dichloroethene	5	5	6	6	6	Upward Trend	8	Not Significant
AE108R-2	Tetrachloroethene	5	5	6	6	6	Upward Trend	8	Not Significant
AE108R-2	Trichloroethene	5	5	0	0		No Trend		No Trend
AE108R-3	cis-1,2-Dichloroethene	8	8	18	18	8	Upward Trend	12	Upward Trend
AE108R-3	Tetrachloroethene	8	8	22	22	8	Upward Trend	12	Upward Trend
AE108R-3	Trichloroethene	8	8	14	14	8	Upward Trend	12	Upward Trend
AE108R-4	cis-1,2-Dichloroethene	5	5	8	8	6	Upward Trend	8	Upward Trend
AE108R-4	Tetrachloroethene	5	5	6	6	6	Upward Trend	8	Not Significant
AE108R-4	Trichloroethene	5	5	6	6	6	Upward Trend	8	Not Significant
AE108R-5	cis-1,2-Dichloroethene	8	8	24	24	8	Upward Trend	12	Upward Trend
AE108R-5	Tetrachloroethene	8	8	18	18	8	Upward Trend	12	Upward Trend
AE108R-5	Toluene	8	3	-16	-16	8	Downward Trend	12	Downward Trend
AE108R-5	Trichloroethene	8	8	13	13	8	Upward Trend	12	Upward Trend
AE109D	1,4-Dioxane	6	5	13	13	7	Upward Trend	9	Upward Trend
AE109R-1	cis-1,2-Dichloroethene	6	6	-9	-9	7	Downward Trend	9	Downward Trend
AE109R-1	Trichloroethene	6	6	-15	-15	7	Downward Trend	9	Downward Trend
AE109R-2	cis-1,2-Dichloroethene	6	6	15	15	7	Upward Trend	9	Upward Trend
AE109R-2	Trichloroethene	6	6	-13	-13	7	Downward Trend	9	Downward Trend
AE109R-2	1,4-Dioxane	4	4	4	4	4	Upward Trend	6	Not Significant
AE109R-3	cis-1,2-Dichloroethene	6	5	-3	-3	7	Not Significant	9	Not Significant
AE109R-3	Trichloroethene	6	5	-9	-9	7	Downward Trend	9	Downward Trend
AE109R-4	cis-1,2-Dichloroethene	6	6	-5	-5	7	Not Significant	9	Not Significant
AE109R-4	Tetrachloroethene	6	3	-13	-13	7	Downward Trend	9	Downward Trend
AE109R-4	Trichloroethene	6	6	-11	-11	7	Downward Trend	9	Downward Trend

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
AE109R-5	cis-1,2-Dichloroethene	6	6	-1	-1	7	Not Significant	9	Not Significant
AE109R-5	Tetrachloroethene	6	6	-15	-15	7	Downward Trend	9	Downward Trend
AE109R-5	Trichloroethene	6	6	-11	-11	7	Downward Trend	9	Downward Trend
AE109R-5	1,4-Dioxane	5	5	-8	-8	6	Downward Trend	8	Downward Trend
AE109R-6	cis-1,2-Dichloroethene	6	6	10	10	7	Upward Trend	9	Upward Trend
AE109R-6	Tetrachloroethene	6	6	-15	-15	7	Downward Trend	9	Downward Trend
AE109R-6	Trichloroethene	6	6	-13	-13	7	Downward Trend	9	Downward Trend
AE109R-7	cis-1,2-Dichloroethene	6	6	-1	-1	7	Not Significant	9	Not Significant
AE109R-7	Trichloroethene	6	6	-15	-15	7	Downward Trend	9	Downward Trend
AE109R-7	1,4-Dioxane	6	6	-7	-7	7	Downward Trend	9	Not Significant
AE109R-8	cis-1,2-Dichloroethene	6	6	11	11	7	Upward Trend	9	Upward Trend
AE109R-8	Tetrachloroethene	5	3	-9	-9	6	Downward Trend	8	Downward Trend
AE109R-8	Trichloroethene	6	6	-15	-15	7	Downward Trend	9	Downward Trend
AE110R-6	cis-1,2-Dichloroethene	6	4	7	7	7	Upward Trend	9	Not Significant
AE110R-6	Toluene	6	3	-10	-10	7	Downward Trend	9	Downward Trend
AE110R-6	1,4-Dioxane	6	6	-7	-7	7	Downward Trend	9	Not Significant
AE111R-1	Toluene	7	3	-13	-13	7	Downward Trend	11	Downward Trend
AE111R-2	Toluene	4	4	-6	-6	4	Downward Trend	6	Downward Trend
AE111R-3	Toluene	7	6	-15	-15	7	Downward Trend	11	Downward Trend
AE111R-4	Toluene	4	4	-6	-6	4	Downward Trend	6	Downward Trend
AE111R-5	Toluene	7	5	-14	-14	7	Downward Trend	11	Downward Trend
AE111R-6	Toluene	7	3	-9	-9	7	Downward Trend	11	Not Significant
AE111R-7	Toluene	4	4	-4	-4	4	Downward Trend	6	Not Significant
AE112R-2	Toluene	4	3	-6	-6	4	Downward Trend	6	Downward Trend
AE112R-3	cis-1,2-Dichloroethene	7	3	15	15	7	Upward Trend	11	Upward Trend
AE112R-3	Toluene	7	4	-16	-16	7	Downward Trend	11	Downward Trend
AE112R-3	Trichloroethene	7	3	7	7	7	Upward Trend	11	Not Significant
AE112R-4	Toluene	4	4	-6	-6	4	Downward Trend	6	Downward Trend
AE112R-5	cis-1,2-Dichloroethene	7	5	14	14	7	Upward Trend	11	Upward Trend
AE112R-5	Tetrachloroethene	6	3	-10	-10	7	Downward Trend	9	Downward Trend
AE112R-5	Trichloroethene	7	7	3	3	7	Not Significant	11	Not Significant
AE112R-6	cis-1,2-Dichloroethene	7	5	18	18	7	Upward Trend	11	Upward Trend
AE112R-6	Tetrachloroethene	6	4	-14	-14	7	Downward Trend	9	Downward Trend
AE112R-6	Toluene	7	6	-21	-21	7	Downward Trend	11	Downward Trend
AE112R-6	Trichloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE112R-7	Tetrachloroethene	4	3	-4	-4	4	Downward Trend	6	Not Significant
AE112R-7	Toluene	4	3	-6	-6	4	Downward Trend	6	Downward Trend
AE112R-7	Trichloroethene	4	3	0	0		No Trend		No Trend
AE23R	Tetrachloroethene	10	10	17	17	11	Upward Trend	17	Upward Trend
AE23R	Toluene	10	8	14	14	11	Upward Trend	17	Not Significant
AE23R	Trichloroethene	10	10	17	17	11	Upward Trend	17	Upward Trend
AE23R	1,4-Dioxane	10	9	-8	-8	11	Not Significant	17	Not Significant
AE23S	cis-1,2-Dichloroethene	6	6	-9	-9	7	Downward Trend	9	Downward Trend

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
AE23S	Tetrachloroethene	6	6	-3	-3	7	Not Significant	9	Not Significant
AE23S	Trichloroethene	6	6	-3	-3	7	Not Significant	9	Not Significant
AE24	Tetrachloroethene	9	9	-6	-6	10	Not Significant	14	Not Significant
AE24	1,4-Dioxane	6	3	-4	-4	7	Not Significant	9	Not Significant
AE26D	Tetrachloroethene	5	4	4	4	6	Not Significant	8	Not Significant
AE26R-1	cis-1,2-Dichloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
AE26R-1	Tetrachloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
AE26R-1	Trichloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
AE26R-1	1,4-Dioxane	7	7	1	1	7	Not Significant	11	Not Significant
AE26R-2	cis-1,2-Dichloroethene	7	7	4	4	7	Not Significant	11	Not Significant
AE26R-2	Tetrachloroethene	7	5	-13	-13	7	Downward Trend	11	Downward Trend
AE26R-2	Trichloroethene	7	7	-19	-19	7	Downward Trend	11	Downward Trend
AE26R-3	cis-1,2-Dichloroethene	4	4	4	4	4	Upward Trend	6	Not Significant
AE26R-3	Tetrachloroethene	4	3	-6	-6	4	Downward Trend	6	Downward Trend
AE26R-3	Trichloroethene	4	4	-4	-4	4	Downward Trend	6	Not Significant
AE26R-4	cis-1,2-Dichloroethene	4	4	4	4	4	Upward Trend	6	Not Significant
AE26R-4	Tetrachloroethene	4	4	-2	-2	4	Not Significant	6	Not Significant
AE26R-4	Trichloroethene	4	4	4	4	4	Upward Trend	6	Not Significant
AE26R-5	cis-1,2-Dichloroethene	7	7	11	11	7	Upward Trend	11	Upward Trend
AE26R-5	Tetrachloroethene	7	7	0	0		No Trend		No Trend
AE26R-5	Trichloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
AE26R-5	1,4-Dioxane	7	7	3	3	7	Not Significant	11	Not Significant
AE26S	cis-1,2-Dichloroethene	8	8	-18	-18	8	Downward Trend	12	Downward Trend
AE26S	Tetrachloroethene	8	8	-16	-16	8	Downward Trend	12	Downward Trend
AE26S	Trichloroethene	8	8	-14	-14	8	Downward Trend	12	Downward Trend
AE27R	cis-1,2-Dichloroethene	6	3	11	11	7	Upward Trend	9	Upward Trend
AE27R	Tetrachloroethene	6	5	-5	-5	7	Not Significant	9	Not Significant
AE27R	Trichloroethene	6	6	-3	-3	7	Not Significant	9	Not Significant
AE28R-1	cis-1,2-Dichloroethene	7	5	17	17	7	Upward Trend	11	Upward Trend
AE28R-1	Tetrachloroethene	7	7	-5	-5	7	Not Significant	11	Not Significant
AE28R-1	Trichloroethene	7	7	5	5	7	Not Significant	11	Not Significant
AE28R-1	Vinyl Chloride	7	3	16	16	7	Upward Trend	11	Upward Trend
AE28R-2	cis-1,2-Dichloroethene	7	4	18	18	7	Upward Trend	11	Upward Trend
AE28R-2	Tetrachloroethene	7	7	1	1	7	Not Significant	11	Not Significant
AE28R-2	Trichloroethene	7	7	10	10	7	Upward Trend	11	Not Significant
AE28R-2	Vinyl Chloride	7	3	-5	-5	7	Not Significant	11	Not Significant
AE28R-2	1,4-Dioxane	7	7	3	3	7	Not Significant	11	Not Significant
AE28R-3	cis-1,2-Dichloroethene	7	5	18	18	7	Upward Trend	11	Upward Trend
AE28R-3	Tetrachloroethene	7	7	-13	-13	7	Downward Trend	11	Downward Trend
AE28R-3	Trichloroethene	7	7	1	1	7	Not Significant	11	Not Significant
AE28R-3	1,4-Dioxane	5	5	5	5	6	Not Significant	8	Not Significant
AE28R-4	cis-1,2-Dichloroethene	7	6	21	21	7	Upward Trend	11	Upward Trend
AE28R-4	Tetrachloroethene	7	7	-2	-2	7	Not Significant	11	Not Significant

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
AE28R-4	Trichloroethene	7	7	13	13	7	Upward Trend	11	Upward Trend
AE29R-1	Trichloroethene	7	6	-11	-11	7	Downward Trend	11	Downward Trend
AE29R-2	Trichloroethene	4	4	-4	-4	4	Downward Trend	6	Not Significant
AE29R-3	cis-1,2-Dichloroethene	7	7	-4	-4	7	Not Significant	11	Not Significant
AE29R-3	Trichloroethene	7	7	-13	-13	7	Downward Trend	11	Downward Trend
AE29R-4	cis-1,2-Dichloroethene	4	4	4	4	4	Upward Trend	6	Not Significant
AE29R-4	Trichloroethene	4	4	-4	-4	4	Downward Trend	6	Not Significant
AE29R-5	cis-1,2-Dichloroethene	7	7	5	5	7	Not Significant	11	Not Significant
AE29R-5	Trichloroethene	7	7	3	3	7	Not Significant	11	Not Significant
AE29R-6	cis-1,2-Dichloroethene	8	8	5	5	8	Not Significant	12	Not Significant
AE29R-6	Toluene	8	4	-16	-16	8	Downward Trend	12	Downward Trend
AE29R-6	Trichloroethene	8	8	-14	-14	8	Downward Trend	12	Downward Trend
AE29R-6	Vinyl Chloride	8	3	4	4	8	Not Significant	12	Not Significant
AE29R-6	1,4-Dioxane	7	7	12	12	7	Upward Trend	11	Upward Trend
AE2I	Tetrachloroethene	4	4	0	0		No Trend		No Trend
AE2I	Trichloroethene	4	3	0	0		No Trend		No Trend
AE2R	Tetrachloroethene	5	5	-4	-4	6	Not Significant	8	Not Significant
EMW-10D	cis-1,2-Dichloroethene	21	20	-34	-0.9974	0.8416	Downward Trend	1.282	Not Significant
EMW-10D	Tetrachloroethene	21	20	51	1.511	0.8416	Upward Trend	1.282	Upward Trend
EMW-10D	Trichloroethene	21	20	14	0.3938	0.8416	Not Significant	1.282	Not Significant
EMW-10D	Vinyl Chloride	21	13	57	1.717	0.8416	Upward Trend	1.282	Upward Trend
EMW-10R	cis-1,2-Dichloroethene	14	14	33	1.752	0.8416	Upward Trend	1.282	Upward Trend
EMW-10R	Tetrachloroethene	14	10	11	0.5547	0.8416	Not Significant	1.282	Not Significant
EMW-10R	Trichloroethene	14	14	13	0.6569	0.8416	Not Significant	1.282	Not Significant
EMW-10R	Vinyl Chloride	21	10	116	3.691	0.8416	Upward Trend	1.282	Upward Trend
EMW-11D	cis-1,2-Dichloroethene	19	19	-24	-0.8061	0.8416	Not Significant	1.282	Not Significant
EMW-11D	Tetrachloroethene	18	17	-21	-0.7586	0.8416	Not Significant	1.282	Not Significant
EMW-11D	Trichloroethene	19	18	-17	-0.5605	0.8416	Not Significant	1.282	Not Significant
EMW-11D	Vinyl Chloride	19	19	-41	-1.401	0.8416	Downward Trend	1.282	Downward Trend
EMW-11R1	cis-1,2-Dichloroethene	24	23	94	2.308	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R1	Tetrachloroethene	24	24	105	2.580	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R1	Trichloroethene	24	24	80	1.961	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R1	Vinyl Chloride	24	9	20	0.4729	0.8416	Not Significant	1.282	Not Significant
EMW-11R2	cis-1,2-Dichloroethene	23	23	75	1.956	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R2	Tetrachloroethene	23	20	105	2.751	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R2	Trichloroethene	23	23	72	1.876	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R2	Vinyl Chloride	23	19	21	0.5291	0.8416	Not Significant	1.282	Not Significant
EMW-11R3	cis-1,2-Dichloroethene	15	14	43	2.078	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R3	Tetrachloroethene	15	14	-2	-0.04955	0.8416	Not Significant	1.282	Not Significant
EMW-11R3	Trichloroethene	15	15	-15	-0.6945	0.8416	Not Significant	1.282	Not Significant
EMW-11R3	Vinyl Chloride	15	7	-15	-0.6991	0.8416	Not Significant	1.282	Not Significant
GZA-101R	cis-1,2-Dichloroethene	29	10	-45	-0.8351	0.8416	Not Significant	1.282	Not Significant
GZA-101R	Tetrachloroethene	33	33	-19	-0.2790	0.8416	Not Significant	1.282	Not Significant

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
GZA-101R	Toluene	23	8	-151	-4.004	0.8416	Downward Trend	1.282	Downward Trend
GZA-101R	Trichloroethene	33	33	-202	-3.115	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	cis-1,2-Dichloroethene	17	11	-57	-2.313	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	Tetrachloroethene	22	15	-137	-3.838	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	Trichloroethene	22	13	-127	-3.595	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	Vinyl Chloride	22	10	-124	-3.483	0.8416	Downward Trend	1.282	Downward Trend
GZA-105D	cis-1,2-Dichloroethene	25	23	-32	-0.7244	0.8416	Not Significant	1.282	Not Significant
GZA-105D	Tetrachloroethene	26	24	-59	-1.279	0.8416	Downward Trend	1.282	Not Significant
GZA-105D	Trichloroethene	26	25	-39	-0.8380	0.8416	Not Significant	1.282	Not Significant
GZA-105D	Vinyl Chloride	26	25	-155	-3.396	0.8416	Downward Trend	1.282	Downward Trend
GZA-105D	1,4-Dioxane	8	8	-14	-14	8	Downward Trend	12	Downward Trend
GZA-105R	cis-1,2-Dichloroethene	25	20	72	1.659	0.8416	Upward Trend	1.282	Upward Trend
GZA-105R	Tetrachloroethene	33	33	166	2.557	0.8416	Upward Trend	1.282	Upward Trend
GZA-105R	Toluene	32	3	-16	-0.2460	0.8416	Not Significant	1.282	Not Significant
GZA-105R	Trichloroethene	33	33	137	2.107	0.8416	Upward Trend	1.282	Upward Trend
GZA-105R	Vinyl Chloride	35	13	-43	-0.5988	0.8416	Not Significant	1.282	Not Significant
GZA-14	cis-1,2-Dichloroethene	10	6	-31	-31	11	Downward Trend	17	Downward Trend
GZA-14	Tetrachloroethene	11	6	-29	-2.239	0.8416	Downward Trend	1.282	Downward Trend
GZA-14	Trichloroethene	10	9	-35	-35	11	Downward Trend	17	Downward Trend
GZA-14A	Tetrachloroethene	9	4	-25	-25	10	Downward Trend	14	Downward Trend
GZA-14A	Trichloroethene	8	4	-16	-16	8	Downward Trend	12	Downward Trend
IP-01R2	cis-1,2-Dichloroethene	13	10	-28	-1.653	0.8416	Downward Trend	1.282	Downward Trend
IP-01R2	Tetrachloroethene	13	13	12	0.6711	0.8416	Not Significant	1.282	Not Significant
IP-01R2	Trichloroethene	13	13	-12	-0.6711	0.8416	Not Significant	1.282	Not Significant
MW-4	cis-1,2-Dichloroethene	11	10	-12	-0.8590	0.8416	Downward Trend	1.282	Not Significant
MW-4	Vinyl Chloride	14	9	19	1.019	0.8416	Upward Trend	1.282	Not Significant
MW-4	1,4-Dioxane	7	7	-7	-7	7	Downward Trend	11	Not Significant
MW-4A	cis-1,2-Dichloroethene	8	6	-2	-2	8	Not Significant	12	Not Significant
MW-4A	Tetrachloroethene	10	4	6	6	11	Not Significant	17	Not Significant
MW-4A	Trichloroethene	9	5	5	5	10	Not Significant	14	Not Significant
MW-4A	Vinyl Chloride	11	3	1	0	0.8416	Not Significant	1.282	Not Significant
MW-5	cis-1,2-Dichloroethene	8	8	10	10	8	Upward Trend	12	Not Significant
MW-7	cis-1,2-Dichloroethene	9	9	12	12	10	Upward Trend	14	Not Significant
MW-7	Trichloroethene	9	9	16	16	10	Upward Trend	14	Upward Trend
MW-7	Vinyl Chloride	16	8	52	2.374	0.8416	Upward Trend	1.282	Upward Trend
PS-1D	cis-1,2-Dichloroethene	17	17	-16	-0.6189	0.8416	Not Significant	1.282	Not Significant
PS-1D	Tetrachloroethene	17	16	-102	-4.168	0.8416	Downward Trend	1.282	Downward Trend
PS-1D	Trichloroethene	17	17	-126	-5.167	0.8416	Downward Trend	1.282	Downward Trend
PS-1D	Vinyl Chloride	22	8	-55	-1.583	0.8416	Downward Trend	1.282	Downward Trend
PS-1M	Tetrachloroethene	5	5	-2	-2	6	Not Significant	8	Not Significant
PS-1M	Trichloroethene	6	5	-3	-3	7	Not Significant	9	Not Significant
PS-1S	cis-1,2-Dichloroethene	12	11	-5	-0.2749	0.8416	Not Significant	1.282	Not Significant
PS-1S	Trichloroethene	13	11	-63	-3.790	0.8416	Downward Trend	1.282	Downward Trend

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
PS-1S	Vinyl Chloride	13	7	-17	-0.9866	0.8416	Downward Trend	1.282	Not Significant
PS-4	cis-1,2-Dichloroethene	6	6	-9	-9	7	Downward Trend	9	Downward Trend
PS-4	Vinyl Chloride	6	3	-8	-8	7	Downward Trend	9	Not Significant
PS-5D	cis-1,2-Dichloroethene	12	10	16	1.033	0.8416	Upward Trend	1.282	Not Significant
PS-5D	Vinyl Chloride	15	9	-17	-0.7937	0.8416	Not Significant	1.282	Not Significant
PS-5S	cis-1,2-Dichloroethene	8	6	-6	-6	8	Not Significant	12	Not Significant
PS-5S	Tetrachloroethene	9	3	-18	-18	10	Downward Trend	14	Downward Trend
PS-5S	Trichloroethene	9	3	-18	-18	10	Downward Trend	14	Downward Trend
PS-5S	Vinyl Chloride	9	3	-12	-12	10	Downward Trend	14	Not Significant
STM-8D	cis-1,2-Dichloroethene	16	12	22	0.9500	0.8416	Upward Trend	1.282	Not Significant
STM-8D	Tetrachloroethene	11	10	-23	-1.723	0.8416	Downward Trend	1.282	Downward Trend
STM-8D	Trichloroethene	13	10	-46	-2.756	0.8416	Downward Trend	1.282	Downward Trend
STM-8D	1,4-Dioxane	6	6	-3	-3	7	Not Significant	9	Not Significant
STM-8M	cis-1,2-Dichloroethene	10	7	6	6	11	Not Significant	17	Not Significant
STM-8M	Trichloroethene	8	3	-20	-20	8	Downward Trend	12	Downward Trend
STM-8R	cis-1,2-Dichloroethene	18	13	3	0.07612	0.8416	Not Significant	1.282	Not Significant
STM-8R	Tetrachloroethene	17	12	-49	-1.991	0.8416	Downward Trend	1.282	Downward Trend
STM-8R	Trichloroethene	18	16	-60	-2.241	0.8416	Downward Trend	1.282	Downward Trend
STM-8R	1,4-Dioxane	6	4	-4	-4	7	Not Significant	9	Not Significant

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical	Conclusion
STM-8R1	Trichloroethene	8	8	-17	-17	8	Downward Trend	12	Downward Trend
STM-8R1	1,4-Dioxane	6	5	7	7	7	Upward Trend	9	Not Significant
TRC-102	cis-1,2-Dichloroethene	7	4	-9	-9	7	Downward Trend	11	Not Significant
TRC-103	cis-1,2-Dichloroethene	4	4	-2	-2	4	Not Significant	6	Not Significant
TRC-103	Trichloroethene	4	3	-1	-1	4	Not Significant	6	Not Significant
TRC-103	Vinyl Chloride	4	3	-1	-1	4	Not Significant	6	Not Significant
TRC-201R	cis-1,2-Dichloroethene	10	10	17	17	11	Upward Trend	17	Upward Trend
TRC-201R	Tetrachloroethene	9	3	-8	-8	10	Not Significant	14	Not Significant
TRC-201R	Trichloroethene	10	10	-17	-17	11	Downward Trend	17	Downward Trend
TRC-201R	Vinyl Chloride	10	4	15	15	11	Upward Trend	17	Not Significant
TRC-301R-1	cis-1,2-Dichloroethene	5	5	-6	-6	6	Downward Trend	8	Not Significant
TRC-301R-1	Tetrachloroethene	5	5	-2	-2	6	Not Significant	8	Not Significant
TRC-301R-1	Trichloroethene	5	5	-6	-6	6	Downward Trend	8	Not Significant
TRC-301R-1	Vinyl Chloride	5	5	-4	-4	6	Not Significant	8	Not Significant
TRC-301R-2	cis-1,2-Dichloroethene	8	8	-4	-4	8	Not Significant	12	Not Significant
TRC-301R-2	Tetrachloroethene	8	8	2	2	8	Not Significant	12	Not Significant
TRC-301R-2	Trichloroethene	8	8	4	4	8	Not Significant	12	Not Significant
TRC-301R-2	Vinyl Chloride	8	5	-14	-14	8	Downward Trend	12	Downward Trend
TRC-301R-3	cis-1,2-Dichloroethene	5	5	0	0		No Trend		No Trend
TRC-301R-3	Tetrachloroethene	5	5	2	2	6	Not Significant	8	Not Significant
TRC-301R-3	Trichloroethene	5	5	4	4	6	Not Significant	8	Not Significant
TRC-301R-3	Vinyl Chloride	5	3	-3	-3	6	Not Significant	8	Not Significant
TRC-301R-4	cis-1,2-Dichloroethene	8	8	-6	-6	8	Not Significant	12	Not Significant
TRC-301R-4	Tetrachloroethene	8	8	0	0		No Trend		No Trend
TRC-301R-4	Trichloroethene	8	8	-15	-15	8	Downward Trend	12	Downward Trend
TRC-301R-4	Vinyl Chloride	8	8	-2	-2	8	Not Significant	12	Not Significant
TRC-401R	cis-1,2-Dichloroethene	11	10	-20	-1.484	0.8416	Downward Trend	1.282	Downward Trend
TRC-401R	Tetrachloroethene	10	10	1	1	11	Not Significant	17	Not Significant
TRC-401R	Trichloroethene	10	10	-9	-9	11	Not Significant	17	Not Significant

Notes:
Datasets presented for wells that were included in the sampling program in September 2021.
Field duplicates assigned the maximum value for the purposes of the trend test.
The detection limit was used for non-detect concentrations for the purposes of the trend test.
Trend test results were interpreted using a confidence level of 80% and 90%. If the absolute value of the statistic is equal to or greater than the critical value, a significant trend is concluded. The direction of the trend is determined by the sign of the statistic with positive statistics indicating an upward trend and negative statistics indicating a downward trend.
* When sample size > 10, the normal approximation is used and calculated per box 4-9 in Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S. When the normal approximation is used, the critical value is the standard normal distribution.
When S is 0, no critical value is calculated and a conclusion of no trend is made.
NA = The Mann-Kendall trend test was not performed because there were less than 4 samples.
ND = The Mann-Kendall trend test was not performed because there were less than 3 detected concentrations.
- Analyte results not available for location.

Table 5-9
Mass Flux Results 2016 vs 2021

Transect	Distance from Source (feet)	Formation	June 2016 Mass Flux (g/day)			September 2021 Mass Flux (g/day)			Percent Decrease
			PCE	TCE	Total	PCE	TCE	Total	2016 --> 2021
Building 1	0	Overburden	4.73	0.12	4.85	0.49	0.03	0.52	89.2
		Bedrock	0.71	1.39	2.10	0.75	1.72	2.47	-17.8
		Total Building 1:	5.44	1.51	**6.95**	1.25	1.75	**3.00**	**56.9**
A (edge of parking lot)	600	Overburden	0.07	0.08	0.15	0.005	0.018	0.02317	84.6
		Bedrock	2.09	3.20	5.29	1.970	3.120	5.09	3.8
		Total Transect A:	2.16	3.28	**5.44**	1.975	3.138	**5.11**	**6.0**
B (wetlands)	1100	Overburden	0.040	0.120	0.16	0.031	0.067	0.0976	39.0
		Bedrock	0.002	6.12E-03	0.01	1.62E-03	4.96E-03	0.01	19.0
		Total Transect B:	0.042	0.126	**0.17**	0.033	0.071	**0.10**	**38.0**
C (end of plume)	3500	Overburden	0.01	0.01	0.02	4.76E-03	4.76E-03	0.0095	52.4
		Bedrock	2.12E-06	9.46E-06	1.16E-05	7.79E-10	3.34E-09	4.119E-09	100.0
		Total Transect C:	0.01	0.01	**0.02**	0.005	0.005	**0.01**	**52.4**

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Building 1 Tank F														
Location ID:	AE23S	AE23S	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-2	AE26S	AE26S	AE26S	AE28R-2	AE28R-2	AE28R-2	AE28R-2
Sample ID:	16A-AE23S-062716-1	17A-AE23S-100517-1	16A-AE26R1-062316-1	17A-AE26R1-100417-1	18A-AE26R1-091818-1	19A-AE26R1-092319-1	20A-AE26R1-091420-1	21A-AE26R2-090121-1	18A-AE26S-092518-1	19A-AE26S-092319-1	20A-AE26S-091420-1	16B-AE28R2-062316-1	17A-AE28R2-100417-1	18A-AE28R2-091818-1	19A-AE28R2-092319-1
Sample Date:	06/27/2016	10/05/2017	06/23/2016	10/04/2017	09/18/2018	09/23/2019	09/14/2020	09/01/2021	09/25/2018	09/23/2019	09/14/2020	06/23/2016	10/04/2017	09/18/2018	09/23/2019
Depth Interval:	10 - 20 ft	10 - 20 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	72 - 78 ft	25 - 30 ft	25 - 30 ft	25 - 30 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte															
Conventional (ug/l)															
Chloride	NS	NS	**121000**	**122000**	**127000**	**133000**	**126000**	**120000**	NS	NS	NS	**326000**	**354000**	**373000 J-**	**422000**
Nitrate	NS	NS	100 U	100 U	100 U	50 U	50 U	50 U	NS	NS	NS	100 U	100 U	100 U	50 U
Nitrite as N	NS	NS	100 U	100 U	100 U	4 U	20 U	8 U	NS	NS	NS	1300 U	100 U	200 U	40 U
Sulfate	NS	NS	**9970**	**15300**	**15700**	**17500**	**15700**	**20200**	NS	NS	NS	**33800**	**37600**	**34500**	**39400**
Sulfide	NS	NS	100 U	100 U	100 U	**170**	**230**	**270**	NS	NS	NS	100 U	100 U	100 U	**300**
Total Organic Carbon	NS	NS	**10800**	**2290**	5000 U	1000 U	1000 U	1000 U	NS	NS	NS	**1600**	**1200**	10000 U	1000 U
Dissolved Gases (ug/l)															
Acetylene	NS	NS	**0.44 J**	**0.29 J**	**0.17 J**	**0.25 J**	0.11 U	0.13 U	NS	NS	NS	**15**	**0.99**	**1.1**	**0.90**
Ethane	NS	NS	**2.2**	**1.1**	**1.4**	**1.0**	**1.6**	0.17 U	NS	NS	NS	**11**	**11**	**10**	**7.7**
Ethene	NS	NS	**3.4**	**1.6**	**1.3**	**1.3**	**1.1**	**2.9**	NS	NS	NS	**23**	**17**	**13**	**11**
Hydrogen (nM)	NS	NS	NS	**42**	**28**	**20**	**67**	**4.9**	NS	NS	NS	NS	**7.3**	**240**	**220**
Methane	NS	NS	**65**	**250**	**160**	**190 J-**	**160**	**38**	NS	NS	NS	**67**	**160**	**200**	**190 J-**
Propane	NS	NS	**0.23**	**0.16**	**0.19**	**0.11**	**0.18**	0.29 U	NS	NS	NS	**0.87**	**1.1**	**1.0**	**0.74**
Dissolved Metals (ug/l)															
Iron	**1180**	**428**	15.0 U	**131**	250 U	**58**	**106**	**308**	125 U	**11**	11 U	**1510**	**1140**	**931**	**823**
Manganese	**590**	**468**	**16.4**	**518**	**524 J**	**636**	**772**	**623**	**426**	**440**	**1020**	**1710**	**1810**	**1800**	**1870**
Total Metals (ug/l)															
Iron	**1380**	**568**	**195**	**265**	250 U	**243**	**345**	**326**	125 U	**57**	**11**	**1550**	**1110**	**907**	**892**
Manganese	**652**	**495**	**331**	**451**	**357 J**	**667**	**801**	**623**	**430**	**437**	**1050**	**1750**	**1750**	**1800**	**1920**
Field Parameters															
Dissolved Oxygen (mg/L)	**0.27**	**0.27**	**0.3**	**0.23**	**0.39**	**0.4**	**2.65**	**0.29**	**2.85**	**0.5**	**0.06**	**0.09**	**0.19**	**4.57**	**2.6**
Oxidation Reduction Potential (ORP) (mV)	**110.8**	**170.4**	**-124.4**	**-225.7**	**-253**	**-75.4**	**-357.1**	**-174.9**	**54.9**	**146.7**	**235.1**	**-67.3**	**-213.6**	**-218.9**	**-288.7**
Specific Conductance (uS/cm)	**142**	**139**	**1377**	**685**	**561**	**679**	**655**	**574**	**235**	**188**	**1000**	**1241**	**1317**	**1452**	**1613**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Building 1 Tank F													
Location ID:	AE28R-2	AE28R-2	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	GZA-101R	GZA-101R	GZA-101R	GZA-101R	GZA-101R	GZA-101R
Sample ID:	20A-AE28R2-091420-1	21A-AE28R2-090121-1	16B-AE29R6-062816-1	17A-AE29R6-101717-1	18A-AE29R6-091818-1	19A-AE29R6-092419-1	20A-AE29R6-092220-1	21A-AE29R6-091421-1	16A-GZA101R-061416-1	17A-GZA101R-101017-1	18A-GZA101R-091818-1	19A-GZA101R-092619-1	20A-GZA101R-092420-1	21A-GZA101R-091421-1
Sample Date:	09/14/2020	09/01/2021	06/28/2016	10/17/2017	09/18/2018	09/24/2019	09/22/2020	09/14/2021	06/14/2016	10/10/2017	09/18/2018	09/26/2019	09/24/2020	09/14/2021
Depth Interval:	75 - 85 ft	75 - 85 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	36.5 - 38 ft	36 - 38 ft	36.5 - 38 ft	36.5 - 38 ft	36.5 - 38 ft	36.5 - 38 ft
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	**405000**	**458000**	**1220000**	**442000**	**420000**	**424000**	**461000**	**423000**	**907000**	**1060000**	**1150000**	**1370000**	**1200000**	**1160000**
Nitrate	50 U	50 U	**3020**	100 U	100 U	50 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U	50 UJ
Nitrite as N	40 U	40 U	600 U	200 U	200 U	40 U	40 U	40 U	500 U	R	500 U	100 U	4 U	100 U
Sulfate	**35300**	**37000**	**49200**	**49200**	**45200**	**46300**	**43900**	**43800**	**46300**	**49400**	**50000**	**52800**	**46400**	**56700**
Sulfide	**650**	**420**	100 U	100 U	100 U	50 U	**70**	50 U	100 U	100 U	100 U	50 U	50 U	50 U
Total Organic Carbon	1000 U	**1700**	**1000**	**1490 J+**	10000 U	1000 U	**1200**	1000 U	NS	NS	NS	NS	NS	1000 U
Dissolved Gases (ug/l)														
Acetylene	0.11 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.74 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.74 U	NS
Ethane	**6.1**	**6.2**	**0.80**	**0.88**	**0.86**	**0.26**	**0.42 J**	**0.61 J**	**4.6**	**2.2**	**0.95**	**0.59**	**0.40 J**	NS
Ethene	**10**	**10**	**0.64**	**1.2**	**1.4**	**0.90**	**1.2**	**1.1**	**0.035 J**	**0.049 J**	**0.12**	0.10 U	1.0 U	NS
Hydrogen (nM)	**1.8 J**	**6.1**	NS	**320**	**100**	**180**	**15**	**11**	NS	**20**	**33**	**22**	**26**	**4.4**
Methane	**130**	**120**	**7.1**	**580**	**1300**	**1100 J-**	**900**	2.0 U	**61**	**27**	**15**	**11 J-**	**4.6 J**	NS
Propane	**0.57**	**0.63 J**	**0.29**	**0.31**	**0.34**	**0.14**	**0.13**	0.29 U	**0.71**	**0.39**	**0.17**	**0.17**	**0.15**	NS
Dissolved Metals (ug/l)														
Iron	**876**	**1090**	**1030**	**1340**	**1080**	**1280**	**1390**	**1120**	**12800**	**15200**	**17600**	**17200**	**17800**	**17200**
Manganese	**1750**	**2110**	**4190**	**847**	**876**	**974**	**1030**	**849**	**7020**	**7390**	**8440**	**8200**	**8040**	**6660**
Total Metals (ug/l)														
Iron	**939**	**1040**	**1040**	**1370**	**1120**	**1210**	**1190**	**1180**	**11600**	**14500**	**17000**	**19600**	**16800**	**16800**
Manganese	**1920**	**2210**	**4270**	**860**	**874**	**886**	**890**	**872**	**7040**	**7780**	**8540**	**8020**	**8000**	**6870**
Field Parameters														
Dissolved Oxygen (mg/L)	**0.68**	**0.21**	**0.4**	**0.26**	**0.93**	**0.15**	**0.61**	**0.2**	**0.3**	**0.26**	**0.31**	**0.49**	**0**	**0.11**
Oxidation Reduction Potential (ORP) (mV)	**347.2**	**-257.4**	**0.7**	**-275.6**	**-104.1**	**-262.1**	**174.2**	**-176.5**	**-90.6**	**-140**	**-95.8**	**-104.3**	**-84.7**	**-113.7**
Specific Conductance (uS/cm)	**1539**	**1689**	**4567**	**1908**	**1845**	**1782**	**2457**	**1676**	**3336**	**3670**	**4101**	**4457**	**4005**	**3245**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Building 1 Tank F	Downgradient Wetland													
Location ID:	GZA-101R	GZA-14	GZA-14	GZA-14A	GZA-14A	GZA-14A	GZA-14A	GZA-14A	GZA-14A	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
Sample ID:	21A-GZA101R-092221-1	16A-GZA14-063016-1	17A-GZA14-102017-1	16A-GZA14A-061716-1	16A-GZA14A-061716-2	17A-GZA14A-102017-1	18A-GZA14A-092818-1	19A-GZA14A-093019-1	20A-GZA14A-091720-1	16A-MW4-062416-1	17A-MW4-101817-1	18A-MW4-100418-1	19A-MW4-091919-1	19A-MW4-091919-2	20A-MW4-091820-1
Sample Date:	09/22/2021	06/30/2016	10/20/2017	06/17/2016	06/17/2016	10/20/2017	09/28/2018	09/30/2019	09/17/2020	06/24/2016	10/18/2017	10/04/2018	09/19/2019	09/19/2019	09/18/2020
Depth Interval:	36.5 - 38 ft	39 - 49 ft	39 - 49 ft	0 - 15 ft	0 - 15 ft	0 - 15 ft	0 - 15 ft	0 - 15 ft	0 - 15 ft	18 - 28 ft	18 - 28 ft	18 - 28 ft	18 - 28 ft	18 - 28 ft	18 - 28 ft
Sample Type:	N	N	N	N	FD	N	N	N	N	N	N	N	N	FD	N
Analyte															
Conventional (ug/l)															
Chloride	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrite as N	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Organic Carbon	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Gases (ug/l)															
Acetylene	0.13 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	0.17 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	0.24 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hydrogen (nM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	**2.2 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Propane	0.29 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)															
Iron	NS	**12100**	**18500**	**7040**	**7100**	**8150**	**4040**	**8030**	**13700**	**21900**	**25700**	**30000**	**24200**	**24100**	**29000**
Manganese	NS	**662**	**1460**	**2110**	**2080**	**2290**	**1160**	**1650**	**2970**	**1180 J**	**1330**	**1400**	**1190**	**1160**	**1490**
Total Metals (ug/l)															
Iron	NS	**12400**	**18500**	**7340**	**7490**	**8100**	**4520**	**8950**	**16100**	**22900**	**25900 J**	**29000**	**24800**	**24700**	**34800**
Manganese	NS	**700**	**1490**	**2240**	**2240**	**2160**	**1300**	**1710**	**3060**	**1050 J**	**1340**	**1460**	**1230**	**1230**	**1570**
Field Parameters															
Dissolved Oxygen (mg/L)	NS	**0.11**	**0.35**	**0.19**	NS	**0.22**	**1.18**	**0.29**	**0**	**0.81**	**0.15**	**0.19**	**0.27**	NS	**0.22**
Oxidation Reduction Potential (ORP) (mV)	NS	**20.3**	**-68.5**	**63.8**	NS	**2.9**	**116.1**	**53.7**	**113.7**	**-47.3**	**-89.5**	**-55**	**-59.7**	NS	**-104.3**
Specific Conductance (uS/cm)	NS	**745**	**1387**	**421**	NS	**440**	**352**	**379**	**583.5**	**435**	**588**	**650**	**546**	NS	**760**

Notes:
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J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Downgradient Wetland									EPL						
Location ID:	MW-4	MW-4A	MW-4A	MW-4A	MW-4A	MW-4A	PS-8D	PS-8D	PS-8D	AE03	AE03	AE03	AE03	AE03	AE03	AE03
Sample ID:	20A-MW4-091820-2	16A-MW4A-062416-1	17A-MW4A-101817-1	18A-MW4A-100418-1	19A-MW4A-091919-1	20A-MW4A-091820-1	18A-PS8D-100218-1	19A-PS8D-091719-1	20A-PS8D-091520-1	16A-AE03-062816-1	16A-AE03-062816-2	17A-AE03-100917-1	18A-AE03-092418-1	18A-AE03-092418-2	19A-AE03-091219-1	19A-AE03-091219-2
Sample Date:	09/18/2020	06/24/2016	10/18/2017	10/04/2018	09/19/2019	09/18/2020	10/02/2018	09/17/2019	09/15/2020	06/28/2016	06/28/2016	10/09/2017	09/24/2018	09/24/2018	09/12/2019	09/12/2019
Depth Interval:	18 - 28 ft	38 - 48 ft	38 - 48 ft	38 - 48 ft	38 - 48 ft	38 - 48 ft	51.8 - 56.8 ft	51.8 - 56.8 ft	51.8 - 56.8 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft
Sample Type:	FD	N	N	N	N	N	N	N	N	N	FD	N	N	FD	N	FD
Analyte																
Conventional (ug/l)																
Chloride	NS	NS	NS	NS	NS	NS	NS	NS	NS	**172000**	**164000**	**260000**	NS	NS	NS	NS
Nitrate	NS	NS	NS	NS	NS	NS	NS	NS	NS	100 U	100 U	100 U	NS	NS	NS	NS
Nitrite as N	NS	NS	NS	NS	NS	NS	NS	NS	NS	100 U	100 U	100 U	NS	NS	NS	NS
Sulfate	NS	NS	NS	NS	NS	NS	NS	NS	NS	1000 U	1000 U	1000 U	NS	NS	NS	NS
Sulfide	NS	NS	NS	NS	NS	NS	NS	NS	NS	100 U	100 U	100 U	NS	NS	NS	NS
Total Organic Carbon	NS	NS	NS	NS	NS	NS	NS	NS	NS	**6000**	**6000**	**7180**	NS	NS	NS	NS
Dissolved Gases (ug/l)																
Acetylene	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.50 U	0.50 U	0.50 U	NS	NS	NS	NS
Ethane	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1.1**	**0.81**	**1.6**	NS	NS	NS	NS
Ethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.073 J**	**0.055 J**	**0.045 J**	NS	NS	NS	NS
Hydrogen (nM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**4.3**	NS	NS	NS	NS
Methane	NS	NS	NS	NS	NS	NS	NS	NS	NS	**3200 J**	**2200 J**	**4700**	NS	NS	NS	NS
Propane	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.029 J**	0.10 U	**0.064 J**	NS	NS	NS	NS
Dissolved Metals (ug/l)																
Iron	**29400**	**23100 J**	**34100**	**36100**	**27000**	**33100**	**1050**	**761**	**738**	**25600**	NS	**26700**	**15200**	**15200**	**10900**	**10800**
Manganese	**1500**	**1100**	**1530**	**1420**	**1080**	**1370**	**16.2 J**	**7**	**7**	**2300**	NS	**2630**	**1710**	**1710**	**1430**	**1430**
Total Metals (ug/l)																
Iron	**35900**	**20700 J**	**35900 J**	**34700**	**28000**	**39700**	**2390**	**5380**	**2290**	**25700**	NS	**26600**	**15200**	**15400**	**10300**	**10400**
Manganese	**1600**	**1090**	**1590**	**1450**	**1140**	**1440**	**13.2 J**	**31**	**17**	**2140**	NS	**2590**	**1700**	**1730**	**1490**	**1470**
Field Parameters																
Dissolved Oxygen (mg/L)	NS	**0.37**	**0.28**	**0.21**	**0.37**	**0.42**	**6.43**	**0.71**	**0.41**	**0.12**	NS	**0.22**	**1.42**	NS	**0.6**	NS
Oxidation Reduction Potential (ORP) (mV)	NS	**-32.5**	**-71.4**	**-51.4**	**-53.6**	**-63.2**	**187.6**	**-25.6**	**-124.3**	**-52.4**	NS	**-114.2**	**-97.8**	NS	**-72.3**	NS
Specific Conductance (uS/cm)	NS	**593**	**1086**	**953**	**902**	**1002**	**33**	**319**	**307.7**	**810**	NS	**1157**	**1022**	NS	**1024**	NS

Notes:
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J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	EPL															
Location ID:	AE03	AE03	AE03	AE03	AE04	AE04	GZA-06	GZA-06	GZA-06	GZA-10	GZA-10	GZA-10	GZA-105D	GZA-105D	GZA-105D	GZA-105D
Sample ID:	20A-AE3-092320-1	20A-AE3-092320-2	21A-AE3-091521-1	21A-AE03-092221-1	16A-AE04-061316-1	17A-AE04-100917-1	18A-GZA6-100118-1	19A-GZA6-092019-1	20A-GZA6-092120-1	18A-GZA10-100118-1	19A-GZA10-092619-1	20A-GZA10-092120-1	16A-GZA105D-061516-1	17A-GZA-105D-101917-1	21A-GZA105D-091521-1	21A-GZA105D-091521-2
Sample Date:	09/23/2020	09/23/2020	09/15/2021	09/22/2021	06/13/2016	10/09/2017	10/01/2018	09/20/2019	09/21/2020	10/01/2018	09/26/2019	09/21/2020	06/15/2016	10/19/2017	09/15/2021	09/15/2021
Depth Interval:	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	8 - 18 ft	8 - 18 ft	8 - 18 ft	13 - 38 ft	13 - 38 ft	13 - 38 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft
Sample Type:	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	FD
Analyte																
Conventional (ug/l)																
Chloride	NS	NS	**459000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**701000**	**715000**
Nitrate	NS	NS	50 UJ	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**450 J-**	**480 J-**
Nitrite as N	NS	NS	40 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	40 U	40 U
Sulfate	NS	NS	5000 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**19600**	**20100**
Sulfide	NS	NS	**210**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	50 U	50 U
Total Organic Carbon	NS	NS	**3800**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1300**	**1400**
Dissolved Gases (ug/l)																
Acetylene	NS	NS	NS	0.13 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	NS	NS	NS	**2.3**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	NS	NS	NS	0.24 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hydrogen (nM)	NS	NS	**6.6**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5.0**	NS
Methane	NS	NS	NS	**3100**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Propane	NS	NS	NS	0.29 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)																
Iron	**8930**	**8900**	**14300**	NS	**7450**	**5510**	**870**	**1500**	**1340**	**10900**	**6820**	**3570**	**27500 J**	**22300**	**2730**	**2560**
Manganese	**1160**	**1170**	**2210**	NS	**2500**	**2680**	**71.6**	**143**	**129**	**1020**	**1170**	**1530**	**4750**	**4860**	**2020**	**2000**
Total Metals (ug/l)																
Iron	**9280**	**9440**	**13700**	NS	**7680**	**5480**	**1010**	**1590**	**1340**	**12200**	**7000**	**3680**	**25200**	**21900**	**3070**	**3030**
Manganese	**1180**	**1190**	**2180**	NS	**2740**	**2730**	**86.4**	**147**	**130**	**1090**	**1130**	**1500**	**4660**	**4980**	**1930**	**1940**
Field Parameters																
Dissolved Oxygen (mg/L)	**0.28**	NS	**0.17**	NS	**0.39**	**0.36**	**0.46**	**0.3**	**0.13**	**0.45**	**0.19**	**0.05**	**0.35**	**0.15**	**0.21**	NS
Oxidation Reduction Potential (ORP) (mV)	**-95.1**	NS	**-87.3**	NS	**67.9**	**31.5**	**37.8**	**62.4**	**-15.9**	**-50.8**	**-53.9**	**-20.3**	**-65.7**	**-119.7**	**70.1**	NS
Specific Conductance (uS/cm)	**1080**	NS	**1774**	NS	**730**	**1198**	**84**	**148.9**	**158.2**	**601**	**639**	**1028**	**1413**	**1736**	**2184**	NS

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	EPL													
Location ID:	GZA-105D	GZA-105D	GZA-105R	GZA-105R	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	TRC-101	TRC-101	TRC-102	TRC-102
Sample ID:	21A-GZA105D-092221-1	21A-GZA105D-092221-2	21A-GZA105R-091421-1	21A-GZA105R-092221-1	16A-GZA105S-061516-1	17A-GZA105S-100917-1	17A-GZA105S-100917-2	18A-GZA105S-092518-1	19A-GZA105S-091819-1	20A-GZA105S-092420-1	21A-TRC101-091421-1	21A-TRC101-092221-1	16A-TRC102-062716-1	17A-TRC102-100217-1
Sample Date:	09/22/2021	09/22/2021	09/14/2021	09/22/2021	06/15/2016	10/09/2017	10/09/2017	09/25/2018	09/18/2019	09/24/2020	09/14/2021	09/22/2021	06/27/2016	10/02/2017
Depth Interval:	16 - 26 ft	16 - 26 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	1.5 - 10.5 ft	1.5 - 10.5 ft	2.25 - 12.25 ft	2.25 - 12.25 ft
Sample Type:	N	FD	N	N	N	N	FD	N	N	N	N	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	NS	NS	**256000**	NS	**184000 J+**	**244000**	**247000**	NS	NS	NS	**611000**	NS	NS	NS
Nitrate	NS	NS	**140**	NS	100 U	100 U	100 U	NS	NS	NS	50 UJ	NS	NS	NS
Nitrite as N	NS	NS	20 U	NS	100 U	100 U	100 U	NS	NS	NS	40 U	NS	NS	NS
Sulfate	NS	NS	**26700**	NS	1000 UJ	1000 U	1000 U	NS	NS	NS	5000 U	NS	NS	NS
Sulfide	NS	NS	50 U	NS	100 U	100 U	100 U	NS	NS	NS	**440**	NS	NS	NS
Total Organic Carbon	NS	NS	1000 U	NS	**6900**	**11600**	**12400**	NS	NS	NS	**7300**	NS	NS	NS
Dissolved Gases (ug/l)														
Acetylene	0.13 U	0.13 U	NS	0.13 U	NS	0.50 U	0.50 UJ	NS	NS	NS	NS	0.13 U	NS	NS
Ethane	**1.0**	**0.96 J**	NS	**2.3**	NS	**1.8 J**	**1.2 J**	NS	NS	NS	NS	0.17 U	NS	NS
Ethene	0.24 U	0.24 U	NS	**1.6**	NS	**0.038 J**	**0.032 J**	NS	NS	NS	NS	0.24 U	NS	NS
Hydrogen (nM)	NS	NS	**6.9**	NS	NS	**5.6**	NS	NS	NS	NS	**5.7**	NS	NS	NS
Methane	**370**	**320**	NS	**88**	NS	**3700 J**	**2300 J**	NS	NS	NS	NS	2.0 U	NS	NS
Propane	0.29 U	0.29 U	NS	0.29 U	NS	**0.035 J**	**0.014 J**	NS	NS	NS	NS	0.29 U	NS	NS
Dissolved Metals (ug/l)														
Iron	NS	NS	**142 J**	NS	**45300**	**43500**	**41400**	**29900**	**28500**	**28300**	**10200**	NS	**15000**	**19100**
Manganese	NS	NS	**986**	NS	**3810 J-**	**2730**	**2630**	**1690**	**1800**	**1590**	**2220**	NS	**1990**	**3870**
Total Metals (ug/l)														
Iron	NS	NS	**55 J**	NS	**45300**	**43800**	**42200**	**29800**	**28800**	**28500**	**11600**	NS	**14200**	**19500**
Manganese	NS	NS	**1940**	NS	**3440**	**2760**	**2630**	**1670**	**1830**	**1620**	**2330**	NS	**2210**	**3920**
Field Parameters														
Dissolved Oxygen (mg/L)	NS	NS	**0.3**	NS	**0.24**	**0.34**	NS	**0.82**	**0.55**	**0.17**	**0.22**	NS	**0.19**	**0.12**
Oxidation Reduction Potential (ORP) (mV)	NS	NS	**-47.1**	NS	**-45**	**-105.7**	NS	**-62.6**	**-91.8**	**-98.1**	**-81.5**	NS	**29.8**	**28.6**
Specific Conductance (uS/cm)	NS	NS	**1137**	NS	**973**	**1011**	NS	**965**	**1414**	**1381**	**2351**	NS	**471**	**714**

Notes:
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mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	EPL			Former Tank Farm							Transect A			
Location ID:	TRC-102	TRC-102	TRC-102	AE100R-1	AE100R-5	AE100R-5	AE100R-5	AE100R-5	AE100R-5	AE100R-5	AE101R-5	AE102M	AE102M	AE102M
Sample ID:	18A-TRC102-092418-1	19A-TRC102-092019-1	20A-TRC102-092320-1	21A-AE100R1-090921-1	16A-AE100R5-061516-1	17A-AE100R5-100417-1	18A-AE100R5-091918-1	19A-AE100R5-092319-1	20A-AE100R5-091020-1	21A-AE100R5-090921-1	20A-AE101R5-092420-1	16A-AE102M-061316-1	17A-AE102M-100217-1	18A-AE102M-100118-1
Sample Date:	09/24/2018	09/20/2019	09/23/2020	09/09/2021	06/15/2016	10/04/2017	09/19/2018	09/23/2019	09/10/2020	09/09/2021	09/24/2020	06/13/2016	10/02/2017	10/01/2018
Depth Interval:	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	18 - 24 ft	88 - 93 ft	88.68 - 93.68 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft	175 - 180 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	NS	NS	NS	**701000**	**269000 J+**	**316000**	**325000**	**368000**	**389000**	**389000**	NS	**499000**	**641000**	**526000**
Nitrate	NS	NS	NS	**580**	**191**	**402**	**464**	**680**	**690**	**840**	NS	100 U	100 U	100 U
Nitrite as N	NS	NS	NS	40 U	100 U	100 U	1300 U	40 U	20 U	40 U	NS	100 U	100 U	300 U
Sulfate	NS	NS	NS	**11000**	**27600 J-**	**29600**	**28200**	**31000**	**29300**	**30000**	NS	**22600**	**18700**	**13400**
Sulfide	NS	NS	NS	**110**	100 U	100 U	100 U	50 U	50 U	50 U	NS	100 U	100 U	100 U
Total Organic Carbon	NS	NS	NS	**2900**	NS	NS	NS	NS	NS	**1200**	NS	**1000**	**3160**	**2730**
Dissolved Gases (ug/l)														
Acetylene	NS	NS	NS	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.13 U	NS	0.50 U	0.50 U	0.50 U
Ethane	NS	NS	NS	**2.0**	**2.3**	**2.3**	**2.7**	**2.4**	**1.8**	**2.0**	NS	**1.8**	**2.0**	**2.9**
Ethene	NS	NS	NS	**3.5**	**88**	**8.2**	**4.2**	**5.4**	**7.3**	**2.4**	NS	**3.2**	**2.5**	**0.47**
Hydrogen (nM)	NS	NS	NS	**3.6**	NS	**2.9**	**3.8**	**2.4**	NS	**5.6**	**5.3**	NS	**2.8**	**29**
Methane	NS	NS	NS	2.0 U	**920 J**	**320**	**170**	**99 J-**	**69**	**42**	NS	**140**	**910**	**490**
Propane	NS	NS	NS	0.29 U	**0.060 J**	**0.19**	**0.23**	**0.19**	0.014 U	0.29 U	NS	**0.066 J**	**0.090 J**	**0.095 J**
Dissolved Metals (ug/l)														
Iron	**23600**	**22500**	**23700**	**33800**	335 U	40.0 U	250 U	**76**	**30**	**3300 J**	NS	**3190**	**3550**	**824**
Manganese	**3750**	**3180**	**3120**	**9980**	**1210 J-**	**120**	**720**	**675**	**656**	**1770 J**	NS	**11500**	**17600**	**10900**
Total Metals (ug/l)														
Iron	**24000**	**23700**	**23500**	**34300**	**377**	**150**	250 U	**76**	**60**	**18 J**	NS	**3340**	**3710**	**906**
Manganese	**3720**	**3260**	**3030**	**9020**	**1220**	**383**	**765**	**642**	**717**	**664 J**	NS	**11700**	**17900**	**10800**
Field Parameters														
Dissolved Oxygen (mg/L)	**4.5**	**0.07**	**0.72**	**0.33**	**0.01**	**3.7**	**0.38**	**0.85**	**0.12**	**0.27**	**1.03**	**0.66**	**0.16**	**0.59**
Oxidation Reduction Potential (ORP) (mV)	**-7.6**	**-33.5**	**-92.9**	**-50.8**	**-158.2**	**-47**	**41.9**	**30**	**81.6**	**68.2**	**-209.7**	**25.9**	**-82.3**	**69.9**
Specific Conductance (uS/cm)	**1135**	**1084**	**1344**	**2458**	**1222**	**1107**	**1104**	**1355**	**1438**	**1323**	**524**	**2045**	**2299**	**2042**

Notes:
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mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Transect A													
Location ID:	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE103D	AE103D	AE103D
Sample ID:	19A-AE102M-092519-1	19A-AE102M-092519-2	20A-AE102M-090920-1	20A-AE102M-090920-2	21A-AE102M-091521-1	21A-AE102M-092221-1	16A-AE102RR6-061416-1	17A-AE102RR6-100317-1	18A-AE102RR6-091918-1	19A-AE102RR6-092419-1	20A-AE102RR6-090920-1	16A-AE103D-061316-1	17A-AE103D-100317-1	18A-AE103D-092418-1
Sample Date:	09/25/2019	09/25/2019	09/09/2020	09/09/2020	09/15/2021	09/22/2021	06/14/2016	10/03/2017	09/19/2018	09/24/2019	09/09/2020	06/13/2016	10/03/2017	09/24/2018
Depth Interval:	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft
Sample Type:	N	FD	N	FD	N	N	N	N	N	N	N	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	**530000**	**532000**	**603000**	**611000**	**689000**	NS	**115000**	**128000 J-**	**140000**	**163000**	**150000**	**818000**	**842000 J-**	**818000**
Nitrate	50 U	50 U	50 U	50 U	50 UJ	NS	100 U	100 U	100 U	50 U	50 U	**3280**	**3980**	**3840**
Nitrite as N	40 U	40 U	40 U	40 U	40 U	NS	100 U	100 U	600 U	4 U	8 U	3300 U	100 U	3200 UJ
Sulfate	**7600**	**7500**	**5900**	**5600**	**7700**	NS	**23600**	**25900**	**24400**	**26600**	**24700**	**31600**	**33400**	**30100**
Sulfide	50 U	50 U	50 U	50 U	**60**	NS	100 U	100 U	100 U	50 U	50 U	100 U	100 U	100 U
Total Organic Carbon	**1600**	**1600**	**2600**	**2500**	**2200**	NS	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	**1630**	**1750**
Dissolved Gases (ug/l)														
Acetylene	0.50 U	0.50 U	0.11 U	0.11 U	NS	0.13 U	**0.076 J**	**0.035 J**	0.50 U	**0.073 J**	0.11 U	0.50 U	0.50 U	0.50 U
Ethane	**6.3**	**6.3**	**6.9**	**6.5**	NS	0.17 U	**1.5**	**0.86**	**0.83**	**0.81**	**0.83 J**	**2.3**	**1.3**	**0.49**
Ethene	**1.4**	**1.4**	**1.2**	**1.2**	NS	0.24 U	**3.3**	**1.8**	**3.5**	**7.5**	**6.5**	**0.78**	**0.050 J**	**0.066 J**
Hydrogen (nM)	**2.3**	NS	**2.3 J**	**1.9 J**	**3.8**	NS	NS	**2.7**	**3.3**	**3.7**	0.98 U	NS	**2.4**	**2.1**
Methane	**260 J-**	**260 J-**	**160**	**160**	NS	2.0 U	**65**	**52**	**58**	**55 J-**	**51**	**150**	**130 J+**	**36**
Propane	**0.052 J**	**0.052 J**	**0.057 J**	**0.050 J**	NS	0.29 U	**0.14**	**0.066 J**	**0.073 J**	**0.052 J**	**0.059 J**	**0.27**	**0.16**	**0.083 J**
Dissolved Metals (ug/l)														
Iron	**1810**	NS	**2610**	NS	**2410**	NS	**423**	**546**	**7940 J**	**645**	**640**	**1080**	**411**	125 U
Manganese	**10800**	NS	**11100**	NS	**13200**	NS	**453**	**546**	**576**	**636**	**612**	**3420**	**3240**	**2550**
Total Metals (ug/l)														
Iron	**1870**	NS	**2930**	NS	**2270**	NS	**422**	**556**	**4490 J**	**594**	**681**	**1550**	**420**	125 U
Manganese	**11100**	NS	**12000**	NS	**13900**	NS	**538**	**611**	**588**	**595**	**623**	**3390**	**3250**	**2520**
Field Parameters														
Dissolved Oxygen (mg/L)	**0.36**	NS	**1.6**	NS	**0.08**	NS	**0.19**	**0.71**	**0.09**	**0.38**	**0**	**0.19**	**0.06**	NS
Oxidation Reduction Potential (ORP) (mV)	**41.4**	NS	**56.9**	NS	**213**	NS	**-135.5**	**-155.2**	**-119.1**	**-78.5**	**-95.4**	**120.8**	**26.6**	NS
Specific Conductance (uS/cm)	**2069**	NS	**2153**	NS	**2414**	NS	**573**	**606**	**680**	**384**	**725**	**2614**	**2742**	NS

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ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
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NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Transect A													
Location ID:	AE103D	AE103D	AE103D	AE103D	AE103D	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-5	AE103R-5
Sample ID:	18A-AE103D-092418-2	19A-AE103D-091919-1	20A-AE103D-091020-1	21A-AE103D-091421-1	21A-AE103D-092221-1	16A-AE103R1-061516-1	17A-AE103R1-100217-1	18A-AE103R1-092518-1	19A-AE103R1-091819-1	20A-AE103R1-091020-1	21A-AE103R1-090921-1	21A-AE103R1-090921-1(H2)	17A-AE103R5-100217-1	18A-AE103R5-092518-1
Sample Date:	09/24/2018	09/19/2019	09/10/2020	09/14/2021	09/22/2021	06/15/2016	10/02/2017	09/25/2018	09/18/2019	09/10/2020	09/09/2021	09/13/2021	10/02/2017	09/25/2018
Depth Interval:	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	122 - 128 ft	122 - 128 ft
Sample Type:	FD	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	**816000**	**42000**	**773000**	**848000**	NS	**390000 J+**	**680000**	**643000**	**667000**	**776000**	**669000**	NS	**184000**	**201000**
Nitrate	**4250**	50 U	**3950**	**5090**	NS	**1650**	**3020 J**	**3390**	**2990**	**2960**	**3200**	NS	100 U	100 U
Nitrite as N	3200 UJ	4 U	100 U	100 U	NS	200 U	100 U	2600 U	40 U	40 U	40 U	NS	100 U	100 U
Sulfate	**30300**	**7600**	**36300**	**36200**	NS	**28200 J-**	**28500**	**27500**	**29800**	**29700**	**32100**	NS	**36900**	**34400**
Sulfide	100 U	50 U	50 U	50 U	NS	100 U	100 U	100 U	50 U	50 U	50 U	NS	100 U	100 U
Total Organic Carbon	**1840**	**1400**	**1500**	**1200**	NS	1000 U	**1310**	**1120**	**1100**	**1400**	**1100**	NS	1000 U	**1080**
Dissolved Gases (ug/l)														
Acetylene	0.50 U	0.50 U	**34**	NS	R	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.13 U	NS	**0.051 J**	0.50 U
Ethane	**0.55**	**0.54**	**0.15 J**	NS	R	**1.6**	**1.3**	**0.84**	**0.98**	**0.41 J**	**0.35 J**	NS	**1.5**	**1.4**
Ethene	**0.078 J**	**0.044 J**	0.12 U	NS	R	**17**	**8.4**	**5.9**	**12**	**5.4**	**2.9**	NS	**39**	**67**
Hydrogen (nM)	NS	**2.1**	**2.7 J**	**3.8**	NS	NS	**3.2**	**2.5**	**1.6**	**1.2 J**	NS	**5.6**	**2.7**	**2.7**
Methane	**42**	**25**	**6.0**	NS	R	**97**	**110**	**75**	**190**	**160**	**66**	NS	**120**	**130**
Propane	**0.085 J**	**0.16**	0.014 U	NS	R	**0.10**	**0.098 J**	**0.075 J**	**0.15**	**0.034 J**	0.29 U	NS	**0.095 J**	**0.077 J**
Dissolved Metals (ug/l)														
Iron	125 U	11 U	11 U	**64**	NS	**1120**	**455**	**628**	**648**	**505**	**519**	NS	**391**	**373**
Manganese	**2570**	**1990**	**2010**	**1940**	NS	**2020 J-**	**2770**	**2660**	**2480**	**2090**	**1780**	NS	**578**	**665**
Total Metals (ug/l)														
Iron	125 U	**165**	**105**	**56**	NS	**1200**	**461**	**660**	**786**	**625**	**765**	NS	**463**	**433**
Manganese	**2480**	**1900**	**2330**	**1940**	NS	**1970**	**2580**	**2710**	**2210**	**2230**	**1930**	NS	**511**	**678**
Field Parameters														
Dissolved Oxygen (mg/L)	**3.89**	**0.51**	**0.43**	**0.36**	NS	**0.4**	**1.69**	**0.4**	**0.36**	**4.2**	**0.8**	NS	**0.28**	**0.19**
Oxidation Reduction Potential (ORP) (mV)	**38.5**	**125.8**	**214.7**	**132**	NS	**5.4**	**51.2**	**140**	**59.2**	**18.6**	**114.8**	NS	**-142**	**18**
Specific Conductance (uS/cm)	**2851**	**2807**	**2735**	**2489**	NS	**1291**	**2263**	**2236**	**2241**	**1650**	**2170**	NS	**794**	**879**

Notes:
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ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
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NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Transect A													
Location ID:	AE103R-5	AE103R-5	AE103R-5	AE103S	AE103S	AE103S	AE103S	AE103S	AE104R-4	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1
Sample ID:	19A-AE103R5-091819-1	20A-AE103R5-091020-1	21A-AE103R5-090921-1	16A-AE103S-061516-1	17A-AE103S-100317-1	18A-AE103S-092418-1	19A-AE103S-091919-1	20A-AE103S-091020-1	16A-AE104R4-061416-1	16A-AE108R1-061616-1	16A-AE108R1-061616-2	17A-AE108R1-100917-1	18A-AE108R1-091918-1	19A-AE108R1-092419-1
Sample Date:	09/18/2019	09/10/2020	09/09/2021	06/15/2016	10/03/2017	09/24/2018	09/19/2019	09/10/2020	06/14/2016	06/16/2016	06/16/2016	10/09/2017	09/19/2018	09/24/2019
Depth Interval:	122 - 128 ft	122 - 128 ft	122 - 128 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	128 - 133 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft
Sample Type:	N	N	N	N	N	N	N	N	N	N	FD	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	**233000**	**285000**	**244000**	NS	NS	NS	NS	NS	**211000**	**274000**	**275000**	**234000**	**929000**	**1330000**
Nitrate	50 U	50 U	**260**	NS	NS	NS	NS	NS	100 U	100 U	100 U	100 U	**238**	**60**
Nitrite as N	20 U	20 U	20 U	NS	NS	NS	NS	NS	100 U	100 U	100 U	100 U	3600 U	4 U
Sulfate	**35800**	**35600**	**35500**	NS	NS	NS	NS	NS	**31000**	**11000**	**10900**	**10300**	**16200**	**11200**
Sulfide	50 U	50 U	50 U	NS	NS	NS	NS	NS	100 U	100 U	100 U	100 U	100 U	50 U
Total Organic Carbon	1000 U	**1300**	1000 U	NS	NS	NS	NS	NS	1000 U	**5000 J**	**7000 J**	**5560**	**6540**	**4600**
Dissolved Gases (ug/l)														
Acetylene	**0.057 J**	**17**	0.13 U	NS	NS	NS	NS	NS	**0.048 J**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Ethane	**1.6**	**0.81 J**	**0.49 J**	NS	NS	NS	NS	NS	**0.46**	**0.91**	**0.84**	**0.94**	**0.65**	**0.32**
Ethene	**120**	**150**	**29**	NS	NS	NS	NS	NS	**2.4**	**0.21**	**0.17**	**0.11**	**0.23**	**0.48**
Hydrogen (nM)	**1.7**	**3.2 J**	**3.9**	NS	NS	NS	NS	NS	NS	NS	NS	**12**	**3.8**	**2.6**
Methane	**150**	**98**	**60**	NS	NS	NS	NS	NS	**72**	**190**	**180**	**500**	**640**	**2200 J-**
Propane	**0.13**	**0.10**	0.29 U	NS	NS	NS	NS	NS	**0.036 J**	**0.26**	**0.24**	**0.30**	**0.21**	**0.19**
Dissolved Metals (ug/l)														
Iron	**430**	**222**	**295**	**19000 J**	**33800**	**8280**	**9080**	**13800**	**52.0**	**686 J**	**316 J**	**485**	**485**	**5300**
Manganese	**813**	**1010**	**894**	**3160**	**6300**	**1530**	**1560**	**1930**	**318**	**883 J**	**855**	**794**	**3550 J**	**2450**
Total Metals (ug/l)														
Iron	**458**	**225**	**370**	**17400**	**32600**	**9960**	**9360**	**15500**	**58.8**	**1020**	**1340**	**1340**	**581**	**6880**
Manganese	**822**	**1060**	**872**	**3110**	**6330**	**1580**	**1560**	**2060**	**345**	**768 J**	**875**	**860**	**2460 J**	**2910**
Field Parameters														
Dissolved Oxygen (mg/L)	**0.11**	**6.12**	**2.76**	**0.31**	**0.36**	**3.32**	**0.2**	**0.05**	**0.04**	**0.42**	NS	**0.58**	**19.84**	**0.36**
Oxidation Reduction Potential (ORP) (mV)	**-84.8**	**-20.4**	**47.6**	**-75.4**	**-73.2**	**-106.9**	**-94.1**	**-23.6**	**-78.6**	**-241.4**	NS	**-185.8**	**-150.7**	**-49.9**
Specific Conductance (uS/cm)	**924**	**713**	**1084**	**758**	**1245**	**473**	**415**	**500.6**	**907**	**1132**	NS	**1082**	**2910**	**4828**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Transect A													
Location ID:	AE108R-1	AE108R-1	AE109D	AE109D	AE109D	AE109R-5	AE109R-5	AE109R-5	AE109R-5	AE109R-5	EMW-10R	EMW-11R2	EMW-11R2	EMW-11R2
Sample ID:	20A-AE108R1-090920-1	21A-AE108R1-090921-1	18A-AE109D-092618-1	19A-AE109D-092019-1	20A-AE109D-091620-1	16A-AE109R5-061616-1	17A-AE109R5-101017-1	18A-AE109R5-100218-1	19A-AE109R5-091819-1	20A-AE109R5-091620-1	21A-EMW10R-090821-1	16A-EMW11R2-062116-1	17A-EMW11R2-101017-1	18A-EMW11R2-092418-1
Sample Date:	09/09/2020	09/09/2021	09/26/2018	09/20/2019	09/16/2020	06/16/2016	10/10/2017	10/02/2018	09/18/2019	09/16/2020	09/08/2021	06/21/2016	10/10/2017	09/24/2018
Depth Interval:	36.5 - 43.5 ft	36.5 - 43.5 ft	18 - 23 ft	18 - 23 ft	18 - 23 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft	42 - 52 ft	104 - 114 ft	102.63 - 112.63 ft	104 - 114 ft
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	**939000**	**54200**	NS	NS	NS	**55400**	**44900**	**52700**	**63400**	**33400**	**180000**	**136000**	**183000**	**223000**
Nitrate	50 U	50 U	NS	NS	NS	100 U	100 U	100 U	50 U	50 U	**740**	100 U	100 U	100 U
Nitrite as N	100 U	4 U	NS	NS	NS	100 U	100 U	100 U	4 U	4 U	10 U	100 U	100 U	100 U
Sulfate	**9300**	5000 U	NS	NS	NS	**9360**	**9660**	**8400**	**10100**	**7800**	**11700**	**31100**	1000 U	**34700**
Sulfide	**70**	50 U	NS	NS	NS	100 U	100 U	100 U	50 U	**110**	50 U	100 U	100 U	100 U
Total Organic Carbon	**4900**	**2500**	NS	NS	NS	**3100 J**	1000 U	1000 U	1000 U	**1100**	**1100**	1000 U	**1760**	1000 U
Dissolved Gases (ug/l)														
Acetylene	0.11 U	0.13 U	NS	NS	NS	**0.85**	0.50 U	0.50 U	0.50 U	0.11 U	0.13 U	0.50 U	**0.12 J**	0.50 U
Ethane	**0.82 J**	0.17 U	NS	NS	NS	**1.2**	**0.93**	**0.97**	**0.70**	**0.57 J**	0.17 U	**9.7**	**14**	**5.7**
Ethene	**1.0**	0.24 U	NS	NS	NS	**2.3**	**1.9**	**1.8**	**1.6**	**1.0**	0.24 U	**9.9**	**12**	**28**
Hydrogen (nM)	0.98 U	**3.7**	NS	NS	NS	NS	**2.9**	**2.3**	**1.7**	**2.6**	**3.4**	NS	**2.3**	**2.7**
Methane	**2800**	2.0 U	NS	NS	NS	**7.5**	**140**	**520**	**480**	**530**	2.0 U	**1000**	**1300**	**640**
Propane	**0.20**	0.29 U	NS	NS	NS	**0.48**	**0.16**	**0.21**	**0.18**	**0.090 J**	0.29 U	**0.037 J**	**0.064 J**	0.10 U
Dissolved Metals (ug/l)														
Iron	**7250 J**	**482**	125 U	**14**	11 U	**594 J**	**110**	**151**	**122**	**115**	**24**	**955**	**1510**	**1290**
Manganese	**3020 J**	**45**	**839**	**1180**	**617**	**181**	**155**	**163**	**162**	**144**	**6**	**732 J**	**704**	**682**
Total Metals (ug/l)														
Iron	**5050 J**	**3810**	125 U	**55**	**47**	**345 J**	**111**	**129**	**127**	**127**	**223**	**967**	**1910**	**1650**
Manganese	**2010 J**	**112**	**938**	**1830**	**1110**	**172**	**165**	**144**	**149**	**150**	**24**	**628 J**	**740**	**683**
Field Parameters														
Dissolved Oxygen (mg/L)	**2.57**	**0.09**	**0.62**	**1.04**	**0.59**	**0.17**	**1.78**	**0.73**	**1.01**	**1**	**2.11**	**0.25**	**0.29**	**0.17**
Oxidation Reduction Potential (ORP) (mV)	**-278.5**	**-43**	**467.5**	**96.6**	**-308**	**-129.6**	**-134.2**	**-154.9**	**-141.2**	**-172.9**	**106.5**	**-126.5**	**-147.2**	**-79.9**
Specific Conductance (uS/cm)	**2916**	**171**	**921**	**1387**	**1225**	**370**	**276**	**295**	**280.9**	**276.5**	**959**	**648**	**799**	**601**

Notes:
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ft = feet
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ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
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NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Transect A			Transect B										
Location ID:	EMW-11R2	EMW-11R2	EMW-11R2	AE105R-1	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105S	AE105S	AE105S	AE105S	AE105S
Sample ID:	19A-EMW11R2-091719-1	20A-EMW11R2-092120-1	21A-EMW11R2-090821-1	21A-AE105R1-091321-1	16A-AE105R2-062016-1	17A-AE105R2-101217-1	18A-AE105R2-100318-1	19A-AE105R2-091619-1	20A-AE105R2-091720-1	16A-AE105S-061516-1	16A-AE105S-062216-1	17A-AE105S-101217-1	18A-AE105S-100318-1	19A-AE105S-091619-1
Sample Date:	09/17/2019	09/21/2020	09/08/2021	09/13/2021	06/20/2016	10/12/2017	10/03/2018	09/16/2019	09/17/2020	06/15/2016	06/22/2016	10/12/2017	10/03/2018	09/16/2019
Depth Interval:	104 - 114 ft	104 - 114 ft	104 - 114 ft	90.5 - 95.5 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	**225000**	**281000**	**239000**	**67300**	**41200**	**45600**	**52700 J-**	**51900**	**56900**	NS	**111000**	**167000**	**252000**	**218000**
Nitrate	50 U	50 U	20 U	50 U	100 U	100 U	R	50 U	50 U	NS	100 U	100 U	100 U	50 U
Nitrite as N	20 U	20 U	10 U	4 U	100 U	100 U	R	4 U	4 U	NS	100 U	100 U	100 U	4 U
Sulfate	**36800**	**37100**	**35500**	**17700**	**14700**	**17200**	**17500**	**15300**	**15500**	NS	**15700**	**16800**	**15800**	**15300**
Sulfide	50 U	50 U	50 U	**100**	100 U	100 U	100 U	50 U	50 U	NS	100 U	100 U	100 U	50 U
Total Organic Carbon	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	NS	**1500**	**1320**	**1100**	**1300**
Dissolved Gases (ug/l)														
Acetylene	0.50 U	0.74 U	0.13 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Ethane	**7.6**	**2.9**	**0.91 J**	**0.37 J**	**0.19**	**0.29**	**0.30**	**0.32**	**0.32 J**	**7.5**	**0.010 J**	**0.010 J**	0.10 U	**0.011 J**
Ethene	**35**	**42**	**9.1**	**1.4**	**0.41**	**0.090 J**	**0.088 J**	**0.072 J**	**0.60 J**	**0.30**	**0.11**	**0.27**	**0.064 J**	**0.16**
Hydrogen (nM)	**1.6**	**2.9**	**3.6**	**2.6**	NS	**6.7**	**30**	**1.0**	**2.6**	NS	NS	**2.5**	**2.4**	**1.3**
Methane	**630**	**320**	**100**	**150**	**94**	**120**	**120**	**140**	**120**	**6400**	**97**	**130**	**63**	**92**
Propane	**0.073 J**	0.10 U	0.29 U	0.29 U	**0.082 J**	**0.13**	**0.16**	**0.14**	**0.11**	0.10 U	0.10 U	**0.022 J**	**0.028 J**	**0.020 J**
Dissolved Metals (ug/l)														
Iron	**914**	**718**	**604**	**139 J**	**87.6**	**48.0**	125 U	**53**	**82 J**	NS	**23200**	**27300**	**36500**	**36900**
Manganese	**626**	**715**	**612**	**160 J**	**164**	**121**	**107**	**121**	**300 J**	NS	**979**	**1080**	**1210**	**1410**
Total Metals (ug/l)														
Iron	**1090**	**879**	**1180**	**83 J**	**66.2**	**57.6**	125 U	**52**	**44 J**	NS	**25400**	**30200**	**37100**	**38300**
Manganese	**667**	**699**	**658**	**125 J**	**191**	**132**	**126**	**129**	**107 J**	NS	**1010**	**1170**	**1400**	**1460**
Field Parameters														
Dissolved Oxygen (mg/L)	**0.13**	**0**	**0.18**	**0.33**	**1.14**	**0.19**	**0.14**	**0.13**	**0.19**	**0.17**	NS	**0.19**	**0.44**	**0.23**
Oxidation Reduction Potential (ORP) (mV)	**-111.9**	**-34**	**-91**	**42.7**	**65.5**	**-63.7**	**-69**	**-18.1**	**-278.9**	**-44.2**	NS	**-98.1**	**-62.8**	**-46.9**
Specific Conductance (uS/cm)	**922**	**958**	**886**	**383**	**241**	**327**	**291**	**351**	**362**	**572**	NS	**769**	**731**	**935**

Notes:
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ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Transect B													
Location ID:	AE105S	AE106D	AE106D	AE106D	AE106D	AE106D	AE106D	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-3	TRC-301R-2
Sample ID:	20A-AE105S-091720-1	16A-AE106D-062016-1	17A-AE106D-101217-1	18A-AE106D-100318-1	19A-AE106D-091719-1	20A-AE106D-091720-1	21A-AE106D-091321-1	16A-AE106R3-062016-1	17A-AE106R3-101217-1	18A-AE106R3-100318-1	19A-AE106R3-091619-1	20A-AE106R3-091720-1	21A-AE106R3-091321-1	18A-TRC301R2-092718-1
Sample Date:	09/17/2020	06/20/2016	10/12/2017	10/03/2018	09/17/2019	09/17/2020	09/13/2021	06/20/2016	10/12/2017	10/03/2018	09/16/2019	09/17/2020	09/13/2021	09/27/2018
Depth Interval:	35 - 40 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	81.5 - 85.5 ft
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	**265000**	**580000**	**680000**	**658000**	**688000**	**579000**	**548000**	**391000**	**418000**	**139000**	**112000**	**126000**	**90500**	NS
Nitrate	50 U	**2300**	**2800**	**3070**	**3380**	**2720**	**2810**	**1050**	**1120**	**303**	**130**	**140**	**100**	NS
Nitrite as N	20 U	300 U	2700 U	2600 U	20 U	20 U	40 U	200 U	1700 U	100 U	4 U	4 U	4 U	NS
Sulfate	**15300**	**26300**	**25900**	**24900**	**28400**	**25100**	**27200**	**23300**	**25300**	**13000**	**11900**	**12600**	**11900**	NS
Sulfide	50 U	100 U	100 U	100 U	50 U	50 U	50 U	100 U	100 U	100 U	50 U	NS	**70**	NS
Total Organic Carbon	**1400**	1000 U	**1300**	**1330**	**1200**	**1600**	**1300**	1000 U	**1010**	**1230**	1000 U	**1300**	1000 U	NS
Dissolved Gases (ug/l)														
Acetylene	0.11 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.13 U	NS
Ethane	0.075 U	**0.18**	**0.074 J**	**0.048 J**	**0.078 J**	0.075 U	0.17 U	**0.77**	**0.54**	**0.25**	**0.16**	**0.16 J**	0.17 U	NS
Ethene	**0.20 J**	**0.039 J**	**0.079 J**	**0.013 J**	**0.016 J**	0.12 U	0.24 U	**0.32**	**0.24**	**0.36**	**2.7**	**3.9**	**1.5**	NS
Hydrogen (nM)	**0.67 J**	NS	**2.2**	**3.1**	**1.6**	**0.62 J**	**4.3**	NS	**2.7**	**3.0**	**2.2**	**0.71 J**	**4.4**	NS
Methane	**69**	**16**	**14**	**18**	**3.1**	**7.9**	**39**	**3.1**	**50**	**400**	**560**	**630**	**300**	NS
Propane	**0.014 J**	0.10 U	**0.010 J**	**0.014 J**	**0.045 J**	0.014 U	0.29 U	**0.15**	**0.096 J**	**0.072 J**	**0.048 J**	**0.028 J**	0.29 U	NS
Dissolved Metals (ug/l)														
Iron	**35300**	20.0 U	15.0 U	125 U	11 U	**21**	11 U	20.0 U	15.0 U	125 U	**81**	**95**	**81**	**401**
Manganese	**1430**	**2940**	**3570**	**2860**	**3290**	**2260**	**2570**	**78.6**	**77.2**	**72.4**	**139**	**171**	**158**	**532**
Total Metals (ug/l)														
Iron	**38600**	20.0 U	**18.4**	125 U	**66**	**19**	**723**	20.0 U	15.0 U	**136**	**91**	**106**	**86**	**431**
Manganese	**1490**	**3140**	**3860**	**3090**	**3320**	**2280**	**2750**	**85.5**	**79.5**	**77.3**	**147**	**175**	**168**	**520**
Field Parameters														
Dissolved Oxygen (mg/L)	**0.11**	**0.25**	**0.17**	**0.5**	**1.48**	**7.73**	**0.32**	**0.2**	**0.14**	**1.82**	**0.42**	**0.32**	**0.37**	**0.47**
Oxidation Reduction Potential (ORP) (mV)	**-39.5**	**138.2**	**17.7**	**253.1**	**198**	**210.1**	**172.8**	**-115.9**	**-41**	**-43.6**	**-17.9**	**-52.5**	**-19.6**	**-164**
Specific Conductance (uS/cm)	**1046**	**2260**	**1948**	**2232**	**2453**	**2042**	**2579**	**1474**	**1726**	**564**	**504**	**588.3**	**377.9**	**580**

Notes:
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J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Transect B									Transect B 1/2				
Location ID:	TRC-301R-2	TRC-301R-2	TRC-301R-3	TRC-301R-3	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	AE112D	AE112D	AE112D	AE112D	AE112R-1
Sample ID:	19A-TRC301R2-091719-1	20A-TRC301R2-091520-1	17A-TRC301R3-102317	21A-TRC301R3-091321-1	16A-TRC301R4-062216-1	17A-TRC301R4-102317-1	18A-TRC301R4-092718-1	19A-TRC301R4-091719-1	20A-TRC301R4-091520-1	17A-AE112D-101717-1	18A-AE112D-092618-1	19A-AE112D-091319-1	20A-AE112D-091120-1	18A-AE112R1-092618-1
Sample Date:	09/17/2019	09/15/2020	10/23/2017	09/13/2021	06/22/2016	10/23/2017	09/27/2018	09/17/2019	09/15/2020	10/17/2017	09/26/2018	09/13/2019	09/11/2020	09/26/2018
Depth Interval:	81.5 - 85.5 ft	81.5 - 85.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	41 - 51 ft
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	NS	NS	NS	**102000**	**112000**	**121000**	**129000**	**137000**	**153000**	NS	NS	NS	NS	NS
Nitrate	NS	NS	NS	50 U	100 U	500 U	100 U	50 U	50 U	NS	NS	NS	NS	NS
Nitrite as N	NS	NS	NS	4 U	100 U	500 U	100 UJ	4 U	8 U	NS	NS	NS	NS	NS
Sulfate	NS	NS	NS	**60100**	**17100**	**17300**	**16400**	**15200**	**18600**	NS	NS	NS	NS	NS
Sulfide	NS	NS	NS	**60**	100 U	100 U	100 U	**130**	**190**	NS	NS	NS	NS	NS
Total Organic Carbon	NS	NS	NS	**3200**	**1100**	**1380**	**1840**	**1300**	**1600**	NS	NS	NS	NS	NS
Dissolved Gases (ug/l)														
Acetylene	NS	NS	NS	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	NS	NS	NS	NS	NS
Ethane	NS	NS	NS	**1.0**	**0.61**	**1.0**	**1.1**	**1.3**	**1.2**	NS	NS	NS	NS	NS
Ethene	NS	NS	NS	**1.9**	**1.3**	**2.2**	**1.8**	**2.0**	**1.6**	NS	NS	NS	NS	NS
Hydrogen (nM)	NS	NS	NS	**3.5**	NS	**7.2**	**6.1**	**3.9**	**3.0**	NS	NS	NS	NS	NS
Methane	NS	NS	NS	**56**	**140**	**270**	**250**	**390**	**270**	NS	NS	NS	NS	NS
Propane	NS	NS	NS	**0.30 J**	**0.34**	**0.76**	**0.95**	**1.2**	**1.1**	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)														
Iron	**431**	**386**	**177**	**196**	**4750 J**	**4280**	**5670**	**6870**	**7690**	15.0 U	125 U	11 U	**17**	**956**
Manganese	**540**	**569**	**565**	**618**	**1250**	**1250**	**1500**	**1610**	**1600**	**31.8**	**110**	**18**	**13**	**2310**
Total Metals (ug/l)														
Iron	**490**	**412**	**169**	**232**	**4210 J**	**4330**	**5500**	**7030**	**8180**	**194**	**128**	**55**	**456**	**904**
Manganese	**583**	**587**	**597**	**679**	**1230**	**1230**	**1440**	**1650**	**1720**	**34.4**	**137**	**45**	**73**	**2360**
Field Parameters														
Dissolved Oxygen (mg/L)	**0.42**	**0.23**	**0.32**	**0.58**	**0.3**	**0.46**	**0.85**	**1.57**	**0.32**	**1.12**	**2.06**	**2.45**	**1.92**	**5.24**
Oxidation Reduction Potential (ORP) (mV)	**-145.8**	**-145.1**	**-211.7**	**-141.1**	**-137.8**	**-212.4**	**-123.5**	**-122.5**	**-161**	**103.7**	**176.7**	**260.8**	**309.6**	**-24.2**
Specific Conductance (uS/cm)	**619**	**617.5**	**638**	**593**	**572**	**676**	**590**	**670**	**712**	**901**	**1333**	**1286**	**1318**	**1178**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Transect B 1/2											Transect C		
Location ID:	AE112R-1	AE112R-1	AE112R-2	AE112R-6	AE112R-6	AE112R-6	AE112R-6	AE112R-6	AE112R-6	AE112R-6	AE112R-6	STM-8D	STM-8R1	STM-8R1
Sample ID:	19A-AE112R1-091319-1	20A-AE112R1-091120-1	17A-AE112R2-101717-1	16B-AE112R6-062116-1	17A-AE112R6-101717-1	18A-AE112R6-092618-1	18A-AE112R6-092618-2	19A-AE112R6-091319-1	20A-AE112R6-091120-1	21A-AE112R6-091621-1	21A-AE112R6-092221-1	21A-STM8D-090821-1	16A-STM8R1-062816-1	17A-STM8R1-101717-1
Sample Date:	09/13/2019	09/11/2020	10/17/2017	06/21/2016	10/17/2017	09/26/2018	09/26/2018	09/13/2019	09/11/2020	09/16/2021	09/22/2021	09/08/2021	06/28/2016	10/17/2017
Depth Interval:	41 - 51 ft	41 - 51 ft	62 - 72 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	34.7 - 39.7 ft	85 - 90 ft	85 - 90 ft
Sample Type:	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
Analyte														
Conventional (ug/l)														
Chloride	NS	NS	NS	**261000**	**260000**	NS	NS	NS	NS	**237000**	NS	**262000**	**62100**	**68500**
Nitrate	NS	NS	NS	100 U	100 U	NS	NS	NS	NS	50 U	NS	20 U	**138**	100 U
Nitrite as N	NS	NS	NS	100 U	100 U	NS	NS	NS	NS	20 U	NS	10 U	100 U	100 U
Sulfate	NS	NS	NS	**12300**	**11500**	NS	NS	NS	NS	**9900**	NS	**26000**	**49700**	**50600**
Sulfide	NS	NS	NS	100 U	100 U	NS	NS	NS	NS	**70**	NS	50 U	100 U	100 U
Total Organic Carbon	NS	NS	NS	**2500**	**1740 J+**	NS	NS	NS	NS	**2000**	NS	**1100**	1000 U	1000 U
Dissolved Gases (ug/l)														
Acetylene	NS	NS	NS	0.50 U	0.50 U	NS	NS	NS	NS	NS	0.13 U	0.13 U	0.50 U	0.50 U
Ethane	NS	NS	NS	**1.7**	**1.4**	NS	NS	NS	NS	NS	**1.3**	0.17 U	**0.0099 J**	**0.014 J**
Ethene	NS	NS	NS	**0.21**	**0.22**	NS	NS	NS	NS	NS	**0.25 J**	0.24 U	**0.11**	**0.27**
Hydrogen (nM)	NS	NS	NS	NS	**7500**	NS	NS	NS	NS	**7.6**	NS	**3.8**	NS	**4.7**
Methane	NS	NS	NS	**14**	**810**	NS	NS	NS	NS	NS	**1400**	**6.6**	**0.74**	**0.96**
Propane	NS	NS	NS	**0.47**	**0.48**	NS	NS	NS	NS	NS	**0.45 J**	0.29 U	0.10 U	**0.012 J**
Dissolved Metals (ug/l)														
Iron	**815**	**690**	**1400**	**3290**	**2940**	**3240**	**3580**	**3690**	**3490**	**3350**	NS	**365**	15.0 U	**30.4**
Manganese	**2280**	**1970**	**1770**	**1420**	**1390**	**1380**	**1430**	**1330**	**1290**	**1240**	NS	**3190**	**314**	**259**
Total Metals (ug/l)														
Iron	**835**	**723**	**1440**	**3020**	**2760**	**3340**	**3480**	**3790**	**3750**	**3770 J**	NS	**407**	**79.3 J+**	**153 J**
Manganese	**2080**	**2110**	**1760**	**1400**	**1390**	**1370**	**1390**	**1360**	**1380**	**1340**	NS	**3220**	**314**	**355**
Field Parameters														
Dissolved Oxygen (mg/L)	**0.64**	**0.1**	**0.57**	**0.04**	**1.81**	NS	**4.3**	**0.21**	**0.34**	**2.06**	NS	**0.11**	**1.66**	**2.74**
Oxidation Reduction Potential (ORP) (mV)	**28.3**	**-81.6**	**-164.6**	**-153.9**	**-187.5**	NS	**-76.3**	**-81.1**	**-29.9**	**-97.5**	NS	**32.4**	**25.1**	**56.4**
Specific Conductance (uS/cm)	**1278**	**1289**	**1184**	**985**	**1013**	NS	**867**	**1070**	**966**	**914**	NS	**929**	**509**	**531**

Notes:
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J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-10
Summary of 2016 - 2021 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group:	Transect C								Upgradient						
Location ID:	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12
Sample ID:	17A-STM8R1-101717-2	18A-STM8R1-100218-1	19A-STM8R1-092619-1	20A-STM8R1-092320-1	21A-STM8R1-091621-1	21A-STM8R1-091621-2	21A-STM8RI-092221-1	21A-STM8RI-092221-2	16A-GZA12-061416-1	17A-GZA12-101017-1	18A-GZA12-100118-1	19A-GZA12-092619-1	20A-GZA12-092420-1	21A-GZA12-091421-1	21A-GZA12-092221-1
Sample Date:	10/17/2017	10/02/2018	09/26/2019	09/23/2020	09/16/2021	09/16/2021	09/22/2021	09/22/2021	06/14/2016	10/10/2017	10/01/2018	09/26/2019	09/24/2020	09/14/2021	09/22/2021
Depth Interval:	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft
Sample Type:	FD	N	N	N	N	FD	N	FD	N	N	N	N	N	N	N
Analyte															
Conventional (ug/l)															
Chloride	**67200**	**73400**	**78600**	**79800**	**81900**	**81000**	NS	NS	**1190000**	**1220000**	**1190000**	**1140000**	**1050000**	**623000**	NS
Nitrate	100 U	100 U	**180**	**70**	50 U	**80**	NS	NS	**9910**	**10900 J**	**10900**	**9290**	**6910**	**9170 J-**	NS
Nitrite as N	100 U	100 U	4 U	4 U	4 U	4 U	NS	NS	600 U	R	500 U	20 U	4 U	40 U	NS
Sulfate	**50500**	**48600**	**40600**	**51200**	**22000**	**23100**	NS	NS	**33900**	**36500**	**33200**	**36800**	**30100**	**31000**	NS
Sulfide	100 U	100 U	50 U	50 U	50 U	50 U	NS	NS	100 U	100 U	100 U	50 U	50 U	50 U	NS
Total Organic Carbon	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	NS	NS	1000 U	**1080**	**1690**	**1400**	**1500**	**1300**	NS
Dissolved Gases (ug/l)															
Acetylene	0.50 U	0.50 U	0.50 U	0.74 U	NS	NS	0.13 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.74 U	NS	0.13 U
Ethane	**0.013 J**	**0.0097 J**	0.10 U	1.0 U	NS	NS	0.17 U	0.17 U	**0.0091 J**	**0.0065 J**	0.10 U	0.10 U	1.0 U	NS	0.17 U
Ethene	**0.27**	**0.050 J**	0.10 U	1.0 U	NS	NS	**0.31 J**	**0.25 J**	**0.014 J**	**0.010 J**	**0.0071 J**	0.10 U	1.0 U	NS	0.24 U
Hydrogen (nM)	NS	**3.5**	**7.9**	**2.6**	**3.7**	NS	NS	NS	NS	**4.1**	**2.8**	**1.8**	**28**	**4.2**	NS
Methane	**0.96**	**0.79**	**0.51 J-**	**14**	NS	NS	2.0 U	2.0 U	**0.69**	**0.46 J**	**0.28 J**	**0.30 J-**	5.0 U	NS	2.0 U
Propane	**0.013 J**	**0.019 J**	0.10 U	0.10 U	NS	NS	0.29 U	0.29 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NS	0.29 U
Dissolved Metals (ug/l)															
Iron	**20.7**	125 U	**12**	**30**	11 U	**13**	NS	NS	30.0 U	**50.8**	125 U	11 U	**19**	**15**	NS
Manganese	**258**	**187**	**140**	**138**	**162**	**163**	NS	NS	**2410**	**2080**	**1540**	**1340**	**1150**	**325**	NS
Total Metals (ug/l)															
Iron	**87.2 J**	125 U	**69**	**340**	**90 J**	**164 J**	NS	NS	**96.4**	**21.8**	125 U	**56**	**164**	**58**	NS
Manganese	**338**	**205**	**156**	**182**	**188**	**210**	NS	NS	**2620**	**2170**	**1770**	**1320**	**1290**	**316**	NS
Field Parameters															
Dissolved Oxygen (mg/L)	NS	**3.67**	**0.79**	**NM**	**3.89**	NS	NS	NS	**1.03**	**0.35**	**4.65**	**1.09**	**0.73**	**0.86**	NS
Oxidation Reduction Potential (ORP) (mV)	NS	**109.7**	**-38.3**	**NM**	**93**	NS	NS	NS	**218.5**	**206**	**61.7**	**199.3**	**-154**	**211.6**	NS
Specific Conductance (uS/cm)	NS	**527**	**491**	**NM**	**317.8**	NS	NS	NS	**4194**	**3719**	**3615**	**4079**	**3744**	**2132**	NS

Notes:
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J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NE = not established
NS = not sampled
Detects are bolded

Table 5-11
2016, 2017, and 2021 Microbial Insights Quantarray Chlor Analytical Results Summary

		Source Area																			
Location ID:		GZA-105D	GZA-105D	GZA-105D	GZA-105S	GZA-105S	GZA-105S	AE100R-1	AE100R-1	AE100R-1	AE100R-5	AE100R-5	AE100R-5	AE26R-1	AE26R-1	AE26R-2	AE28R-2	AE28R-2	AE28R-2	AE29R-6	AE29R-6	AE29R-6
Sample Date:		2016	2017	2021	2016	2017	2021	2016	2017	2021	2016	2017	2021	2016	2017	2021	2016	2017	2021	2016	2017	2021
Depth Interval:		16 - 26 ft	16 - 26 ft	16 - 26 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	18 - 24 ft	18 - 24 ft	18 - 24 ft	88.68 - 93.68 ft	88.68 - 93.68 f	88 - 93 ft	50 - 56 ft	50 - 56 ft	72 - 78 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft
Analyte	**Units:**																					
Reductive Dechlorination																						
Dehalococcoides (DHC)	cells/mL	**-**	**-**	**2.61E+02**	**8.90E+02**	**3.56E+02**	**-**	**-**	**-**	**5.14E+03**	**5.64E+03**	**5.26E+01**	**8.59E+03**	**5.98E+02**	**2.26E+03**	**8.53E+01**	**1.12E+04**	**1.49E+04**	**2.00E+04**	**1.82E+02**	**6.23E+01**	**-**
tceA Reductase (TCE)	cells/mL	-	-	5.00E+00	<0.3	8.00E-01	**-**	-	-	0.5 <	**<5.00E-01**	**3.30E+00**	**2.00E-01**	**<5.00E-01**	**8.00E-01**	**2.00E-01**	1.00E-01	0.25 U	**9.60E+01**	<5.00E-01	0.5 U	-
bvcA Reductase	cells/mL	**-**	**-**	**3.70E+00**	**3.00E+00**	**1.70E+00**	**-**	**-**	**-**	**3.00E-01**	**<5.00E-01**	**5.70E-02**	**3.90E+00**	<5.00E-01	4.00E-01	0.5 <	<0.4	**2.50E-01**	0.5 <	<5.00E-01	**5.00E-01**	-
Vinyl Chloride Reductase (VCR)	cells/mL	**-**	**-**	**4.90E+00**	**3.93E+01**	**1.04E+02**	**-**	**-**	**-**	**3.36E+02**	**5.65E+02**	**6.53E+01**	**6.55E+02**	**<5.00E-01**	**5.00E-01**	0.5 <	<0.4	0.25 U	0.5 <	<5.00E-01	0.5 U	-
Dehalobacter spp. (DHBt)	cells/mL	-	-	5 <	**1.87E+01**	7.08E+02	**-**	**-**	**-**	**1.31E+03**	**5.78E+02**	**3.00E+03**	5 <	**2.93E+02**	**6.28E+03**	**2.30E+02**	**2.39E+02**	**4.93E+03**	**1.35E+03**	**1.02E+02**	**2.83E+03**	**-**
Dehalobacter DCM (DCM)	cells/mL	-	-	5 <	5 ND	5 ND	-	-	-	5 <	<5.00E+00	2.5 ND	5 <	**<5.00E+00**	**2.46E+02**	5 <	<4.2	2.50E+00	5 <	<5.00E+00	5.00E+00	-
Dehalogenimonas spp. (DHG)	cells/mL	**-**	**-**	**1.92E+03**	**1.35E+04**	**2.18E+03**	**-**	**-**	**-**	**2.72E+03**	**6.28E+03**	**1.25E+03**	**7.00E+03**	**9.90E+03**	**1.34E+05**	**9.70E+03**	**8.81E+03**	**1.06E+05**	**2.85E+04**	**7.65E+03**	**4.02E+04**	**-**
CER	cells/mL	-	-	5 <	-	-	-	-	-	5 <	-	-	5 <	-	-	5 <	-	-	5 <	-	-	-
TDR	cells/mL	-	-	5 <	-	-	-	-	-	5 <	-	-	5 <	-	-	5 <	-	-	5 <	-	-	-
Desulfitobacterium spp. (DSB)	cells/mL	**-**	**-**	**1.91E+04**	**8.90E+02**	**6.93E+03**	**-**	**-**	**-**	**8.62E+03**	**1.45E+03**	**8.19E+03**	**1.06E+05**	**1.58E+03**	**4.38E+03**	5 <	**1.76E+03**	**5.91E+03**	**1.16E+03**	**4.52E+02**	**4.50E+03**	**-**
Dehalobium chlorocoercia (DECO)	cells/mL	**-**	**-**	**2.22E+03**	**4.30E+03**	**1.82E+04**	**-**	**-**	**-**	**5.94E+03**	**1.48E+03**	**6.34E+02**	**2.77E+03**	**9.39E+01**	**1.44E+03**	**4.00E+01**	**5.37E+01**	**1.15E+03**	5 <	**1.39E+02**	**6.47E+02**	**-**
Desulfuromonas spp. (DSM)	cells/mL	-	-	5 <	4.54E+01	5 U	-	**-**	**-**	**4.59E+02**	4.63E+02	2.5 U	5 <	**<5.00E+00**	**5.05E+01**	5 <	<4.2	**3.13E+03**	**3.93E+01**	2.97E+02	5 U	-
PCE-1	cells/mL	-	-	5 <			-	-	-	5 <	-	-	**3.46E+01**	-	-	5 <	-	-	5 <	-	-	-
PCE-2	cells/mL	-	-	5 <			-	-	-	5 <	-	-	5 <	-	-	5 <	-	-	5 <	-	-	-
Chloroform Reductase (CFR)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	**<5.00E+00**	**4.00E+00**	5 <	1.74E+01	2.5 U	5 <	<5.00E+00	5 U	-
1,1 DCA Reductase (DCA)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	<5.00E+00	5 U	-
1,2 DCA Reductase (DCAR)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	**<5.00E+00**	**4 U**	5 <	<4.2	2.5 U	5 <	<5.00E+00	5 U	-
Aerobic (Co)Metabolic																						
Solublemethanemonooxygenase (SMMO)	cells/mL	-	-	5 <	**1.63E+04**	**1.16E+04**	**-**	-	-	5 <	**1.14E+02**	**1.18E+02**	**4.96E+01**	**5.87E+01**	**5.45E+01**	5 <	**5.76E+01**	**2.71E+01**	5 <	**1.14E+02**	**3.83E+01**	**-**
Toluene Dioxygenase (TOD)	cells/mL	-	-	5 <	3.80E+00	5 U	-	-	-	5 <	**3.80E+00**	**2.44E+02**	5 <	7.70E+00	4 U	**8.80E+00**	6.40E+00	2.5 U	5 <	3.14E+01	5 U	-
Phenol Hydroxylase (PHE)	cells/mL	**-**	**-**	**1.60E+01**	**6.03E+02**	**7.82E+01**	**-**	**-**	**-**	**2.26E+01**	**6.03E+02**	**4.50E+02**	**7.35E+02**	1.17E+02	4 U	5 <	4.26E+01	2.5 U	5 <	**7.20E+03**	**2.32E+01**	**-**
Trichlorobenzene Dioxygenase (TCBO)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	<5.00E+00	5 U	-
Toluene Monooxygenase 2 (RDEG)	cells/mL	-	-	5 <	5 U	**6.23E+02**	**-**	**-**	**-**	**1.12E+02**	**<5.00E+00**	**2.86E+02**	**1.97E+02**	1.12E+02	4 U	5 <	<4.2	2.5 U	5 <	1.39E+03	5 U	-
Toluene Monooxygenase (RMO)	cells/mL	-	-	5 <	**4.38E+02**	**2.31E+01**	**-**	-	-	5 <	**4.38E+02**	**1.57E+03**	**1.14E+02**	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	7.34E+02	5 U	-
Ethene Monooxygenase (EtnC)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	<5.00E+00	5 U	-
Epoxyalkane Transferase (EtnE)	cells/mL	**-**	**-**	**2.26E+01**	5 U	5 U	-	-	-	5 <	**<5.00E+00**	**1.39E+01**	**3.39E+01**	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	<5.00E+00	5 U	-
Dichloromethane Dehalogenase (DCMA)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	<5.00E+00	5 U	-
Particulate Methane Monooxygenase (PMMO)	cells/mL	-	-		**2.14E+02**	**2.00E-01**	**-**	-	-		**2.14E+02**	**2.30E+00**		3.19E+01	4 U		1.06E+01	2.5 U		**1.65E+02**	**2.40E+00**	**-**
Other																						
Total Eubacteria (EBAC)	cells/mL	**-**	**-**	**5.33E+06**	**1160000 ND**	**1.16E+06**	**-**	**-**	**-**	**9.22E+05**	**4.46E+05**	**3.74E+05**	**1.55E+06**	**3.34E+05**	**9.46E+05**	**3.07E+04**	**2.79E+05**	**2.59E+04**	**2.72E+05**	**3.96E+05**	**1.92E+04**	**-**
Sulfate Reducing Bacteria (APS)	cells/mL	**-**	**-**	**3.32E+05**	**24300 ND**	**2.43E+04**	**-**	**-**	**-**	**2.44E+04**	**3.68E+05**	**5.89E+04**	**1.03E+05**	**1.50E+04**	**5.38E+04**	**4.72E+03**	**4.73E+04**	**3.39E+04**	**4.72E+04**	**3.24E+05**	**6.66E+04**	**-**
Methanogens (MGN)	cells/mL	**-**	**-**	**1.73E+01**	**3350 ND**	**3.35E+03**	**-**	**-**	**-**	**1.47E+04**	**1.03E+02**	**3.30E+02**	**2.59E+03**	**2.32E+02**	**2.38E+02**	**6.84E+01**	**2.64E+01**	**2.12E+02**	**9.00E+00**	**2.12E+01**	**1.86E+03**	**-**

Table 5-11
2016, 2017, and 2021 Microbial Insights Quantarray Chlor Analytical Results Summary

		Transect A								
Location ID:		**AE102M**	**AE102M**	**AE102M**	**AE103R-5**	**AE103R-5**	**AE103R-5**	**EMW-11R2**	**EMW-11R2**	**EMW-11R2**
Sample Date:		**2016**	**2017**	**2021**	**2016**	**2017**	**2021**	**2016**	**2017**	**2021**
Depth Interval:		**23 - 28 ft**	**23 - 28 ft**	**23 - 28 ft**	**122 - 128 ft**	**122 - 128 ft**	**122 - 128 ft**	**102 - 112 ft**	**102 - 112 ft**	**102 - 112 ft**
Analyte	**Units:**									
Reductive Dechlorination										
Dehalococcoides (DHC)	cells/mL	**3.74E+03**	**1.28E+02**	**1.19E+02**	**-**	**4.14E+02**	**1.14E+03**	**4.44E+03**	**3.82E+02**	**-**
tceA Reductase (TCE)	cells/mL	1.00E-01	<0.5	<0.5	-	<0.5	<0.5	<0.3	<0.5	-
bvcA Reductase	cells/mL	**2.13E+01**	**8.70E+00**	**1.00E-01**	**-**	**9.10E+00**	0.5 <	**6.08E+01**	**1.55E+01**	**-**
Vinyl Chloride Reductase (VCR)	cells/mL	**1.96E+02**	**8.72E+01**	**5.50E+00**	**-**	**3.56E+02**	**7.77E+01**	**3.19E+01**	**3.36E+01**	**-**
Dehalobacter spp. (DHBt)	cells/mL	**2.78E+02**	**2.79E+03**	**1.31E+03**	**-**	**7.11E+02**	**2.08E+02**	**1.05E+01**	**7.91E+01**	**-**
Dehalobacter DCM (DCM)	cells/mL	<2.5	<5	<5	-	<5	<5	1.26E+03	<5	-
Dehalogenimonas spp. (DHG)	cells/mL	**7.62E+03**	**3.32E+03**	**1.14E+05**	**-**	**4.47E+04**	**1.21E+04**	**1.02E+04**	**7.25E+03**	**-**
CER	cells/mL			5 <	-	-	<5	-	-	-
TDR	cells/mL			5 <	-	-	<5	-	-	-
Desulfitobacterium spp. (DSB)	cells/mL	**1.30E+03**	**6.64E+03**	**4.49E+03**	**-**	**8.94E+02**	**8.94E+03**	**5.02E+01**	**4.50E+02**	**-**
Dehalobium chlorocoercia (DECO)	cells/mL	**4.18E+02**	**1.87E+03**	**3.03E+03**	**-**	**4.00E+01**	<5	**4.38E+02**	**3.79E+02**	**-**
Desulfuromonas spp. (DSM)	cells/mL	**3.68E+01**	**<2.5**	**7.80E+00**	-	<5	<5	**1.48E+03**	**2.59E+02**	**-**
PCE-1	cells/mL			<5	-	-	**1.27E+02**	-	-	-
PCE-2	cells/mL			**6.60E+01**	-	-	<5	-	-	-
Chloroform Reductase (CFR)	cells/mL	<2.5	<2.5	<5	-	<5	<5	<0.3	<5	-
1,1 DCA Reductase (DCA)	cells/mL	<2.5	<2.5	<5	-	<5	<5	<0.3	<5	-
1,2 DCA Reductase (DCAR)	cells/mL	<2.5	<2.5	<5	-	<5	<5	<0.3	<5	-
Aerobic (Co)Metabolic										
Solublemethanemonooxygenase (SMMO)	cells/mL	**1.10E+04**	**8.09E+03**	**2.36E+02**	**-**	**7.70E+01**	<5	9.82E+01	<5	-
Toluene Dioxygenase (TOD)	cells/mL	**4.93E+01**	**7.62E+02**	<5	-	<5	<5	**9.00E-01**	**2.78E+01**	**-**
Phenol Hydroxylase (PHE)	cells/mL	**1.71E+01**	**2.09E+01**	**9.30E+00**	-	<5	**2.45E+02**	1.08E+02	<5	-
Trichlorobenzene Dioxygenase (TCBO)	cells/mL	<2.5	<2.5	<5	-	<5	<5	<0.3	<5	-
Toluene Monooxygenase 2 (RDEG)	cells/mL	**8.86E+01**	**1.21E+02**	**3.73E+03**	-	<5	<5	<0.3	<5	-
Toluene Monooxygenase (RMO)	cells/mL	<2.5	<2.5	<5	-	<5	**3.34E+02**	3.10E+00	<5	-
Ethene Monooxygenase (EtnC)	cells/mL	**1.09E+01**	**6.95E+01**	**1.39E+02**	-	<5	<5	<0.3	<5	-
Epoxyalkane Transferase (EtnE)	cells/mL	**<2.5**	**5.88E+02**	**1.17E+02**	-	<5	<5	<0.3	<5	-
Dichloromethane Dehalogenase (DCMA)	cells/mL	<2.5	<2.5	<5	-	<5	<5	<0.3	<5	-
Particulate Methane Monooxygenase (PMMO)	cells/mL	**2.36E+02**	**6.00E+00**	<5	**-**	**2.1 J**	<5	**2.40E+01**	**2.30E+00**	**-**
Other										
Total Eubacteria (EBAC)	cells/mL	**4.57E+05**	**4.13E+05**	**3.38E+06**	**-**	**7.06E+04**	**2.85E+05**	**7.14E+04**	**2.20E+04**	**-**
Sulfate Reducing Bacteria (APS)	cells/mL	**2.39E+05**	**6.33E+03**	**2.50E+04**	**-**	**9.50E+03**	**6.54E+03**	**3.95E+04**	**2.37E+03**	**-**
Methanogens (MGN)	cells/mL	**1.06E+01**	**1.42E+02**	<5	**-**	**3.52E+01**	**4.30 J**	**4.29E+01**	**6.00E+00**	**-**

Table 5-11
2016, 2017, and 2021 Microbial Insights Quantarray Chlor Analytical Results Summary

Analyte	Units	Transect B																			
Location ID:		AE105R-2	AE105R-2	AE105R-2	AE105S	AE105S	AE105S	AE106D	AE106D	AE106D	AE106R-3	AE106R-3	AE106R-3	AE112R-6	AE112R-6	AE112R-6	TRC-301R-3	TRC-301R-3	TRC-301R-3	TRC-301R-4	TRC-301R-4	TRC-301R-4
Sample Date:		2016	2017	2021	2016	2017	2021	2016	2017	2021	2016	2017	2021	2016	2017	2021	2016	2017	2021	2016	2017	2021
Depth Interval:		98 - 103 ft	98 - 103 ft	98 - 103 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	65.5 - 69.5 ft
Reductive Dechlorination																						
Dehalococcoides (DHC)	cells/mL	**1.02E+02**	**4.54E+01**	**-**	**1.84E+01**	**1.34E+01**	**-**	**1.61E+01**	0.4 U	-	**5.10E+01**	**8.71E+02**	**-**	**1.30E+00**	**2.30E+00**	**-**	**-**	**-**	**1.22E+02**	**1.08E+02**	**8.70E+00**	
tceA Reductase (TCE)	cells/mL	<5.00E-01	3.00E+00	-	<4.00E-01	0.5 U	-	<3.00E-01	0.4 U	-	<5.00E-01	**2.00E-01**	**-**	<4.00E-01	0.4 U	-	-	-	0.5 <	<5.00E-01	0.3 U	
bvcA Reductase	cells/mL	**5.00E-01**	**1.50E+00**	**-**	<4.00E-01	5.00E-01	-	<3.00E-01	0.4 ND	-	**2.40E+00**	**1.33E+01**	**-**	<4.00E-01	**4.00E-01**	-	**-**	**-**	**6.00E-01**	**3.10E+01**	**2.40E+00**	
Vinyl Chloride Reductase (VCR)	cells/mL	**9.00E-01**	**5.91E+01**	**-**	**1.30E+01**	**5.28E+01**	**-**	<3.00E-01	0.4 U	-	**4.00E-01**	**1.11E+02**	**-**	<4.00E-01	0.4 U	-	**-**	**-**	**3.80E+00**	**1.58E+01**	**8.30E+00**	
Dehalobacter spp. (DHBt)	cells/mL	**1.31E+02**	**5.81E+03**	**-**	**1.59E+02**	**2.79E+03**	**-**	**1.90E+00**	**2.40E+03**	**-**	**2.28E+02**	**3.85E+03**	**-**	**9.36E+02**	**5.73E+02**	**-**	**-**	**-**	**2.10E+03**	**3.19E+01**	**8.11E+02**	
Dehalobacter DCM (DCM)	cells/mL	<5.00E+00	3.00E-01	-	<4.00E+00	5.00E+00	-	<2.50E+00	**4.00E+00**	-	<5.00E+00	4.00E+00	-	<4.20E+00	**4.00E+00**	-	-	-	5 <	**1.90E+00**	**3.00E-01**	
Dehalogenimonas spp. (DHG)	cells/mL	**4.87E+02**	**5.51E+02**	**-**	**1.12E+03**	**3.35E+03**	**-**	**1.14E+02**	4 U	-	**2.40E+02**	**9.21E+02**	**-**	**3.70E+00**	**9.93E+02**	**-**	**-**	**-**	**2.97E+03**	**9.67E+02**	**8.91E+02**	
CER	cells/mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5 <			
TDR	cells/mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5 <			
Desulfitobacterium spp. (DSB)	cells/mL	**2.81E+02**	**2.76E+03**	**-**	**2.85E+02**	**2.50E+03**	**-**	**3.30E+00**	**3.22E+03**	**-**	**8.61E+02**	**3.27E+03**	**-**	**2.07E+03**	**3.16E+02**	**-**	**-**	**-**	**1.20E+03**	**3.98E+01**	**5.45E+02**	
Dehalobium chlorocoercia (DECO)	cells/mL	**9.77E+01**	**3.79E+02**	**-**	**4.45E+02**	**5.37E+02**	**-**	**1.57E+02**	**3.65E+02**	**-**	**9.71E+01**	**2.80E+01**	**-**	**3.04E+02**	4 U	-	**-**	**-**	**5.53E+02**	**9.90E+01**	**2.56E+02**	
Desulfuromonas spp. (DSM)	cells/mL	**2.53E+03**	**3.06E+02**	**-**	<4.00E+00	5 U	-	<2.50E+00	4 U	-	**8.93E+03**	**3.24E+02**	**-**	**2.29E+03**	4 U	-	-	-	5 <	8.45E+01	0.3 U	
PCE-1	cells/mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5 <			
PCE-2	cells/mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5 <			
Chloroform Reductase (CFR)	cells/mL	5.00E-01	0.3 U	-	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	**1.70E+02**	4 U	-	-	-	5 <	<5.00E+00	0.3 U	
1,1 DCA Reductase (DCA)	cells/mL	<5.00E+00	0.3 U	-	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U	
1,2 DCA Reductase (DCAR)	cells/mL	<5.00E+00	0.3 U	-	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U	
Aerobic (Co)Metabolic																						
Solublemethanemonooxygenase (SMMO)	cells/mL	1.44E+02	3.00E-01	-	**5.73E+02**	**5.00E+00**		**7.82E+02**	**4.00E+00**	-	**1.61E+02**	**4.00E+00**	-	**9.92E+02**	**4.00E+00**	-	-	-	5 <	**7.91E+02**	**7.70E+00**	
Toluene Dioxygenase (TOD)	cells/mL	2.90E+00	0.3 U	-	**1.00E+00**	5 U	-	**2.40E+00**	**1.20E+02**	**-**	**8.39E+01**	4 U	-	**2.03E+02**	4 U	-	-	-	5 <	**3.60E+00**	0.3 U	
Phenol Hydroxylase (PHE)	cells/mL	**2.29E+01**	**7.80E+00**	**-**	**2.37E+02**	5 U	-	**1.20E+01**	**3.57E+03**	**-**	**6.62E+02**	**1.02E+02**	**-**	**3.83E+01**	**9.00E+00**	**-**	-	-	5 <	**9.66E+01**	**4.13E+01**	
Trichlorobenzene Dioxygenase (TCBO)	cells/mL	<5.00E+00	0.3 U	-	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U	
Toluene Monooxygenase 2 (RDEG)	cells/mL	<5.00E+00	0.3 U	-	**1.34E+02**	5 U	-	**<2.50E+00**	**1.89E+04**	**-**	**<5.00E+00**	**1.56E+01**	**-**	**3.20E+01**	4 U	-	-	-	5 <	<5.00E+00	0.3 U	
Toluene Monooxygenase (RMO)	cells/mL	6.22E+01	0.3 U	-	**1.41E+02**	5 U	-	**<2.50E+00**	**3.61E+03**	**-**	**3.08E+02**	**3.33E+02**	**-**	<4.20E+00	4 U	-	-	-	5 <	**5.43E+01**	**7.03E+01**	
Ethene Monooxygenase (EtnC)	cells/mL	<5.00E+00	0.3 U	-	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U	
Epoxyalkane Transferase (EtnE)	cells/mL	<5.00E+00	0.3 U	-	**6.50E+00**	**1.08E+02**	**-**	**2.10E+00**	4 U	-	<5.00E+00	4 U	-	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U	
Dichloromethane Dehalogenase (DCMA)	cells/mL	<5.00E+00	0.3 U	-	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U	
Particulate Methane Monooxygenase (PMMO)	cells/mL	**1.44E+01**	**2.90E+00**	**-**	**3.70E+03**	**2.70E+00**	**-**	**5.07E+02**	**7.90E+00**	**-**	**2.67E+01**	**3.70E+00**	**-**	**3.06E+01**	4 U	-	-	-		**3.08E+03**	0.3 U	
Other																						
Total Eubacteria (EBAC)	cells/mL	**1.51E+05**	**6.88E+04**	**-**	**4.65E+04**	**8.63E+04**	**-**	**5.94E+04**	**3.11E+04**	**-**	**3.87E+05**	**3.20E+05**	**-**	**2.48E+05**	**9.47E+03**	**-**	**-**	**-**	**1.89E+05**	**5.10E+04**	**5.14E+04**	
Sulfate Reducing Bacteria (APS)	cells/mL	**8.92E+04**	**9.12E+03**	**-**	**8.03E+04**	**2.80E+03**	**-**	**4.46E+04**	**6.35E+03**	**-**	**2.56E+05**	**3.17E+04**	**-**	**3.11E+04**	**7.36E+03**	**-**	**-**	**-**	**3.65E+04**	**2.41E+04**	**1.41E+04**	
Methanogens (MGN)	cells/mL	**5.20E+00**	**1.83E+01**	**-**	**5.40E+00**	**5.50E+00**	**-**	**2.30E+00**	**2.63E+01**	**-**	**1.37E+01**	**1.68E+01**	**-**	**1.61E+01**	**2.44E+01**	**-**	**-**	**-**	**3.10 J**	**5.60E+00**	**2.10E+00**	

Table 5-12
2016, 2017, and 2021 Compound Specific Isotope Analytical Results Summary

			2016 CSIA (‰ VPDB)				2017 CSIA (‰ VPDB)				2021 CSIA (‰ VPDB)			
Location Group:	**Location ID:**	**Depth Interval:**	**PCE**	**TCE**	**c-DCE**	**VC**	**PCE**	**TCE**	**c-DCE**	**VC**	**PCE**	**TCE**	**c-DCE**	**VC**
Source Area	AE26R-1	50 - 56 ft	-23.91	-22.61	-33.86		-21.37	-18.71	-29.52					
Building 1 Tank F	AE26R-2	72 - 78 ft										-3.6	-27.6	-13.1
	AE28R-2	75 - 85 ft	-25.67	-23.58	-36.84		-21.49	-21.84	-37.09		-24	-25.4	-32	
	AE29R-6	140 - 146 ft		-0.27	-32.19		-	2.13	-25.7			5.7	-25.7	
	GZA-101R	36.5 - 38 ft					-18.62	-35.31	-37.5					
	GZA-101R-6	36.5 - 38 ft	-22.01	-38.69	-42.72									
	GZA-105D	16 - 26 ft									-21.5	-18.2	-25.7	
EPL	GZA-105R	34.5 - 36.5 ft									-23.1	-25.7		
	AE100R-1	18 - 24 ft									-25.6	-26.5	-21.7	
Former Tank Farm	AE100R-5	88 - 93 ft	-23.95	-23.53	-15.32	-8.42	-21.19	-21.48	-23.66	-18.45	-24.4	-25	-22.6	
Transect A	AE102M	23 - 28 ft	-25.05	-22.46	-16.14	-25.36	-21.98	-19.53	-13.44	-17.67	-20.5	-16.2	-15.8	
	AE103R-5	122 - 128 ft					-20.1	-22.19	-24.08	-26.49	-22.1	-25.6	-21.9	
	AE104R-6	168 - 174 ft	-22.51	-24.09	-34.9	-38.31								
	AE108R-1	36.5 - 43.5 ft	-31.22	-8.79	-23.57			-4.58	-19.3					
	EMW-10R	42 - 52 ft									-11.2	-2.9	-18.6	
	EMW-11R2	104 - 114 ft	-22.64	-24.87	-31.22	-35.84	-18.72	-22.16	-26.63	-29.62		-26.5	-28.9	
Transect B	AE105R-1	90.5 - 95.5 ft									-23.8	-23.3	-26.5	
	AE105R-2	98 - 103 ft	-25.72	-24.01	-27.58		-22.54	-21.26	-23.93					
	AE105S	35 - 40 ft			-25.43				-21.92					
	AE106D	34 - 39 ft	-26.83	-22.78	-21.37		-21.67	-18.08	-19.14		-19.1	-19.7		
	AE106R-3	84 - 88 ft	-25.17	-21.84	-23.32	-23.22	-21.19	-17.91	-19.7	-18.81		-11.6	-17.9	
	TRC-301R-3	75.5 - 79.5 ft									-24.2	-23.4	-24	
	TRC-301R-4	65.5 - 69.5 ft	-25.31	-21.93	-24.23	-23.56	-20.92	-18.34	-18.63	-18.97				
Transect B 1/2	AE112R-6	153 - 163 ft	-23.77	-34.51			-16.43	-22.57	-32.6				-31.3	
Transect C	STM-8D	34.7 - 39.7 ft	-28.59	-24.22	-24.83		-22.33	-20.2	-20.11				-22.1	
	STM-8R1	85 - 90 ft										-21.1		

Table 6-1
Summary of Historical Indoor Air Results through January 2022

Site Location:			Ambient Air - Outdoors (IA-01 by TRC; AA-01 by AECOM)																		Building 1 - First Floor					
Sample Location ID:			IA-01					AA-01													IA-02					
Sample Date:			8/20/2009	4/5/2010	4/8/2010	4/15/2010	1/26/2011	8/23/2012	8/28/2012	2/27/2013	5/21/2013	3/7/2014	2/17/2015	2/11/2016	4/13/2017	7/13/2017	2/7/2018	2/13/2019	2/11/2020	1/26/2021	01/18/2022	8/20/2009	4/15/2010	1/26/2011	8/23/2012	8/28/2012	2/27/2013
Sample ID:			IA-1.08.20.09	IA-1.04.05.10	IA-1.04.08.10	IA-1.04.15.10	IA-1.01.26.11	12A-AA1-1	12B-AA1-1	13A-AA1-1	13B-AA1-1	14A-AA1-1	15A-AA1-1	16A-AA1-1	17A-AA1-1	17B-AA1-1	18A-AA1-1	19A-AA1	20A-AA1-1	21A-AA1-1-012621	22A-AA1-1	IA-2.08.20.09	IA-2.04.15.10	IA-2.01.26.11	12A-IA2-1	12B-IA2-1	13A-IA2-1
HVAC System Status:			Off	Off	On	On	On	Off	On	On	Off	On	On	On	N/A	AC On	On	On	On	On	On	Off	On	On	Off	On	On
CHEMICAL NAME	**CAS Number**	**MA - C/I (October 2016)**																									
MADEP APH (2008-2009); APH (2010)																											
1,3-BUTADIENE	106-99-0	NE	2 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	71-43-2	11	2 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C5-C8 ALIPHATIC HYDROCARBONS	C5C8	**330**	**31.6**	**16**	**98**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C9-C10 AROMATIC HYDROCARBONS	C9C10	**44**	10 U	10 U	10 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C9-C12 ALIPHATIC HYDROCARBONS	C9C12	**220**	**31.6**	14 U	**490**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	100-41-4	880	2 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	1634-04-4	2700	2 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	91-20-3	2.7	2 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	108-88-3	4400	2 U	**2.5**	2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M,P-XYLENE	MPXYLENE	88 **	4 U	4 U	4 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	95-47-6	88 **	2 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TO15																											
CARBON DISULFIDE	75-15-0	NE	--	--	--	--	--	0.623 U	0.623 U	0.623 U	--	--	--	--	--	--	--	--	--	--	--	--	--	0.623 U	0.623 U	0.623 U
TO15_SIM																											
1,1,1-TRICHLOROETHANE	71-55-6	4400	0.1 U	0.109 U	**0.196**	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	**0.142**	0.1 U	0.109 U	0.109 U	0.109 U	0.109 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.2	--	0.137 U	0.1 U	0.1 U	**0.1 U**	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	--	0.137 U	0.1 U	0.137 U	0.137 U	0.137 U
1,1,2-TRICHLOROETHANE	79-00-5	0.72	--	0.109 U	0.1 U	0.1 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	--	0.1 U	0.109 U	0.109 U	0.109 U	0.109 U
1,1-DICHLOROETHANE	75-34-3	710	0.081 U	0.081 U	0.08 U	0.08 U	0.08 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.08 U	0.08 U	0.081 U	0.081 U	0.081 U	0.081 U
1,1-DICHLOROETHYLENE	75-35-4	180	0.08 U	0.079 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.08 U	0.08 U	0.08 U	0.079 U	0.079 U	0.079 U
1,2,4-TRICHLOROBENZENE	120-82-1	3.4	--	0.371 U	0.371 U	0.4 U	0.4 U	0.371 U	0.371 U	0.371 U	**0.668**	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 UJ	0.371 U	0.371 U	--	0.4 U	0.371 U	0.371 U	0.371 U	0.371 U
1,2-DIBROMOETHANE	106-93-4	**0.038**	--	0.2 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	--	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U
1,2-DICHLOROBENZENE	95-50-1	710	--	0.12 U	0.12 U	0.1 U	0.1 U	0.12 U	0.12 U	0.120 U	**0.168**	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	--	0.12 U	0.12 U	0.12 U	0.12 U	0.120 U
1,2-DICHLOROETHANE	107-06-2	**0.44**	--	0.081 U	0.081 U	0.08 U	0.08 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	**0.097**	0.081 U	0.081 U	0.081 U	--	0.08 U	0.081 U	0.081 U	0.081 U	0.081 U
1,2-DICHLOROPROPANE	78-87-5	0.6	--	0.092 U	0.09 U	0.09 U	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	--	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U
1,3-DICHLOROBENZENE	541-73-1	710	--	0.12 U	0.1 U	0.12 U	0.1 U	0.12 U	0.12 U	0.120 U	**0.126**	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	--	0.1 U	0.12 U	0.12 U	0.12 U	0.120 U
1,4-DICHLOROBENZENE	106-46-7	1.7	--	0.12 U	0.1 U	0.1 U	0.1 U	0.12 U	0.12 U	0.120 U	**0.174**	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	--	0.1 U	0.12 U	0.12 U	0.12 U	0.120 U
1,4-DIOXANE	123-91-1	2.3	--	0.4 U	0.4 U	0.4 U	0.4 U	0.36 U	0.36 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	--	0.4 U	0.36 U	0.36 U	0.36 U	0.360 U
2-BUTANONE	78-93-3	4400	--	1.47 U	1 U	1 U	**1.12**	**0.787**	**0.885**	**0.596**	**3.48**	**0.808**	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	--	1.47 U	**1.28**	**0.976**	**0.734**	**0.864**
4-METHYL-2-PENTANONE	108-10-1	2700	--	2.05 U	2 U	2 U	0.819 U	0.82 U	0.82 U	0.820 U	0.820 U	0.820 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	--	2 U	0.8 U	0.82 U	0.82 U	0.820 U
ACETONE	67-64-1	710	--	**5.77**	**7.31**	4.75 U	**6.34**	**8.76**	**8.53**	**9.81**	**17.1**	**5.04**	**2.45**	2.38 U	**4.73**	**5.65**	**3.71**	**3.33**	**3.44**	2.38 U	**2.99**	--	**15.4**	**8.5**	**12.1**	**8.08**	**7.84**
BENZENE	71-43-2	11	--	**0.658**	**0.472**	**0.351**	**1.93**	0.319 U	0.319 U	**0.425**	**0.367**	**0.939**	**0.565**	**0.367**	0.319 U	0.319 U	**0.856**	**0.486**	**0.741**	**0.425**	**0.578**	--	**0.466**	**2.66**	**0.502**	0.319 U	**0.387**
BROMODICHLOROMETHANE	75-27-4	0.65	--	0.134 U	0.134 U	0.1 U	0.1 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	--	0.1 U	0.1 U	0.134 U	0.134 U	0.134 U
BROMOFORM	75-25-2	10	--	0.2 U	0.2 U	0.2 U	0.206 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	--	0.2 U	0.2 U	0.207 U	0.207 U	0.207 U
BROMOMETHANE	74-83-9	4.4	--	0.08 U	0.08 U	0.078 U	0.08 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	--	0.08 U	0.078 U	0.078 U	0.078 U	0.078 U
CARBON DISULFIDE	75-15-0	NE	--	--	--	--	--	--	--	--	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	--	--	--	--	--	--
CARBON TETRACHLORIDE	56-23-5	1.9	--	**0.48**	**0.57**	**0.553**	**0.44**	**0.308**	**0.289**	**0.403**	**0.453**	**0.440**	**0.560**	**0.384**	**0.434**	**0.359**	**0.484**	**0.421**	**0.403**	**0.377**	**0.453**	--	**0.503**	**0.44**	**0.314**	**0.321**	**0.396**
CHLOROBENZENE	108-90-7	44	--	0.092 U	0.092 U	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	--	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U
CHLOROETHANE	75-00-3	NE	--	--	--	--	--	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.264 U	0.264 U	0.264 U	0.264 U	--	--	--	0.053 U	0.053 U	0.053 U
CHLOROFORM	67-66-3	3	--	0.098 U	**0.141**	0.1 U	0.1 U	0.098 U	0.098 U	**0.112**	0.098 U	0.098 U	0.098 U	0.098 U	**0.122**	**0.098**	0.098 U	0.098 U	0.098 U	0.098 U	0.098 U	--	0.1 U	**0.122**	**0.166**	0.098 U	**0.205**
CHLOROMETHANE	74-87-3	NE	--	--	--	--	--	1.03 U	1.03 U	**1.08**	**1.18**	**1.08**	**0.985**	**1.08**	**0.898**	**0.925**	**0.869**	**1.04**	**1.03**	**1.03**	**1.09**	--	--	--	**1.1**	1.03 U	1.03 U
CIS-1,2-DICHLOROETHENE	156-59-2	5.3	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	2.9 *	--	0.09 U	0.09 U	0.09 U	0.09 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	--	0.09 U	0.091 U	0.091 U	0.091 U	0.091 U
DIBROMOCHLOROMETHANE	124-48-1	0.48	--	0.2 U	0.2 U	0.2 U	0.2 U	0.17 U	0.17 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	--	0.2 U	0.17 U	0.17 U	0.17 U	0.170 U
DICHLORODIFLUOROMETHANE (CFC-12)	75-71-8	NE	--	--	--	--	--	**1.69**	**0.658**	**1.13**	**1.57**	**1.33**	**1.79**	**1.66**	**1.27**	**1.26**	**2.38**	**2.17**	**1.86**	**2.01**	**2.20**	--	--	--	**1.95**	**1.2**	**1.24**
ETHYLBENZENE	100-41-4	880	--	**0.321**	**0.23**	0.09 U	**0.529**	0.087 U	0.087 U	0.087 U	**0.169**	**0.208**	**0.091**	0.087 U	0.087 U	0.087 U	**0.139**	**0.096**	**0.169**	0.087 U	0.087 U	--	**0.2**	**0.724**	**0.343**	**0.091**	**0.191**
FREON 113 (CHLORINATED FLUOROCARBON)	76-13-1	5200	--	--	--	--	--	**0.475**	**0.452**	**0.475**	**0.491**	**0.468**	**0.452**	**0.429**	**0.506**	**0.414**	**0.498**	**0.567**	**0.452**	**0.422**	**0.521**	--	--	--	**0.59**	**0.514**	**0.690**
HEXACHLORO-1,3-BUTADIENE	87-68-3	4.6	--	0.192 U	0.5 U	0.5 U	0.5 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	--	0.5 U	0.5 U	0.533 U	0.533 U	0.533 U
METHYL TERT-BUTYL ETHER	1634-04-4	2700	--	0.07 U	0.07 U	0.07 U	0.07 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	--	0.072 U	0.07 U	0.072 U	0.072 U	0.072 U
METHYLENE CHLORIDE	75-09-2	530	1.74 U	1.74 U	2 U	1.74 U	4.9 U	4.86 U	4.86 U	4.86 U	**6.74**	4.86 U	**4.03**	1.74 U	**13.6**	1.74 U	1.74 U	**1.83**	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	4.86 U	4.86 U	4.86 U	4.86 U
NAPHTHALENE	91-20-3	**2.7**	--	0.3 U	0.262 U	0.262 U	**0.471**	0.262 U	0.262 U	0.262 U	**0.881**	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	--	0.3 U	0.262 U	0.262 U	0.262 U	**0.341**
STYRENE (MONOMER)	100-42-5	20	--	0.085 U	0.085 U	0.09 U	**0.13**	0.085 U	0.085 U	0.085 U	**0.183**	0.085 U	0.085 U	0.085 U	0.085 U	0.085 U	0.085 U	**0.085**	0.085 U	0.085 U	0.085 U	--	0.09 U	**0.166**	**0.098**	0.085 U	**0.094**
TETRACHLOROETHENE	127-18-4	**4.1**	**0.176**	**0.244**	**0.49**	0.1 U	**0.318**	0.136 U	0.136 U	0.136 U	**0.142**	**0.142**	0.136 U	0.136 U	0.136 U	0.136 U	0.136 U	0.136 U	**0.522**	0.136 U	0.136 U	**0.712**	**0.44**	**0.759**	**0.692**	**0.183**	**0.461**
TOLUENE	108-88-3	4400	--	**2.05**	**1.1**	**0.267**	**2.8**	**0.456**	**0.607**	**1.47**	**11.5**	**1.94**	**0.467**	**0.226**	**0.328**	**0.283**	**1.06**	**0.814**	**1.04**	**0.543**	**0.607**	--	**1.24**	**4.65**	**2.06**	**0.818**	**0.886**
TRANS-1,2-DICHLOROETHENE	156-60-5	53	0.08 U	0.079 U	0.08 U	0.079 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U	**0.111**	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	**0.107**	**0.448**	**0.139**	**0.099**	0.079 U	0.079 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	2.9 *	--	0.09 U	0.09 U	0.09 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	--	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
TRICHLOROETHYLENE	79-01-6	**1.8**	0.107 U	0.107 U	0.1 U	0.1 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	**0.397**	**0.37**	**0.188**	**1.1**	0.107 U	0.107 U
VINYL CHLORIDE	75-01-4	1.3	0.05 U	0.051 U	0.051 U	0.05 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.05 U	0.05 U	0.051 U	0.051 U	0.051 U	0.051 U
M,P-XYLENE	MPXYLENE	88 **	--	**0.915**	**0.655**	0.2 U	**1.36**	0.174 U	0.174 U	**0.182**	**0.465**	**0.539**	**0.230**	0.174 U	0.174 U	**0.174**	**0.400**	**0.208**	**0.460**	**0.200**	**0.191**	--	**0.746**	**1.95**	**0.999**	**0.248**	**0.717**
O-XYLENE	95-47-6	88 **	--	**0.33**	**0.256**	0.09 U	**0.521**	0.087 U	0.087 U	0.087 U	**0.217**	**0.208**	**0.091**	0.087 U	0.087 U	0.087 U	**0.148**	**0.091**	**0.178**	0.087 U	0.087 U	--	**0.26**	**0.720**	**0.374**	**0.096**	**0.300**

Notes:
All units are in micrograms per cubic meter ($\mu g/m^3$)
Detected values are shown in bold.
Detection Limit indicated is above the MA-C/I threshold value
Detected value is above the MA-C/I threshold value
MA - C/I = Mass Industrial/Commercial threshold values from MassDEP Vapor Intrusion Guidance Policy #WSC-16-435 of October 2016.
* MA - C/I value shown for cis- and trans- 1,3-dichloropropene
** MA - C/I value shown for xylenes is for total xylenes

J = Estimated value
U = Not detected at the reported detection limit for the sample.
UJ = Not detected above laboratory detection limit; detection limit is estimated.
NE = Not established
IA - Indoor Air samples except as noted above for IA-01 (ambient air samples 2009-11)
AA - Ambient air samples (outdoors)
APH - Air-phase Petroleum Hydrocarbons
MassDEP - Massachusetts Department of Environmental Protection
SIM - Selective Ion Monitoring

Table 6-1
Summary of Historical Indoor Air Results through January 2022

Site Location:			Building 1 - First Floor																										
Sample Location ID:			IA-02 continued										IA-03																
Sample Date:			5/21/2013	3/7/2014	2/17/2015	2/11/2016	4/13/2017	2/7/2018	2/13/2019	2/11/2020	1/26/2021	01/18/2022	8/20/2009	4/15/2010	1/26/2011	8/23/2012	8/28/2012	2/27/2013	5/21/2013	3/7/2014	2/17/2015	2/11/2016	4/13/2017	2/7/2018	2/13/2019	2/11/2020	1/26/2021	01/18/2022
Sample ID:			13B-IA2-1	14A-IA2-1	15A-IA2-1	16A-IA2-1	17A-IA2-1	18A-IA2-1	19A-IA2	20A-IA2-1	21A-IA2-1-012621	22A-IA2-1	IA-	IA-3.04.15.10	IA-3.01.26.11	12A-IA3-1	12B-IA3-1	13A-IA3-1	13B-IA3-1	14A-IA3-1	15A-IA3-1	16A-IA3-1	17A-IA3-1	18A-IA3-1	19A-IA3	20A-IA3-1	21A-IA3-1-012621	22A-IA3-1
HVAC System Status:			Off	On	On	On	N/A	On	On	On	On	On	Off	On	On	Off	On	On	Off	On	On	On	N/A	On	On	On	On	On	On
CHEMICAL NAME	**CAS Number**	**MA - C/I (October 2016)**																											
MADEP APH (2008-2009); APH (2010)																													
1,3-BUTADIENE	106-99-0	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	71-43-2	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C5-C8 ALIPHATIC HYDROCARBONS	C5C8	**330**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C9-C10 AROMATIC HYDROCARBONS	C9C10	**44**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C9-C12 ALIPHATIC HYDROCARBONS	C9C12	**220**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	100-41-4	880	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	1634-04-4	2700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	91-20-3	2.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	108-88-3	4400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M,P-XYLENE	MPXYLENE	88 **	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	95-47-6	88 **	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TO15																													
CARBON DISULFIDE	75-15-0	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	0.623 U	0.623 U	0.623 U	--	--	--	--	--	--	--	--	--	--	--
TO15_SIM																													
1,1,1-TRICHLOROETHANE	71-55-6	4400	0.109 U	0.109 U	0.109 UJ	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	**0.13**	0.1 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 UJ	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.2	0.137 U	0.137 U	0.137 UJ	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	--	0.137 U	0.1 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 UJ	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U
1,1,2-TRICHLOROETHANE	79-00-5	0.72	0.109 U	0.109 U	0.109 UJ	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	--	0.1 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 UJ	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U
1,1-DICHLOROETHANE	75-34-3	710	0.081 U	0.081 U	0.081 UJ	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.08 U	0.08 U	0.08 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 UJ	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U
1,1-DICHLOROETHYLENE	75-35-4	180	0.079 U	0.079 U	0.079 UJ	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 UJ	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U
1,2,4-TRICHLOROBENZENE	120-82-1	3.4	0.371 U	0.371 U	0.371 UJ	0.371 U	0.371 U	0.371 U	0.371 U	0.371 UJ	0.371 U	0.371 U	--	0.4 U	0.4 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 UJ	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 UJ	0.371 U	0.371 U	0.371 U
1,2-DIBROMOETHANE	106-93-4	**0.038**	0.154 U	0.154 U	0.154 UJ	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	--	0.2 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 UJ	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U
1,2-DICHLOROBENZENE	95-50-1	710	0.120 U	0.120 U	0.120 UJ	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	--	0.12 U	0.1 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 UJ	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U
1,2-DICHLOROETHANE	107-06-2	**0.44**	0.081 U	0.081 U	0.081 UJ	0.081 U	0.081 U	**0.113**	**0.251**	**0.158**	0.081 U	0.081 U	--	0.08 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 UJ	0.081 U	0.081 U	0.081 U	**0.243**	**0.263**	**0.243**	0.081 U	0.081 U	0.081 U
1,2-DICHLOROPROPANE	78-87-5	0.6	0.092 U	0.092 U	0.092 UJ	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	--	0.09 U	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 UJ	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U
1,3-DICHLOROBENZENE	541-73-1	710	0.120 U	0.120 U	0.120 UJ	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	--	0.12 U	0.12 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 UJ	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U
1,4-DICHLOROBENZENE	106-46-7	1.7	0.120 U	0.120 U	0.120 UJ	**0.126**	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	--	0.12 U	0.12 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 UJ	0.120 U	**0.138**	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U
1,4-DIOXANE	123-91-1	2.3	0.360 U	0.360 U	0.360 UJ	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	--	0.36 U	0.4 U	0.36 U	0.36 U	0.360 U	0.360 U	0.360 UJ	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U
2-BUTANONE	78-93-3	4400	**1.10**	**0.770**	1.47 UJ	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	--	1.47 U	**1.41**	**1.1**	**0.625**	**0.852**	**1.50**	**0.820 J**	**3.48**	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U
4-METHYL-2-PENTANONE	108-10-1	2700	0.820 U	0.820 U	2.05 UJ	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	--	2 U	0.819 U	0.82 U	0.82 U	0.820 U	0.820 U	0.820 UJ	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U
ACETONE	67-64-1	710	**9.29**	**9.36**	**3.66 J**	**12.4**	**7.79**	**4.06 J**	2.38 UJ	**3.21**	**29.5**	2.38 U	--	**13.3**	**9.88**	**13.5**	**7.84**	**8.05**	**10.1**	**9.95 J**	**15.7**	**14.2**	**8.72**	**4.32 J**	2.38 UJ	**3.75**	**29.9**	**3.54**
BENZENE	71-43-2	11	0.319 U	**1.51**	**0.591 J**	**0.511**	0.319 U	**0.917**	**0.447**	**0.687**	**8.98**	**8.47**	--	**0.463**	**2.83**	**0.511**	0.319 U	**0.419**	**0.425**	**1.65 J**	**0.649**	**0.518**	0.319 U	**0.958**	**0.428**	**0.680**	**10.5**	**9.55**
BROMODICHLOROMETHANE	75-27-4	0.65	0.134 U	0.134 U	0.134 UJ	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	--	0.1 U	0.1 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 UJ	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U
BROMOFORM	75-25-2	10	0.207 U	0.207 U	0.207 UJ	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	--	0.2 U	0.206 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 UJ	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U
BROMOMETHANE	74-83-9	4.4	0.078 U	0.078 U	0.078 UJ	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	--	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 UJ	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	**0.116**	0.078 U	0.078 U	0.078 U
CARBON DISULFIDE	75-15-0	NE	0.623 U	0.623 U	0.623 UJ	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	--	--	--	--	--	--	0.623 U	0.623 UJ	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	**0.856**	0.623 U	0.623 U
CARBON TETRACHLORIDE	56-23-5	1.9	**0.453**	**0.440**	**0.572 J**	**0.396**	**0.403**	**0.484**	**0.516**	**0.371**	**0.409**	**0.447**	--	**0.528**	**0.50**	**0.321**	**0.302**	**0.403**	**0.459**	**0.434 J**	**0.598**	**0.403**	**0.409**	**0.453**	**0.497**	**0.390**	**0.409**	**0.453**
CHLOROBENZENE	108-90-7	44	0.092 U	0.092 U	0.092 UJ	0.092 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	--	0.092 U	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 UJ	0.092 U	0.092 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U
CHLOROETHANE	75-00-3	NE	0.053 U	0.053 U	0.053 UJ	0.053 U	0.053 U	0.053 U	0.264 U	0.264 U	0.264 U	0.264 U	--	--	--	0.053 U	0.053 U	0.053 U	0.053 U	0.053 UJ	0.053 U	0.053 U	0.053 U	0.053 U	0.264 U	0.264 U	0.264 U	0.264 U	0.264 U
CHLOROFORM	67-66-3	3	**0.107**	**0.103**	0.098 UJ	0.098 U	0.098 U	**0.122**	0.098 U	**0.098**	0.098 U	0.098 U	--	0.1 U	**0.13**	**0.181**	0.098 U	**0.239**	**0.151**	**0.107 J**	0.098 U	0.098 U	0.098 U	**0.107**	0.098 U	0.098 U	0.098 U	0.098 U	0.098 U
CHLOROMETHANE	74-87-3	NE	**1.12**	**1.09**	**0.929 J**	**1.09**	**0.923**	**0.820**	**1.09**	**1.02**	**1.00**	**1.09**	--	--	--	**1.2**	1.03 U	1.03 U	**1.20**	**1.14 J**	**1.02**	**1.12**	**0.989**	**0.840**	**1.06**	**1.20**	**1.03**	**1.09**
CIS-1,2-DICHLOROETHENE	156-59-2	5.3	0.079 U	0.079 U	0.079 UJ	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 UJ	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	2.9 *	0.091 U	0.091 U	0.091 UJ	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	--	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 UJ	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
DIBROMOCHLOROMETHANE	124-48-1	0.48	0.170 U	0.170 U	0.170 UJ	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	--	0.2 U	0.2 U	0.17 U	0.17 U	0.170 U	0.170 U	0.170 UJ	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U
DICHLORODIFLUOROMETHANE (CFC-12)	75-71-8	NE	**1.50**	**1.36 J**	**1.61 J**	**1.40**	**1.31**	**2.35**	**2.38**	**1.97**	**1.97**	**2.21**	--	--	--	**2.11**	**1.39**	**1.32**	**1.83**	**1.55 J**	**2.49**	**2.08**	**1.49**	**2.34**	**2.34**	**1.98**	**1.96**	**2.21**
ETHYLBENZENE	100-41-4	880	**0.165**	**0.365**	**2.88 J**	**0.213**	**0.404**	**0.213**	**0.278**	**0.195**	**5.56**	**5.21**	--	**0.217**	**0.889**	**0.339**	**0.087**	**0.222**	**0.278**	**0.391 J**	**2.60**	**0.230**	**0.365**	**0.213**	**0.265**	**0.191**	**6.47**	**5.86**
FREON 113 (CHLORINATED FLUOROCARBON)	76-13-1	5200	**0.567**	**0.881**	**0.690 J**	**1.13**	**0.544**	**0.506**	**0.636**	**0.475**	**0.445**	**0.544**	--	--	--	**0.782**	**0.529**	**1.07**	**1.18**	**0.828 J**	**1.29**	**1.36**	**0.567**	**0.521**	**0.613**	**0.521**	**0.437**	**0.498**
HEXACHLORO-1,3-BUTADIENE	87-68-3	4.6	0.533 U	0.533 U	0.533 UJ	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	--	0.5 U	0.5 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 UJ	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U
METHYL TERT-BUTYL ETHER	1634-04-4	2700	0.072 U	0.072 U	0.072 UJ	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	--	0.07 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 UJ	0.072 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U
METHYLENE CHLORIDE	75-09-2	530	4.86 U	4.86 U	1.74 UJ	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	2 U	4.86 U	4.86 U	4.86 U	**10.2**	4.86 U	4.86 UJ	**46.6**	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U
NAPHTHALENE	91-20-3	**2.7**	**0.294**	0.262 U	0.262 UJ	**2.79**	**0.383**	0.262 U	0.262 U	0.262 U	**0.745**	**0.739**	--	0.262 U	0.3 U	0.262 U	0.262 U	**0.367**	**0.330**	0.262 UJ	0.262 U	0.262 U	**0.299**	0.262 U	0.262 U	0.262 U	**0.807**	**0.729**
STYRENE (MONOMER)	100-42-5	20	**0.106**	**0.111**	0.085 UJ	**0.255**	0.085 U	0.085 U	0.085 U	0.085 U	**1.28**	**1.19**	--	0.085 U	**0.20**	**0.089**	0.085 U	**0.115**	**0.170**	**0.115 J**	0.085 U	**0.307**	0.085 U	0.085 U	0.085 U	0.085 U	**1.55**	**1.37**
TETRACHLOROETHENE	127-18-4	**4.1**	**0.319**	**0.705**	**0.156 J**	**0.461**	**0.346**	**0.400**	**0.834**	**2.01**	**0.183**	0.136 U	**0.752**	**0.501**	**0.894**	**0.814**	**0.23**	**0.922**	**1.03**	**0.719 J**	**0.278**	**0.570**	**0.373**	**0.488**	**0.780**	**0.597**	**0.224**	0.136 U
TOLUENE	108-88-3	4400	**0.859**	**2.82**	**3.52 J**	**1.41**	**1.54**	**1.67**	**1.13**	**1.20**	**25.9**	**23.0**	--	**1.31**	**5.3**	**2.08**	**0.746**	**1.19**	**1.67**	**3.11 J**	**2.47**	**2.20**	**1.52**	**1.75**	**1.03**	**1.12**	**29.5**	**25.7**
TRANS-1,2-DICHLOROETHENE	156-60-5	53	0.079 U	**0.254**	0.079 UJ	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	**0.087**	**0.404**	**0.15**	**0.123**	0.079 U	0.079 U	**0.095**	**0.274 J**	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	2.9 *	0.091 U	0.091 U	0.091 UJ	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	--	0.09 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 UJ	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
TRICHLOROETHYLENE	79-01-6	**1.8**	**0.199**	**0.118**	0.107 UJ	0.107 U	0.107 U	0.107 U	0.107 U	**0.113**	0.107 U	0.107 U	**0.44**	**0.37**	**0.226**	**1.07**	0.107 U	0.107 U	**0.446**	**0.134 J**	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U
VINYL CHLORIDE	75-01-4	1.3	0.051 U	0.051 U	0.051 UJ	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.05 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 UJ	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U
M,P-XYLENE	MPXYLENE	88 **	**0.500**	**1.03**	**10.2 J**	**0.717**	**1.45**	**0.643**	**0.843**	**0.612**	**19.2**	**17.7**	--	**0.764**	**2.43**	**0.995**	**0.243**	**0.938**	**0.938**	**1.14 J**	**11.2**	**0.791**	**1.28**	**0.686**	**0.760**	**0.578**	**22.5**	**19.9**
O-XYLENE	95-47-6	88 **	**0.226**	**0.365**	**3.08 J**	**0.282**	**0.478**	**0.265**	**0.365**	**0.243**	**7.17**	**6.95**	--	**0.27**	**0.907**	**0.374**	**0.1**	**0.395**	**0.378**	**0.404 J**	**3.70**	**0.304**	**0.421**	**0.274**	**0.334**	**0.230**	**8.34**	**7.77**

Notes:
All units are in micrograms per cubic meter ($\mu g/m^3$)
Detected values are shown in bold.
Detection Limit indicated is above the MA-C/I threshold value
Detected value is above the MA-C/I threshold value
MA - C/I = Mass Industrial/Commercial threshold values from MassDEP Vapor Intrusion Guidance Policy #WSC-16-435 of October 2016.
* MA - C/I value shown for cis- and trans- 1,3-dichloropropene
** MA - C/I value shown for xylenes is for total xylenes

J = Estimated value
U = Not detected at the reported detection limit for the sample.
UJ = Not detected above laboratory detection limit; detection limit is estimated.
NE = Not established
IA - Indoor Air samples except as noted above for IA-01 (ambient air samples 2009-11)
AA - Ambient air samples (outdoors)
APH - Air-phase Petroleum Hydrocarbons
MassDEP - Massachusetts Department of Environmental Protection
SIM - Selective Ion Monitoring

Table 6-1
Summary of Historical Indoor Air Results through January 2022

Site Location:			Building 1 - First Floor																												
Sample Location ID:			IA-04																	IA-07											
Sample Date:			8/20/2009	4/15/2010	1/26/2011	8/23/2012	8/28/2012	2/27/2013	5/21/2013	3/7/2014	2/17/2015	2/11/2016	4/13/2017	2/7/2018	2/13/2019	2/11/2020	1/26/2021	01/18/2022	4/15/2010	1/26/2011	8/23/2012	8/28/2012	2/27/2013	5/21/2013	3/7/2014	2/17/2015	2/11/2016	4/13/2017	2/7/2018
Sample ID:			IA-	IA-4.04.15.10	IA-4.01.26.11	12A-IA4-1	12B-IA4-1	13A-IA4-1	13B-IA4-1	14A-IA4-1	15A-IA4-1	16A-IA4-1	17A-IA4-1	18A-IA4-1	19A-IA4	20A-IA4-1	21A-IA4-1-012621	22A-IA4-1	IA-7.04.15.10	IA-7.01.26.11	12A-IA7-1	12B-IA7-1	13A-IA7-1	13B-IA7-1	14A-IA7-1	15A-IA7-1	16A-IA7-1	17A-IA7-1	18A-IA7-1
HVAC System Status:			Off	On	On	Off	On	On	Off	On	On	On	N/A	On	On	On	On	On	On	On	Off	On	On	Off	On	On	On	N/A	On
CHEMICAL NAME	**CAS Number**	**MA - C/I (October 2016)**																													
MADEP APH (2008-2009); APH (2010)																															
1,3-BUTADIENE	106-99-0	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	71-43-2	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C5-C8 ALIPHATIC HYDROCARBONS	C5C8	**330**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C9-C10 AROMATIC HYDROCARBONS	C9C10	**44**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C9-C12 ALIPHATIC HYDROCARBONS	C9C12	**220**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	100-41-4	880	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	1634-04-4	2700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	91-20-3	2.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	108-88-3	4400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M,P-XYLENE	MPXYLENE	88 **	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	95-47-6	88 **	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TO15																															
CARBON DISULFIDE	75-15-0	NE	--	--	--	0.623 U	0.623 U	0.623 U	--	--	--	--	--	--	--	--	--	--	--	--	0.623 U	0.623 U	0.623 U	--	--	--	--	--	--	--	--
TO15_SIM																															
1,1,1-TRICHLOROETHANE	71-55-6	4400	0.1 U	0.1 U	0.109 U	**0.125**	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.1 U	0.1 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 UJ	0.109 U	0.109 U	0.109 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.2	--	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.1 U	0.1 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 UJ	0.137 U	0.137 U	0.137 U
1,1,2-TRICHLOROETHANE	79-00-5	0.72	--	0.1 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 UJ	0.109 U	0.109 U	0.109 U
1,1-DICHLOROETHANE	75-34-3	710	0.08 U	0.08 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.08 U	0.08 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 UJ	0.081 U	0.081 U	0.081 U
1,1-DICHLOROETHYLENE	75-35-4	180	0.079 U	0.08 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.08 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 UJ	0.079 U	0.079 U	0.079 U
1,2,4-TRICHLOROBENZENE	120-82-1	3.4	--	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 UJ	0.371 U	0.371 U	0.4 U	0.4 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 UJ	0.371 U	0.371 U	0.371 U
1,2-DIBROMOETHANE	106-93-4	**0.038**	--	0.154 U	0.2 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.2 U	0.2 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 UJ	0.154 U	0.154 U	0.154 U
1,2-DICHLOROBENZENE	95-50-1	710	--	0.1 U	0.1 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.1 U	0.12 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 UJ	0.120 U	0.120 U	0.120 U
1,2-DICHLOROETHANE	107-06-2	**0.44**	--	0.08 U	0.08 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	**1.07**	**0.308**	**0.255**	0.081 U	0.081 U	0.08 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 UJ	0.081 U	0.081 U	**0.194**
1,2-DICHLOROPROPANE	78-87-5	0.6	--	0.09 U	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U	**0.116**	0.092 U	0.092 UJ	0.092 U	0.092 U	0.092 U
1,3-DICHLOROBENZENE	541-73-1	710	--	0.1 U	0.12 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	0.12 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 UJ	0.120 U	0.120 U	0.120 U
1,4-DICHLOROBENZENE	106-46-7	1.7	--	0.1 U	0.12 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.1 U	0.1 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 UJ	**0.126**	0.120 U	0.120 U
1,4-DIOXANE	123-91-1	2.3	--	0.4 U	0.36 U	0.36 U	0.36 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.4 U	0.36 U	0.36 U	0.36 U	0.360 U	0.360 U	0.360 U	0.360 UJ	0.360 U	0.360 U	0.360 U
2-BUTANONE	78-93-3	4400	--	1.47 U	**1.13**	**1.16**	**0.708**	**0.864**	**2.62**	**0.773**	**3.36**	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1 U	**1.32**	**1.13**	**0.655**	**0.917**	**1.79**	**0.734**	**3.72 J**	1.47 U	1.47 U	1.47 U
4-METHYL-2-PENTANONE	108-10-1	2700	--	2.05 U	0.819 U	0.82 U	0.82 U	0.820 U	0.820 U	0.820 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	0.8 U	0.82 U	0.82 U	0.820 U	0.820 U	0.820 U	2.05 UJ	2.05 U	2.05 U	2.05 U
ACETONE	67-64-1	710	--	**9.69**	**7.46**	**12**	**8.81**	**10.2**	**8.48**	**8.34**	**18.6**	**12.3**	**8.36**	**4.09 J**	2.38 UJ	**3.63**	**18.1**	**2.57**	**13.8**	**10.2**	**11.5**	**8.34**	**8.55**	**12.2**	**9.31**	**17.4 J**	**13.4**	**8.86**	**3.90 J**
BENZENE	71-43-2	11	--	**0.405**	**2.42**	**0.511**	0.319 U	**0.355**	**0.371**	**1.44**	**0.636**	**0.489**	0.319 U	**0.930**	**0.409**	**0.696**	**9.68**	**10.6**	**0.437**	**3.03**	**0.473**	0.319 U	**0.387**	**0.399**	**1.52**	**0.626 J**	**0.508**	0.319 U	**0.942**
BROMODICHLOROMETHANE	75-27-4	0.65	--	0.1 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.1 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 UJ	0.134 U	0.134 U	0.134 U
BROMOFORM	75-25-2	10	--	0.2 U	0.206 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.206 U	0.2 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 UJ	0.207 U	0.207 U	0.207 U
BROMOMETHANE	74-83-9	4.4	--	0.08 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.08 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 UJ	0.078 U	0.078 U	0.078 U
CARBON DISULFIDE	75-15-0	NE	--	--	--	--	--	--	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	--	--	--	--	--	0.623 U	0.623 U	0.623 UJ	0.623 U	0.623 U	0.623 U
CARBON TETRACHLORIDE	56-23-5	1.9	--	**0.52**	**0.415**	**0.314**	**0.321**	**0.396**	**0.453**	**0.440**	**0.585**	**0.396**	**0.403**	**0.434**	**0.478**	**0.377**	**0.396**	**0.434**	**0.50**	**0.47**	**0.302**	**0.308**	**0.396**	**0.453**	**0.428**	**0.579 J**	**0.403**	**0.403**	**0.510**
CHLOROBENZENE	108-90-7	44	--	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.092 U	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 UJ	0.092 U	0.461 U	0.461 U
CHLOROETHANE	75-00-3	NE	--	--	--	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.264 U	0.264 U	0.264 U	0.264 U	--	--	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 UJ	0.053 U	0.053 U	0.053 U
CHLOROFORM	67-66-3	3	--	0.1 U	**0.11**	**0.186**	0.098 U	**0.186**	**0.117**	**0.103**	0.098 U	**0.122**	0.098 U	**0.107**	0.098 U	0.098 U	0.098 U	0.098 U	0.098 U	**0.14**	**0.186**	0.098 U	**0.391**	**0.342**	**0.103**	0.098 UJ	0.098 U	**0.098**	**0.103**
CHLOROMETHANE	74-87-3	NE	--	--	--	**1.11**	1.03 U	1.03 U	**1.22**	**1.10**	**1.01**	**1.12**	**0.987**	**0.845**	**1.04**	**1.08**	**1.01**	**1.10**	--	--	**1.05**	1.03 U	1.03 U	**1.30**	**1.10**	**0.958 J**	**1.14**	**0.991**	**0.867**
CIS-1,2-DICHLOROETHENE	156-59-2	5.3	0.079 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 UJ	0.079 U	0.079 U	0.079 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	2.9 *	--	0.09 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 UJ	0.091 U	0.091 U	0.091 U
DIBROMOCHLOROMETHANE	124-48-1	0.48	--	0.096 U	0.17 U	0.17 U	0.17 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.096 U	0.2 U	0.17 U	0.17 U	0.170 U	0.170 U	0.170 U	0.170 UJ	0.170 U	0.170 U	0.170 U
DICHLORODIFLUOROMETHANE (CFC-12)	75-71-8	NE	--	--	--	**1.94**	**1.35**	**0.940**	**1.81**	**1.30**	0.989 U	**1.48**	**1.56**	**2.40**	**2.31**	**2.06**	**1.96**	**2.20**	--	--	**1.12**	**1.14**	**1.19**	**1.77**	**1.72**	**1.45 J**	**1.26**	**1.17**	**2.41**
ETHYLBENZENE	100-41-4	880	--	**0.186**	**0.660**	**0.395**	**0.108**	**0.104**	**0.248**	**0.317**	**4.02**	**0.200**	**0.404**	**0.226**	**0.256**	**0.195**	**5.95**	**6.56**	**0.21**	**0.812**	**0.317**	**0.096**	**0.213**	**0.230**	**0.347**	**3.37 J**	**0.248**	**0.378**	**0.217**
FREON 113 (CHLORINATED FLUOROCARBON)	76-13-1	5200	--	--	--	**0.659**	**0.56**	**0.583**	**0.537**	**0.697**	**0.774**	**1.10**	**0.606**	**0.506**	**0.628**	**0.506**	**0.437**	**0.537**	--	--	**0.759**	**0.56**	**0.743**	**0.828**	**1.39**	**1.52 J**	**1.36**	**0.552**	**0.537**
HEXACHLORO-1,3-BUTADIENE	87-68-3	4.6	--	0.192 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.192 U	0.5 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 UJ	0.533 U	0.533 U	0.533 U
METHYL TERT-BUTYL ETHER	1634-04-4	2700	--	0.07 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.07 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 UJ	0.072 U	0.721 U	0.721 U
METHYLENE CHLORIDE	75-09-2	530	1.74 U	1.74 U	4.86 U	**6.56**	4.86 U	4.86 U	**13.9**	4.86 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	4.9 U	4.86 U	4.86 U	4.86 U	**4.93**	4.86 U	**2.22 J**	1.74 U	**3.19**	1.74 U
NAPHTHALENE	91-20-3	**2.7**	--	0.3 U	0.3 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	**0.283**	0.262 U	0.262 U	0.262 U	**0.792**	**0.682**	0.262 U	0.262 U	0.262 U	0.262 U	**0.351**	**0.262**	0.262 U	0.262 UJ	0.262 U	**0.378**	0.262 U
STYRENE (MONOMER)	100-42-5	20	--	0.09 U	**0.153**	**0.174**	**1.54**	0.085 U	**0.123**	**0.089**	0.085 U	**0.260**	0.085 U	**0.094**	0.085 U	**0.089**	**1.34**	**1.50**	0.09 U	**0.18**	**0.094**	0.085 U	**0.162**	**0.196**	**0.119**	0.085 UJ	0.085 U	**0.311**	0.085 U
TETRACHLOROETHENE	127-18-4	**4.1**	**0.346**	**0.58**	**0.759**	**0.644**	**0.278**	**0.305**	**0.366**	**0.549**	**0.197**	**0.502**	**0.359**	**0.529**	**0.719**	**1.00**	**0.203**	0.136 U	**0.58**	**1.35**	**1.02**	**0.285**	**0.542**	**0.929**	**1.21**	**0.373 J**	**0.536**	**0.448**	**0.481**
TOLUENE	108-88-3	4400	--	**0.874**	**4.1**	**2.12**	**0.848**	**0.494**	**1.32**	**2.67**	**3.58**	**1.34**	**1.63**	**1.72**	**1.03**	**1.13**	**27.3**	**28.8**	**1.19**	**5.49**	**1.98**	**0.818**	**1.04**	**1.51**	**2.77**	**3.11 J**	**1.93**	**1.47**	**1.72**
TRANS-1,2-DICHLOROETHENE	156-60-5	53	0.079 U	**0.2**	**0.103**	**0.127**	0.079 U	0.079 U	0.079 U	**0.230**	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	**0.424**	**0.19**	**0.103**	0.079 U	0.079 U	**0.151**	**0.270**	0.079 UJ	0.079 U	0.079 U	0.079 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	2.9 *	--	0.09 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 UJ	0.091 U	0.091 U	0.091 U
TRICHLOROETHYLENE	79-01-6	**1.8**	**2.43**	**0.24**	**0.2**	**1.05**	0.107 U	0.107 U	**0.188**	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	**0.328**	**0.27**	**0.962**	0.107 U	0.107 U	**0.500**	**0.124**	0.107 UJ	0.107 U	0.107 U	0.107 U
VINYL CHLORIDE	75-01-4	1.3	0.051 U	0.051 U	0.05 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 UJ	0.051 U	0.051 U	0.051 U
M,P-XYLENE	MPXYLENE	88 **	--	**0.681**	**1.85**	**1.18**	**0.317**	**0.339**	**0.760**	**0.882**	**16.9**	**0.656**	**1.47**	**0.695**	**0.747**	**0.582**	**20.3**	**22.1**	**0.738**	**2.2**	**0.938**	**0.269**	**0.830**	**0.691**	**0.986**	**14.5 J**	**0.882**	**1.34**	**0.691**
O-XYLENE	95-47-6	88 **	--	**0.24**	**0.699**	**0.452**	**0.13**	**0.148**	**0.317**	**0.326**	**5.52**	**0.248**	**0.478**	**0.282**	**0.330**	**0.235**	**7.64**	**8.60**	**0.269**	**0.816**	**0.352**	**0.108**	**0.352**	**0.287**	**0.347**	**4.82 J**	**0.326**	**0.434**	**0.274**

Notes:
All units are in micrograms per cubic meter (µg/m^3)
Detected values are shown in bold.
Detection Limit indicated is above the MA-C/I threshold value
Detected value is above the MA-C/I threshold value
MA - C/I = Mass Industrial/Commercial threshold values from MassDEP Vapor Intrusion Guidance Policy #WSC-16-435 of October 2016.
* MA - C/I value shown for cis- and trans- 1,3-dichloropropene
** MA - C/I value shown for xylenes is for total xylenes

J = Estimated value
U = Not detected at the reported detection limit for the sample.
UJ = Not detected above laboratory detection limit; detection limit is estimated.
NE = Not established
IA - Indoor Air samples except as noted above for IA-01 (ambient air samples 2009-11)
AA - Ambient air samples (outdoors)
APH - Air-phase Petroleum Hydrocarbons
MassDEP - Massachusetts Department of Environmental Protection
SIM - Selective Ion Monitoring

Table 6-1
Summary of Historical Indoor Air Results through January 2022

Site Location:			Building 1 - First Floor																										
Sample Location ID:			IA-07 continued				IA-08																						
Sample Date:			2/13/2019	2/11/2020	1/26/2021	01/18/2022	4/15/2010	1/26/2011	8/23/2012	8/23/2012	8/28/2012	8/28/2012	2/27/2013	2/27/2013	5/21/2013	5/21/2013	3/7/2014	3/7/2014	2/17/2015	2/17/2015	2/11/2016	2/11/2016	4/13/2017	4/13/2017	2/7/2018	2/7/2018	2/13/2019	2/13/2019	2/11/2020
Sample ID:			19A-IA7	20A-IA7-1	21A-IA7-1-012621	22A-IA7-1	IA-8.04.15.10	IA-8.01.26.11	12A-IA8-1	12A-IA8-2	12B-IA8-2	12B-IA8-1	13A-IA8-1	13A-IA8-2	13B-IA8-1	13B-IA8-2	14A-IA8-1	14A-IA8-2	15A-IA8-1	15A-IA8-2	16A-IA8-1	16A-IA8-2	17A-IA8-1	17A-IA8-2	18A-IA8-1	18A-IA8-2	19A-IA8	19A-IA8-021319-2	20A-IA8-1
HVAC System Status:			On	On	On	On	On	On	Off	Off	On	On	On	On	Off	Off	On	On	On	On	On	On	N/A	N/A	On	On	On	On	On
CHEMICAL NAME	**CAS Number**	**MA - C/I (October 2016)**								duplicate				duplicate		duplicate		duplicate		duplicate		duplicate		duplicate		duplicate		duplicate	
MADEP APH (2008-2009); APH (2010)																													
1,3-BUTADIENE	106-99-0	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	71-43-2	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C5-C8 ALIPHATIC HYDROCARBONS	C5C8	**330**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C9-C10 AROMATIC HYDROCARBONS	C9C10	**44**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C9-C12 ALIPHATIC HYDROCARBONS	C9C12	**220**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	100-41-4	880	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	1634-04-4	2700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	91-20-3	2.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	108-88-3	4400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M,P-XYLENE	MPXYLENE	88 **	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	95-47-6	88 **	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TO15																													
CARBON DISULFIDE	75-15-0	NE	--	--	--	--	--	--	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TO15_SIM																													
1,1,1-TRICHLOROETHANE	71-55-6	4400	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.1 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 UJ	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.2	0.137 U	0.137 U	0.137 U	0.137 U	0.1 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 UJ	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U
1,1,2-TRICHLOROETHANE	79-00-5	0.72	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.1 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 UJ	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U
1,1-DICHLOROETHANE	75-34-3	710	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 UJ	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U
1,1-DICHLOROETHYLENE	75-35-4	180	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 UJ	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U
1,2,4-TRICHLOROBENZENE	120-82-1	3.4	0.371 U	0.371 UJ	0.371 U	0.371 U	0.4 U	0.4 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 UJ	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 UJ
1,2-DIBROMOETHANE	106-93-4	**0.038**	0.154 U	0.154 U	0.154 U	0.154 U	0.2 U	0.2 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 UJ	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U
1,2-DICHLOROBENZENE	95-50-1	710	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 UJ	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U
1,2-DICHLOROETHANE	107-06-2	**0.44**	**0.227**	**0.247**	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 UJ	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	**0.134**	**0.138**	**0.239**	**0.231**	**0.150**
1,2-DICHLOROPROPANE	78-87-5	0.6	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 UJ	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U
1,3-DICHLOROBENZENE	541-73-1	710	0.120 U	0.120 U	0.120 U	0.120 U	0.1 U	0.1 U	0.12 U	0.12 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 UJ	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U
1,4-DICHLOROBENZENE	106-46-7	1.7	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 UJ	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U
1,4-DIOXANE	123-91-1	2.3	0.360 U	0.360 U	0.360 U	0.360 U	0.4 U	0.4 U	0.36 U	0.36 U	0.36 U	0.36 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 UJ	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U
2-BUTANONE	78-93-3	4400	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	**1.11**	**1.05**	**1.06**	**0.849**	**0.773**	**0.935**	**0.920**	**1.41**	**1.80**	**0.764**	**0.779**	**5.19 J**	**5.25**	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U
4-METHYL-2-PENTANONE	108-10-1	2700	2.05 U	2.05 U	2.05 U	2.05 U	2 U	0.8 U	0.82 U	0.82 U	0.82 U	0.82 U	0.820 U	0.820 U	0.820 U	0.820 U	0.820 U	0.820 U	2.05 UJ	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U
ACETONE	67-64-1	710	2.38 UJ	**3.66**	**28.0**	**4.80**	**14.3**	**8.19**	**11.3**	**11.4**	**9.57**	**8.12**	**8.15**	**8.29**	**10.0**	**11.4**	**9.83**	**9.64**	**18.8 J**	**18.7**	**12.5**	**12.2**	**9.81**	**10.8**	**3.49 J**	**3.44 J**	2.38 UJ	2.38 UJ	**3.44**
BENZENE	71-43-2	11	**0.454**	**0.690**	**9.20**	**9.71**	**0.460**	**2.57**	**0.482**	**0.47**	0.319 U	0.319 U	**0.403**	**0.393**	**0.425**	**0.431**	**1.50**	**1.60**	**0.617 J**	**0.617**	**0.738**	**0.505**	0.319 U	0.319 U	**0.898**	**0.891**	**0.444**	**0.450**	**0.664**
BROMODICHLOROMETHANE	75-27-4	0.65	0.134 U	0.134 U	0.134 U	0.134 U	0.1 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 UJ	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U
BROMOFORM	75-25-2	10	0.207 U	0.207 U	0.207 U	0.207 U	0.206 U	0.206 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 UJ	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U
BROMOMETHANE	74-83-9	4.4	0.078 U	0.078 U	0.078 U	0.078 U	0.08 U	0.08 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 UJ	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U
CARBON DISULFIDE	75-15-0	NE	0.623 U	0.623 U	0.623 U	0.623 U	--	--	--	--	--	--	--	--	0.623 U	0.623 U	0.623 U	0.623 U	0.623 UJ	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U
CARBON TETRACHLORIDE	56-23-5	1.9	**0.484**	**0.428**	**0.384**	**0.484**	**0.50**	**0.45**	**0.302**	**0.302**	**0.308**	**0.302**	**0.403**	**0.396**	**0.453**	**0.459**	**0.434**	**0.434**	**0.572 J**	**0.566**	**0.396**	**0.396**	**0.390**	**0.390**	**0.472**	**0.478**	**0.472**	**0.497**	**0.390**
CHLOROBENZENE	108-90-7	44	0.461 U	0.461 U	0.461 U	0.461 U	0.092 U	0.09 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 UJ	0.092 U	0.092 U	0.092 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U
CHLOROETHANE	75-00-3	NE	0.264 U	0.264 U	0.264 U	0.264 U	--	--	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 UJ	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.264 U	0.264 U	0.264 U
CHLOROFORM	67-66-3	3	0.098 U	0.098 U	0.098 U	0.098 U	0.1 U	**0.12**	**0.19**	**0.195**	0.098 U	0.098 U	**0.195**	**0.186**	**0.147**	**0.156**	**0.098**	**0.103**	0.098 UJ	0.098 U	0.098 U	0.098 U	0.098 U	0.098 U	**0.137**	**0.103**	0.098 U	0.098 U	0.098 U
CHLOROMETHANE	74-87-3	NE	**1.08**	**1.08**	**1.01**	**1.05**	--	--	1.03 U	1.03 U	1.03 U	1.03 U	1.03 U	1.03 U	**1.22**	**1.25**	**1.10**	**1.11**	**0.946 J**	**0.940**	**1.09**	**1.09**	**0.981**	**0.977**	**0.836**	**0.845**	**1.07**	**1.09**	**1.09**
CIS-1,2-DICHLOROETHENE	156-59-2	5.3	0.079 U	0.079 U	0.079 U	0.079 U	0.08 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 UJ	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	2.9 *	0.091 U	0.091 U	0.091 U	0.091 U	0.09 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 UJ	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
DIBROMOCHLOROMETHANE	124-48-1	0.48	0.170 U	0.170 U	0.170 U	0.170 U	0.096 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 UJ	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U
DICHLORODIFLUOROMETHANE (CFC-12)	75-71-8	NE	**2.39**	**2.08**	**1.94**	**2.14**	--	--	**1.39**	**1.38**	**1.34**	**0.93**	**1.34**	**1.45**	**1.73**	**1.68**	**1.26**	**1.37**	**1.78 J**	**1.41**	**1.65**	**1.75**	**1.40**	**1.48**	**2.37**	**2.39**	**2.37**	**2.42**	**2.03**
ETHYLBENZENE	100-41-4	880	**0.287**	**0.195**	**5.69**	**5.99**	**0.208**	**0.647**	**0.304**	**0.317**	**0.091**	0.087 U	**0.217**	**0.217**	**0.256**	**0.261**	**0.334**	**0.369**	**2.16 J**	**2.15**	**0.308**	**0.200**	**0.334**	**0.378**	**0.195**	**0.200**	**0.261**	**0.269**	**0.161**
FREON 113 (CHLORINATED FLUOROCARBON)	76-13-1	5200	**0.613**	**0.529**	**0.460**	**0.529**	--	--	**2.48**	**2.6**	**0.828**	**0.743**	**1.66**	**1.64**	**2.46**	**2.75**	**3.31**	**3.40**	**3.81 J**	**3.79**	**1.97**	**2.03**	**0.797**	**0.851**	**0.720**	**0.682**	**0.736**	**0.743**	**0.613**
HEXACHLORO-1,3-BUTADIENE	87-68-3	4.6	0.533 U	0.533 U	0.533 U	0.533 U	0.192 U	0.5 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 UJ	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U
METHYL TERT-BUTYL ETHER	1634-04-4	2700	0.721 U	0.721 U	0.721 U	0.721 U	0.072 U	0.07 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 UJ	0.072 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U
METHYLENE CHLORIDE	75-09-2	530	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	4.9 U	4.86 U	4.86 U	4.86 U	4.86 U	4.86 U	4.86 U	4.86 UJ	**19.1 J**	4.86 U	4.86 U	1.74 UJ	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	**2.49**	1.74 U	**2.56**	1.74 U	1.74 U
NAPHTHALENE	91-20-3	**2.7**	0.262 U	0.262 U	**0.488**	**0.598**	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	**0.299**	**0.309**	0.262 U	0.262 U	0.262 U	0.262 U	0.262 UJ	0.262 U	**0.839**	0.262 U	**0.315**	**0.561**	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U
STYRENE (MONOMER)	100-42-5	20	0.085 U	0.085 U	**1.33**	**1.29**	0.085 U	**0.15**	0.085 U	0.085 U	0.085 U	0.085 U	**0.102**	**0.098**	**0.166**	**0.166**	**0.089**	**0.115**	0.085 UJ	0.085 U	**0.247**	**0.251**	**0.085**	**0.085**	0.085 U	**0.094**	0.085 U	0.085 U	0.085 U
TETRACHLOROETHENE	127-18-4	**4.1**	**0.821**	**0.888**	**0.237**	0.136 U	**2.58**	**7.12**	**3.11**	**3.34**	**0.502**	**0.508**	**1.65**	**1.60**	**1.80**	**1.99**	**2.03**	**2.14**	**0.943 J**	**0.936**	**0.915**	**0.943**	**1.62**	**1.84**	**3.57**	**3.42**	**1.99**	**2.11**	**1.71**
TOLUENE	108-88-3	4400	**1.17**	**1.11**	**26.0**	**25.8**	**1.21**	**4.1**	**1.87**	**1.92**	**0.931**	**0.799**	**1.41**	**1.38**	**1.64**	**1.65**	**2.67**	**2.97**	**1.97 J**	**2.00**	**1.53**	**1.54**	**2.30**	**1.71**	**1.57**	**1.53**	**1.10**	**1.21**	**0.965**
TRANS-1,2-DICHLOROETHENE	156-60-5	53	0.079 U	0.079 U	0.079 U	0.079 U	**0.412**	**0.19**	**0.099**	**0.107**	0.079 U	0.079 U	0.079 U	0.079 U	**0.139**	**0.131**	**0.254**	**0.289**	0.079 UJ	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	2.9 *	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 UJ	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
TRICHLOROETHYLENE	79-01-6	**1.8**	0.107 U	0.107 U	0.107 U	0.107 U	**0.499**	**0.521**	**1.13**	**1.15**	0.107 U	0.107 U	**0.107**	**0.107**	**0.575**	**0.623**	**0.193**	**0.199**	0.107 UJ	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	**0.145**	**0.140**	**0.107**	**0.113**	0.107 U
VINYL CHLORIDE	75-01-4	1.3	0.051 U	0.051 U	0.051 U	0.051 U	0.05 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 UJ	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U
M,P-XYLENE	MPXYLENE	88 **	**0.851**	**0.578**	**19.6**	**19.8**	**0.729**	**1.72**	**0.895**	**0.93**	**0.252**	**0.217**	**0.873**	**0.847**	**0.812**	**0.825**	**0.934**	**1.07**	**9.38 J**	**9.43**	**1.09**	**0.678**	**1.18**	**1.35**	**0.612**	**0.591**	**0.795**	**0.799**	**0.473**
O-XYLENE	95-47-6	88 **	**0.361**	**0.235**	**7.30**	**7.82**	**0.28**	**0.638**	**0.347**	**0.36**	**0.1**	**0.091**	**0.356**	**0.347**	**0.334**	**0.339**	**0.343**	**0.382**	**3.14 J**	**3.16**	**0.378**	**0.252**	**0.400**	**0.443**	**0.243**	**0.239**	**0.343**	**0.352**	**0.182**

Notes:
All units are in micrograms per cubic meter ($\mu g/m^3$)
Detected values are shown in bold.
Detection Limit indicated is above the MA-C/I threshold value
Detected value is above the MA-C/I threshold value
MA - C/I = Mass Industrial/Commercial threshold values from MassDEP Vapor Intrusion Guidance Policy #WSC-16-435 of October 2016.
* MA - C/I value shown for cis- and trans- 1,3-dichloropropene
** MA - C/I value shown for xylenes is for total xylenes

J = Estimated value
U = Not detected at the reported detection limit for the sample.
UJ = Not detected above laboratory detection limit; detection limit is estimated.
NE = Not established
IA - Indoor Air samples except as noted above for IA-01 (ambient air samples 2009-11)
AA - Ambient air samples (outdoors)
APH - Air-phase Petroleum Hydrocarbons
MassDEP - Massachusetts Department of Environmental Protection
SIM - Selective Ion Monitoring

Table 6-1
Summary of Historical Indoor Air Results through January 2022

Site Location:			Building 1 - First Floor					Building 1 - Second Floor											Building 1 - Mezzanine (Removed 2016-2017)						
Sample Location ID:			IA-08, continued					IA-09											IA-10						
Sample Date:			2/11/2020	1/26/2021	1/26/2021	01/18/2022	01/18/2022	8/23/2012	8/28/2012	2/27/2013	5/21/2013	3/7/2014	2/17/2015	2/11/2016	2/7/2018	2/13/2019	2/11/2020	1/26/2021	01/18/2022	8/23/2012	8/28/2012	2/27/2013	5/21/2013	3/7/2014	2/17/2015	2/11/2016
Sample ID:			20A-IA8-2	21A-IA8-1-012621	21A-IA8-2-012621	22A-IA8-1	22A-IA8-2	12A-IA9-1	12B-IA9-1	13A-IA9-1	13B-IA9-1	14A-IA9-1	15A-IA9-1	16A-IA9-1	18A-IA9-1	19A-IA9	20A-IA9-1	21A-IA9-1-012621	22A-IA9-1	12A-IA10-1	12B-IA10-1	13A-IA10-1	13B-IA10-1	14A-IA10-1	15A-IA10-1	16A-IA10-1
HVAC System Status:			On duplicate	On	On duplicate	On	On duplicate	Off	On	On	Off	On	On	On	On	On	On	On	On	Off	On	On	Off	On	On	On
CHEMICAL NAME	**CAS Number**	**MA - C/I (October 2016)**																								
MADEP APH (2008-2009); APH (2010)																										
1,3-BUTADIENE	106-99-0	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	71-43-2	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C5-C8 ALIPHATIC HYDROCARBONS	C5C8	**330**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C9-C10 AROMATIC HYDROCARBONS	C9C10	**44**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C9-C12 ALIPHATIC HYDROCARBONS	C9C12	**220**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	100-41-4	880	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	1634-04-4	2700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	91-20-3	2.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	108-88-3	4400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M,P-XYLENE	MPXYLENE	88 **	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	95-47-6	88 **	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TO15																										
CARBON DISULFIDE	75-15-0	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TO15_SIM																										
1,1,1-TRICHLOROETHANE	71-55-6	4400	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.2	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U
1,1,2-TRICHLOROETHANE	79-00-5	0.72	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U
1,1-DICHLOROETHANE	75-34-3	710	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U
1,1-DICHLOROETHYLENE	75-35-4	180	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U
1,2,4-TRICHLOROBENZENE	120-82-1	3.4	0.371 UJ	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 UJ	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U
1,2-DIBROMOETHANE	106-93-4	**0.038**	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U
1,2-DICHLOROBENZENE	95-50-1	710	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U
1,2-DICHLOROETHANE	107-06-2	**0.44**	**0.142**	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	**0.162**	**0.202**	**0.158**	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U
1,2-DICHLOROPROPANE	78-87-5	0.6	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U
1,3-DICHLOROBENZENE	541-73-1	710	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U
1,4-DICHLOROBENZENE	106-46-7	1.7	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U
1,4-DIOXANE	123-91-1	2.3	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.36 U	0.36 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.36 U	0.36 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U
2-BUTANONE	78-93-3	4400	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	**1.3**	**0.82**	**1.24**	**4.25**	**0.829**	**1.97**	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	**1.26**	**0.684**	0.590 U	**1.45**	**0.693**	**2.32**	1.47 U
4-METHYL-2-PENTANONE	108-10-1	2700	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	0.82 U	0.82 U	0.820 U	**1.10**	0.820 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	0.82 U	0.82 U	0.820 U	0.820 U	0.820 U	2.05 U	2.05 U
ACETONE	67-64-1	710	**3.61**	**14.0**	**13.4**	**2.49**	2.38 U	**13.8**	**8.76**	**22.4**	**17.6**	**8.67**	**11.0**	**13.0**	**4.37 J**	2.38 UJ	**4.61**	**11.9**	**4.01**	**11.9**	**7.53**	**4.44**	**8.10**	**6.84**	**12.5**	**12.0**
BENZENE	71-43-2	11	**0.642**	**7.35**	**7.38**	**6.93**	**6.64**	**0.473**	0.319 U	**0.403**	**0.390**	**1.46**	**0.783**	**0.543**	**0.942**	**0.441**	**0.661**	**7.54**	**7.03**	**0.623**	0.319 U	**0.339**	**0.406**	**1.36**	**0.639**	**0.527**
BROMODICHLOROMETHANE	75-27-4	0.65	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U
BROMOFORM	75-25-2	10	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U
BROMOMETHANE	74-83-9	4.4	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U
CARBON DISULFIDE	75-15-0	NE	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U				0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	**0.816**	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U
CARBON TETRACHLORIDE	56-23-5	1.9	**0.384**	**0.396**	**0.403**	**0.440**	**0.434**	**0.314**	**0.296**	**0.396**	**0.453**	**0.440**	**0.566**	**0.396**	**0.478**	**0.478**	**0.415**	**0.384**	**0.453**	**0.302**	**0.289**	**0.390**	**0.459**	**0.434**	**0.566**	**0.396**
CHLOROBENZENE	108-90-7	44	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U
CHLOROETHANE	75-00-3	NE	0.264 U	0.264 U	0.264 U	0.264 U	0.264 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.264 U	0.264 U	0.264 U	0.264 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U
CHLOROFORM	67-66-3	3	**0.098**	0.098 U	0.098 U	0.098 U	0.098 U	**0.181**	0.098 U	**0.166**	**0.151**	**0.103**	0.098 U	0.098 U	**0.098**	**0.103**	0.098 U	0.098 U	**0.098**	**0.166**	0.098 U	**0.127**	**0.122**	0.098 U	0.098 U	0.098 U
CHLOROMETHANE	74-87-3	NE	**1.09**	**1.03**	**1.04**	**1.09**	**1.08**	**1.18**	1.03 U	1.03 U	**1.29**	**1.11**	**0.952**	**1.10**	**0.845**	**1.09**	**1.10**	**1.03**	**1.10**	**1.08**	1.03 U	1.03 U	**1.24**	**1.10**	**0.954**	**1.11**
CIS-1,2-DICHLOROETHENE	156-59-2	5.3	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	2.9 *	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
DIBROMOCHLOROMETHANE	124-48-1	0.48	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.17 U	0.17 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.17 U	0.17 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U
DICHLORODIFLUOROMETHANE (CFC-12)	75-71-8	NE	**1.98**	**2.01**	**1.95**	**2.19**	**2.19**	**1.94**	**0.93**	**1.38**	**2.02**	**1.23**	**1.43**	**1.38**	**2.37**	**2.35**	**2.05**	**1.92**	**2.24**	**1.36**	**1.19**	**1.47**	**2.07**	**1.84**	**1.44**	**1.69**
ETHYLBENZENE	100-41-4	880	**0.169**	**4.43**	**4.52**	**4.20**	**3.87**	**0.265**	**0.1**	**0.287**	**0.317**	**0.317**	**2.34**	**0.265**	**0.213**	**0.195**	**0.191**	**4.47**	**4.15**	**0.3**	0.087 U	0.087 U	**0.213**	**0.282**	**2.61**	**0.756**
FREON 113 (CHLORINATED FLUOROCARBON)	76-13-1	5200	**0.590**	**0.789**	**0.713**	**0.667**	**0.644**	**0.82**	**0.483**	**0.636**	**0.874**	**0.705**	**0.720**	**1.11**	**0.690**	**0.651**	**0.529**	**0.452**	**0.544**	**0.606**	**0.46**	**0.521**	**0.613**	**0.590**	**0.659**	**0.820**
HEXACHLORO-1,3-BUTADIENE	87-68-3	4.6	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U
METHYL TERT-BUTYL ETHER	1634-04-4	2700	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.721 U
METHYLENE CHLORIDE	75-09-2	530	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	4.86 U	4.86 U	**5.91**	4.86 U	4.86 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	4.86 U	4.86 U	**7.71**	4.86 U	4.86 U	**19.8**	1.74 U
NAPHTHALENE	91-20-3	**2.7**	0.262 U	**0.592**	**0.608**	**0.493**	**0.482**	0.262 U	0.262 U	**0.362**	**0.336**	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	**0.409**	**0.378**	0.262 U	0.262 U	0.262 U	**0.666**	0.262 U	0.262 U	0.262 U
STYRENE (MONOMER)	100-42-5	20	0.085 U	**1.17**	**1.18**	**0.984**	**0.911**	**0.085**	0.085 U	**0.762**	**0.366**	**0.179**	0.085 U	**0.307**	**0.102**	**0.136**	**0.106**	**1.17**	**0.813**	**0.123**	0.085 U	0.085 U	**0.123**	0.085 U	0.085 U	**0.230**
TETRACHLOROETHENE	127-18-4	**4.1**	**1.77**	**1.50**	**1.47**	**0.692**	**0.617**	**0.827**	0.136 U	**0.346**	**0.617**	**0.468**	**0.149**	**3.02**	**1.22**	**1.09**	**1.09**	**0.481**	**0.319**	**0.508**	0.136 U	**0.136**	**0.346**	**0.332**	0.136 U	**0.292**
TOLUENE	108-88-3	4400	**1.07**	**20.5**	**20.6**	**18.5**	**17.4**	**1.85**	**0.938**	**26.9**	**4.37**	**2.69**	**2.24**	**1.70**	**1.74**	**0.871**	**1.09**	**21.1**	**18.7**	**1.84**	**0.735**	**0.509**	**1.26**	**2.41**	**2.51**	**2.46**
TRANS-1,2-DICHLOROETHENE	156-60-5	53	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	**0.099**	0.079 U	0.079 U	**0.107**	**0.198**	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	**0.103**	0.079 U	0.079 U	0.079 U	**0.186**	0.079 U	0.079 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	2.9 *	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
TRICHLOROETHYLENE	79-01-6	**1.8**	**0.118**	0.107 U	0.107 U	0.107 U	0.107 U	**0.731**	0.107 U	0.107 U	**0.274**	**0.113**	0.107 U	**1.37**	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	**0.779**	0.107 U	0.107 U	**0.204**	0.107 U	0.107 U	0.107 U
VINYL CHLORIDE	75-01-4	1.3	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U
M,P-XYLENE	MPXYLENE	88 **	**0.465**	**15.5**	**15.7**	**14.3**	**13.1**	**0.773**	**0.282**	**1.10**	**0.686**	**0.847**	**9.08**	**0.925**	**0.652**	**0.543**	**0.552**	**15.6**	**13.6**	**0.856**	**0.217**	**0.243**	**0.617**	**0.777**	**11.2**	**2.93**
O-XYLENE	95-47-6	88 **	**0.187**	**5.78**	**5.82**	**5.60**	**5.08**	**0.3**	**0.117**	**0.443**	**0.300**	**0.313**	**3.00**	**0.321**	**0.261**	**0.243**	**0.213**	**5.73**	**5.34**	**0.33**	**0.087**	**0.104**	**0.261**	**0.282**	**3.63**	**0.886**

Notes:
All units are in micrograms per cubic meter ($\mu g/m^3$)
Detected values are shown in bold.
Detection Limit indicated is above the MA-C/I threshold value
Detected value is above the MA-C/I threshold value
MA - C/I = Mass Industrial/Commercial threshold values from MassDEP Vapor Intrusion Guidance Policy #WSC-16-435 of October 2016.
* MA - C/I value shown for cis- and trans- 1,3-dichloropropene
** MA - C/I value shown for xylenes is for total xylenes

J = Estimated value
U = Not detected at the reported detection limit for the sample.
UJ = Not detected above laboratory detection limit; detection limit is estimated.
NE = Not established
IA - Indoor Air samples except as noted above for IA-01 (ambient air samples 2009-11)
AA - Ambient air samples (outdoors)
APH - Air-phase Petroleum Hydrocarbons
MassDEP - Massachusetts Department of Environmental Protection
SIM - Selective Ion Monitoring

Table 6-1
Summary of Historical Indoor Air Results through January 2022

Site Location:			Building 1A									Building 3 (Razed 2011)					Guard Shack (Razed 2017)				
Sample Location ID:			IA-11		IA-12			IA-13		IA-14		IA-05					IA-06				
Sample Date:			4/13/2017	2/13/2019	4/13/2017	7/13/2017	2/13/2019	7/13/2017	2/13/2019	7/13/2017	2/13/2019	8/20/2009	8/20/2009	4/5/2010	4/8/2010	4/8/2010	8/20/2009	4/5/2010	8/23/2012	3/6/2013	5/21/2013
Sample ID:			17A-IA11-1	19A-IA11	17A-IA12-1	17B-IA12-1	19A-IA12	17A-IA13-1	19A-IA13	17A-IA14-1	19A-IA14	IA-5.08.20.09	IA-901.08.20.09	IA-5.04.05.10	IA-5.04.08.10	IA-901.04.08.10	IA-6.08.20.09	IA-6.04.05.10	12A-IA6-1	13A-IA6-1	13B-IA6-1
HVAC System Status:			On	On	On	AC On	On	AC On	On	AC On	On	Off	Off duplicate	Off	On	On duplicate	Off	Off	Off	Off	Off
CHEMICAL NAME	**CAS Number**	**MA - C/I (October 2016)**																			
MADEP APH (2008-2009); APH (2010)																					
1,3-BUTADIENE	106-99-0	NE	--	--	--	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	--
BENZENE	71-43-2	11	--	--	--	--	--	--	--	--	--	2 U	2 U	**3.5**	2 U	2 U	2 U	2 U	--	--	--
C5-C8 ALIPHATIC HYDROCARBONS	C5C8	**330**	--	--	--	--	--	--	--	--	--	**597**	**508**	**320**	**29**	**17**	**56.2**	**19**	--	--	--
C9-C10 AROMATIC HYDROCARBONS	C9C10	**44**	--	--	--	--	--	--	--	--	--	**45.7**	**37.3**	**32**	10 U	10 U	10 U	10 U	--	--	--
C9-C12 ALIPHATIC HYDROCARBONS	C9C12	**220**	--	--	--	--	--	--	--	--	--	**8940**	**7260**	**4800**	**690**	**420**	14 U	14 U	--	--	--
ETHYLBENZENE	100-41-4	880	--	--	--	--	--	--	--	--	--	**2.23**	**2.12**	**2.8**	2 U	2 U	2 U	2 U	--	--	--
METHYL TERT-BUTYL ETHER	1634-04-4	2700	--	--	--	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	--
NAPHTHALENE	91-20-3	2.7	--	--	--	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	--
TOLUENE	108-88-3	4400	--	--	--	--	--	--	--	--	--	**2.45**	**2.25**	**14**	2 U	2 U	**2.02**	2 U	--	--	--
M,P-XYLENE	MPXYLENE	88 **	--	--	--	--	--	--	--	--	--	**7.65**	**7.07**	**10**	4 U	4 U	2 U	2 U	--	--	--
O-XYLENE	95-47-6	88 **	--	--	--	--	--	--	--	--	--	**2.47**	**2.26**	**3.6**	2 U	2 U	4 U	4 U	--	--	--
TO15																					
CARBON DISULFIDE	75-15-0	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.623 U	0.623 U	--
TO15_SIM																					
1,1,1-TRICHLOROETHANE	71-55-6	4400	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.1 U	0.109 U	0.109 U	0.1 U	0.109 U	0.109 U	0.109 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.2	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	--	--	0.1 U	0.1 U	0.137 U	--	0.1 U	0.137 U	0.137 U	0.137 U
1,1,2-TRICHLOROETHANE	79-00-5	0.72	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	--	--	0.1 U	0.109 U	0.1 U	--	0.1 U	0.109 U	0.109 U	0.109 U
1,1-DICHLOROETHANE	75-34-3	710	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.08 U	0.081 U	0.08 U	0.081 U	0.081 U	0.081 U
1,1-DICHLOROETHYLENE	75-35-4	180	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.08 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U
1,2,4-TRICHLOROBENZENE	120-82-1	3.4	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	--	--	0.371 U	0.371 U	0.4 U	--	0.4 U	0.371 U	0.371 U	0.371 U
1,2-DIBROMOETHANE	106-93-4	**0.038**	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	--	--	0.2 U	0.2 U	0.154 U	--	0.2 U	0.154 U	0.154 U	0.154 U
1,2-DICHLOROBENZENE	95-50-1	710	0.120 U	0.120 U	0.120 U	**0.144**	0.120 U	**0.138**	0.120 U	0.120 U	0.120 U	--	--	0.12 U	0.1 U	0.1 U	--	0.1 U	0.12 U	0.120 U	0.120 U
1,2-DICHLOROETHANE	107-06-2	**0.44**	**0.097**	**0.308**	**1.64**	**2.23**	**0.385**	**2.18**	**0.385**	**2.77**	**0.607**	--	--	0.081 U	0.081 U	0.08 U	--	0.08 U	0.081 U	0.081 U	0.081 U
1,2-DICHLOROPROPANE	78-87-5	0.6	0.092 U	**0.148**	0.092 U	**0.139**	0.092 U	**0.139**	0.092 U	**0.111**	0.092 U	--	--	0.092 U	0.092 U	0.09 U	--	0.09 U	0.092 U	0.092 U	0.092 U
1,3-DICHLOROBENZENE	541-73-1	710	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	--	--	0.12 U	0.12 U	0.1 U	--	0.12 U	0.12 U	0.120 U	0.120 U
1,4-DICHLOROBENZENE	106-46-7	1.7	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	0.120 U	--	--	0.12 U	0.12 U	0.1 U	--	0.1 U	0.12 U	0.120 U	0.120 U
1,4-DIOXANE	123-91-1	2.3	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	0.360 U	--	--	0.4 U	0.36 U	0.36 U	--	0.36 UJ	0.36 U	0.360 U	0.360 U
2-BUTANONE	78-93-3	4400	1.47 U	**3.10**	1.47 U	**2.70**	1.47 U	**2.75**	1.47 U	**2.00**	1.47 U	--	--	**1**	1 U	1.47 U	--	1 U	**0.879**	0.590 U	**0.782**
4-METHYL-2-PENTANONE	108-10-1	2700	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	--	--	2.05 U	2.05 U	2 U	--	2 U	0.82 U	0.820 U	0.820 U
ACETONE	67-64-1	710	**9.36**	**9.03**	**27.6**	**23.8**	**17.7**	**24.0**	**17.8**	**125**	**19.4**	--	--	**22.5**	**7.88**	5 U	--	**7.45**	**11.3**	**2.66**	**6.49**
BENZENE	71-43-2	11	0.319 U	**1.36**	**0.607**	0.319 U	**0.997**	0.319 U	**0.987**	0.319 U	**0.930**	--	--	**2.85**	**0.338**	0.3 U	--	**0.488**	0.319 U	**0.326**	0.319 U
BROMODICHLOROMETHANE	75-27-4	0.65	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	--	--	0.1 U	0.134 U	0.134 U	--	0.1 U	0.134 U	0.134 U	0.134 U
BROMOFORM	75-25-2	10	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	--	--	0.2 U	0.206 U	0.206 U	--	0.2 U	0.207 U	0.207 U	0.207 U
BROMOMETHANE	74-83-9	4.4	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	--	--	0.08 U	0.078 U	0.08 U	--	0.08 U	0.078 U	0.078 U	0.078 U
CARBON DISULFIDE	75-15-0	NE	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	--	--	--	--	--	--	--	--	--	0.623 U
CARBON TETRACHLORIDE	56-23-5	1.9	**0.415**	**0.484**	**0.390**	**0.365**	**0.478**	**0.346**	**0.447**	**0.346**	**0.415**	--	--	**0.47**	**0.541**	**0.459**	--	**0.49**	**0.308**	**0.403**	**0.447**
CHLOROBENZENE	108-90-7	44	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	--	--	0.092 U	0.092 U	0.09 U	--	0.092 U	0.092 U	0.092 U	0.092 U
CHLOROETHANE	75-00-3	NE	0.053 U	0.264 U	0.053 U	0.053 U	0.264 U	0.053 U	0.264 U	0.053 U	0.264 U	--	--	--	--	--	--	--	0.053 U	0.053 U	0.053 U
CHLOROFORM	67-66-3	3	**0.176**	0.098 U	**0.137**	**0.142**	0.098 U	**0.137**	**0.103**	**0.127**	**0.107**	--	--	**0.156**	0.098 U	0.1 U	--	0.1 U	0.098 U	0.098 U	0.098 U
CHLOROMETHANE	74-87-3	NE	**1.06**	**1.09**	**1.11**	**1.32**	**1.07**	**1.16**	**1.06**	**1.18**	**1.09**	--	--	--	--	--	--	--	1.03 U	1.03 U	**1.11**
CIS-1,2-DICHLOROETHENE	156-59-2	5.3	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.08 U	0.08 U	0.079 U	0.08 U	0.08 U	0.08 U	0.079 U	0.079 U	0.079 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	2.9 *	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	--	--	0.09 U	0.091 U	0.09 U	--	0.091 U	0.091 U	0.091 U	0.091 U
DIBROMOCHLOROMETHANE	124-48-1	0.48	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	0.170 U	--	--	0.2 U	0.096 U	0.2 U	--	0.2 U	0.17 U	0.170 U	0.170 U
DICHLORODIFLUOROMETHANE (CFC-12)	75-71-8	NE	**1.50**	**2.36**	**1.40**	**1.57**	**2.22**	**1.01**	**2.24**	**1.33**	**2.33**	--	--	--	--	--	--	--	**1.43**	**1.35**	**1.52**
ETHYLBENZENE	100-41-4	880	**0.347**	**6.21**	**0.890**	**3.60**	**1.95**	**3.71**	**1.87**	**2.24**	**1.64**	--	--	**2.3**	**0.156**	**0.10**	--	**0.2**	**0.135**	0.087 U	**0.139**
FREON 113 (CHLORINATED FLUOROCARBON)	76-13-1	5200	**0.498**	**0.567**	**0.606**	**0.422**	**0.590**	**0.406**	**0.590**	**0.414**	**0.590**	--	--	--	--	--	--	--	**0.483**	**0.475**	**0.475**
HEXACHLORO-1,3-BUTADIENE	87-68-3	4.6	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	--	--	0.192 U	0.192 U	0.5 U	--	0.5 U	0.533 U	0.533 U	0.533 U
METHYL TERT-BUTYL ETHER	1634-04-4	2700	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	--	--	0.07 U	0.072 U	0.072 U	--	0.072 U	0.072 U	0.072 U	0.072 U
METHYLENE CHLORIDE	75-09-2	530	**8.44**	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	1.74 U	2 U	2 U	1.74 U	1.74 U	**2.19**	2 U	4.86 U	**27.8**	4.86 U
NAPHTHALENE	91-20-3	**2.7**	**0.530**	**1.25**	**3.16**	**1.22**	**0.592**	**1.27**	**0.561**	**1.04**	**0.503**	--	--	**0.807**	0.262 U	0.262 U	--	0.3 U	0.262 U	0.262 U	0.262 U
STYRENE (MONOMER)	100-42-5	20	**0.085**	**0.456**	**0.307**	**0.302**	**0.238**	**0.298**	**0.221**	**0.392**	**0.332**	--	--	**0.23**	0.085 U	0.085 U	--	0.09 U	0.085 U	0.085 U	0.085 U
TETRACHLOROETHENE	127-18-4	**4.1**	**0.197**	**0.963**	**0.332**	**0.197**	**0.488**	**0.190**	**0.448**	**0.142**	**0.373**	**0.684**	**0.64**	**6.85**	**0.603**	**0.51**	**0.31**	**0.31**	**0.142**	0.136 U	0.136 U
TOLUENE	108-88-3	4400	**2.60**	**15.7**	**13.5**	**7.24**	**8.18**	**7.39**	**7.80**	**4.11**	**6.78**	--	--	**11.6**	**0.761**	**0.588**	--	**1.58**	**0.878**	**0.264**	**1.96**
TRANS-1,2-DICHLOROETHENE	156-60-5	53	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.08 U	0.079 U	0.08 U	0.08 U	0.079 U	0.08 U	0.079 U	0.079 U	0.079 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	2.9 *	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	--	--	0.091 U	0.091 U	0.09 U	--	0.091 U	0.091 U	0.091 U	0.091 U
TRICHLOROETHYLENE	79-01-6	**1.8**	**0.124**	**0.129**	**0.113**	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	**0.13**	**0.123**	**0.20**	0.107 U	0.107 U	0.107 U	**0.13**	0.107 U	0.107 U	0.107 U
VINYL CHLORIDE	75-01-4	1.3	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.05 U	0.051 U	0.051 U	0.051 U	0.05 U	0.05 U	0.051 U	0.051 U	0.051 U
M,P-XYLENE	MPXYLENE	88 **	**1.49**	**16.2**	**3.44**	**15.4**	**6.69**	**15.9**	**6.30**	**9.77**	**5.91**	--	--	**8.63**	**0.538 J**	**0.34 J**	--	**0.486**	**0.208**	0.174 U	**0.326**
O-XYLENE	95-47-6	88 **	**0.756**	**8.21**	**1.38**	**6.08**	**2.83**	**6.25**	**2.70**	**4.01**	**2.51**	--	--	**3.07**	**0.204 J**	**0.13 J**	--	**0.2**	**0.1**	0.087 U	**0.139**

Notes:
All units are in micrograms per cubic meter ($\mu g/m^3$)
Detected values are shown in bold.
Detection Limit indicated is above the MA-C/I threshold value
Detected value is above the MA-C/I threshold value
MA - C/I = Mass Industrial/Commercial threshold values from MassDEP Vapor Intrusion Guidance Policy #WSC-16-435 of October 2016.
* MA - C/I value shown for cis- and trans- 1,3-dichloropropene
** MA - C/I value shown for xylenes is for total xylenes

J = Estimated value
U = Not detected at the reported detection limit for the sample.
UJ = Not detected above laboratory detection limit; detection limit is estimated.
NE = Not established
IA - Indoor Air samples except as noted above for IA-01 (ambient air samples 2009-11)
AA - Ambient air samples (outdoors)
APH - Air-phase Petroleum Hydrocarbons
MassDEP - Massachusetts Department of Environmental Protection
SIM - Selective Ion Monitoring

Table 9-1
Properties and Uses - 2017 versus 2021

Address	2017 Owner/Occupant	2017 Site Use	Changes in Owner/Occupant and Site Use
Source Property:			
40-50 Fordham Rd	Wilmington Realty Trust	Owner	Hilco Redevelopment Partners as of October 29, 2021
	Vacant (Bldg 1)	Under Renovation	United Parcel Service (UPS) seasonal from 2017-2019 and full time from fall 2020-present
	CranBarry (Bldg 1A)	Sporting goods retail/wholesale	Vacant as of late 2021 or early 2022
	K1 Speed Boston (Bldg 1A)	Public go-cart racing facility	No change
	Ametek (Bldg 2)	Aerospace industry	No change
Downgradient Properties:			
99 Concord St	International Family Church	Headquarters, offices, worship services	No change
95 Concord St	YRC Freight	Active Trucking Terminal	No change
91 Concord St	Central Transport/FedEx	Active FedEx Shipping Terminal	No change
87 Concord St	Howland Development/Various	Various light commercial uses	Same Owner; Occupant is now Samara Cabinetry; Site use is the same/similar
73-79 Concord St	Centre Trucking-Sullivan Tire	Various commercial/industrial uses	No change
71 Concord St	DL Maher	Well and Pump Services	No change
62 Concord St	Wilmington Masonry	Commercial Masonry Retailer	No change

Table 10-1
Post-Temporary Solution Operations, Maintenance, and Monitoring Schedule

Year	2017												2018												2019												2020												2021												2022				
Month	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May
Indoor Air Sampling Event																																																												
Comprehensive Groundwater Sampling Event																																																												
LNAPL Gauging and LNAPL Removal																																																												
Post-Temporary Solution Status Reports																																																												
Five-Year Review of the Temporary Solution																																																											

Completed
To be Completed

Table 10-2
Post-Temporary Solution Operations, Maintenance, and Monitoring Schedule 2022-2027

Year	2022						2023												2024												2025												2026												2027					
Month	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**
Groundwater Sampling Event																																																													
LNAPL Gauging and Removal																																																												
Post-Temporary Solution Status Reports																																																											
Five-Year Review of the Temporary Solution																																																											

Completed
To be Completed

Table 10-3
Post-Temporary Solution Operations, Maintennce and Monitoring Updated Groundwater Monitoring Plan 2022-2027

Property Owner	Property Address	Area	Location ID	FLUTe / CMT Port	Interval	Well Diameter (inch)	Screen Interval (Ft bgs)	Total Depth (ft bgs)	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) DL <0.3 ug/l	VPH (MassDEP VPH Method)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-Method)	Total As (SW846 - U SEPA Method 6010)	Dissolved As (field filtered) (SW846 - USEPA Method 6010)	Total Fe, Mn (SW846 - U SEPA Method 6010)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010)	Chloride (SM4500CLE-11)	Nitrite (USEPA 353.2)	Nitrate (USEPA 353.2)	Sulfate (USEPA 300.0)	Sulfide (SM4500S-D-11)	Total organic carbon (SM5310B-11)	Methane, Ethane, Ethene, Acetylene, Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps - Bubble Strip)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2- DCE, VC (Microbial Insights)	Microbial Analysis: Quantaray (Microbial Insights)
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-26R	R1	Upper Bedrock	Shallow FLUTE	50 - 56	150	1	1			1	1	1	1	1	1	1	1	1	1			
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-26R	R4	Middle Bedrock	Shallow FLUTE	104 - 114	150	1																
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-26R	R5	Lower Bedrock	Shallow FLUTE	123 - 132	150	1	1															
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-26S	--	Overburden	2	25 - 30	32	1				1	1											
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE27R	--	Upper Bedrock	2	50 - 60	60.5	1						1	1	1	1	1	1	1	1			
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-28R	R1	Upper Bedrock	Shallow FLUTE	45 - 51	150	1																
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-28R	R2	Middle Bedrock	Shallow FLUTE	75 - 85	150	1	1					1	1	1	1	1	1	1	1	1	1	1
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-28R	R3	Middle Bedrock	Shallow FLUTE	98 - 108	150	1																
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-28R	R4	Lower Bedrock	Shallow FLUTE	132 - 142	150	1																
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-23R	--	Upper Bedrock	1.5	44.75 - 54.75	54.83	1	1															
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-23S	--	Overburden	2	10 - 20	20.17	1																
HRP	40-50 Fordham Rd Wilmington	Building 1, inside	AE-24	--	Overburden	2	7.25 - 17.25	17.25	1	1															
HRP	40-50 Fordham Rd Wilmington	Former Tank F	AE-29R	R1	Upper Bedrock	Shallow FLUTE	37 - 44	150	1																
HRP	40-50 Fordham Rd Wilmington	Former Tank F	AE-29R	R3	Middle Bedrock	Shallow FLUTE	70 -76	150	1																
HRP	40-50 Fordham Rd Wilmington	Former Tank F	AE-29R	R5	Middle Bedrock	Shallow FLUTE	113 - 119	150	1																
HRP	40-50 Fordham Rd Wilmington	Former Tank F	AE-29R	R6	Lower Bedrock	Shallow FLUTE	140 -146	150	1	1					1	1	1	1	1	1	1	1	1	1	1
HRP	40-50 Fordham Rd Wilmington	Former Tank F	GZA-101R	--	Upper Bedrock	PVC	36 - 38	38.44	1				1	1											
HRP	40-50 Fordham Rd Wilmington	Former Tank Farm	AE-100R	R1	Upper Bedrock	FLUTE	18 - 24	117			1	1	1	1											
HRP	40-50 Fordham Rd Wilmington	Former Tank Farm	AE-100R	R2	Upper Bedrock	FLUTE	43 - 48	117	1																
HRP	40-50 Fordham Rd Wilmington	Former Tank Farm	AE-100R	R3	Upper Bedrock	FLUTE	50 - 56	117	1	1															
HRP	40-50 Fordham Rd Wilmington	Former Tank Farm	AE-100R	R4	Middle Bedrock	FLUTE	63 - 68	117	1	1															
HRP	40-50 Fordham Rd Wilmington	Former Tank Farm	AE-100R	R5	Middle Bedrock	FLUTE	88 - 93	117	1						1	1	1	1	1	1	1	1	1	1	1
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-101D	--	Overburden	2	20 - 25	25.50	1	1															
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-101R	R2	Upper Bedrock	CMT	55-60	232	1	1															
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-101R	R4	Lower Bedrock	CMT	153 - 158	232	1						1	1	1	1	1	1	1	1	1		
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-101R	R6	Lower Bedrock	CMT	227-232	232	1	1					1	1	1	1	1	1	1	1	1		
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-102M	--	Overburden	2	23 - 28	30	1	1			1	1	1	1	1	1	1	1	1	1	1		
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-102RR	R1	Upper Bedrock	FLUTE	43 - 48	175	1						1	1	1	1	1	1	1	1	1	1	1
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-102RR	R2	Middle Bedrock	FLUTE	75 - 80	175	1	1															
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-102RR	R4	Lower Bedrock	FLUTE	125 - 130	175	1																
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-102RR	R5	Lower Bedrock	FLUTE	141 - 146	175	1																
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-102RR	R6	Lower Bedrock	FLUTE	153-158	175	1	1					1	1	1	1	1	1	1	1	1		
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-103D	--	Overburden	2	35 - 40	40.50	1	1			1	1	1	1	1	1	1	1	1	1	1		
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-103R	R1	Upper Bedrock	FLUTE	48 - 53	175					1	1											
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-103R	R2	Middle Bedrock	FLUTE	62 - 67	175	1						1	1	1	1	1	1	1	1	1		
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-103R	R3	Middle Bedrock	FLUTE	70 -76	175	1																
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-103R	R4	Middle Bedrock	FLUTE	98 - 105	175	1	1															
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-103R	R5	Lower Bedrock	FLUTE	122 - 128	175	1	1					1	1	1	1	1	1	1	1	1	1	1
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-103R	R7	Lower Bedrock	FLUTE	162.5-168	175	1																
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-103S	--	Overburden	2	15 - 20	22					1	1											
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-104D	--	Overburden	2	35 - 40	41	1	1															
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-104R	R1	Upper Bedrock	FLUTE	48 - 54	175	1	1															
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-104R	R3	Middle Bedrock	FLUTE	97-102	175	1	1															
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-104R	R5	Lower Bedrock	FLUTE	156 - 162	175	1	1					1	1	1	1	1	1	1	1	1		
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-108R	R1	Upper Bedrock	FLUTE	36.5 - 43.5	175	1						1	1	1	1	1	1	1	1	1		
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-108R	R3	Middle Bedrock	FLUTE	84 - 89	175	1																
HRP	40-50 Fordham Rd Wilmington	Transect A	AE-108R	R5	Lower Bedrock	FLUTE	163 - 168	175	1																
Int'l Family Church	99 Concord St North Reading	Transect A	AE-109R	R1	Upper Bedrock	FLUTE	38 - 43	250	1																
Int'l Family Church	99 Concord St North Reading	Transect A	AE-109R	R2	Middle Bedrock	FLUTE	66 - 76	250	1	1															
Int'l Family Church	99 Concord St North Reading	Transect A	AE-109R	R4	Lower Bedrock	FLUTE	174 - 180.5	250	1																
Int'l Family Church	99 Concord St North Reading	Transect A	AE-109R	R6	Lower Bedrock	FLUTE	196-201	250	1	1					1	1	1	1	1	1	1	1	1		
Int'l Family Church	99 Concord St North Reading	Transect A	AE-109R	R8	Lower Bedrock	FLUTE	245 - 250	250	1																
Int'l Family Church	99 Concord St North Reading	Transect A	AE-109D	--	Overburden	2	18 - 23	23.50	1	1			1	1											
Int'l Family Church	99 Concord St North Reading	Transect A	AE-110R	R1	Upper Bedrock	FLUTE	34 - 44	250	1																
Int'l Family Church	99 Concord St North Reading	Transect A	AE-110R	R2	Middle Bedrock	FLUTE	70 - 80	250	1																
Int'l Family Church	99 Concord St North Reading	Transect A	AE-110R	R5	Lower Bedrock	FLUTE	171 -182	250	1																
Int'l Family Church	99 Concord St North Reading	Transect A	AE-110R	R7	Lower Bedrock	FLUTE	224 - 234	250	1	1															

Table 10-3
Post-Temporary Solution Operations, Maintennce and Monitoring Updated Groundwater Monitoring Plan 2022-2027

Property Owner	Property Address	Area	Location ID	FLUTe / CMT Port	Interval	Well Diameter (inch)	Screen Interval (Ft bgs)	Total Depth (ft bgs)	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) DL <0.3 ug/l	VPH (MassDEP VPH Method)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-Method)	Total As (SW846 - U SEPA Method 6010)	Dissolved As (field filtered) (SW846 - USEPA Method 6010)	Total Fe, Mn (SW846 - U SEPA Method 6010)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010)	Chloride (SM4500CLE-11)	Nitrite (USEPA 353.2)	Nitrate (USEPA 353.2)	Sulfate (USEPA 300.0)	Sulfide (SM4500S-D-11)	Total organic carbon (SM5310B-11)	Methane, Ethane, Acetylene, Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps - Bubble Strip)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2- DCE, VC (Microbial Insights)	Microbial Analysis: Quantaray (Microbial Insights)
Lockheed Martin	Wetland Parcel North Reading	Transect B	AE-105D	--	Overburden	2	73 - 78	78.50	1	1					1	1	1	1	1	1	1	1			
Lockheed Martin	Wetland Parcel North Reading	Transect B	AE-105R	R2	Middle Bedrock	FLUTE	98 - 103	175	1	1					1	1	1	1	1	1	1	1	1	1	1
Lockheed Martin	Wetland Parcel North Reading	Transect B	AE-105R	R3	Middle Bedrock	FLUTE	107.50 - 112.50	175	1																
Lockheed Martin	Wetland Parcel North Reading	Transect B	AE-105R	R4	Lower Bedrock	FLUTE	125 - 130	175	1	1															
Lockheed Martin	Wetland Parcel North Reading	Transect B	AE-105R	R5	Lower Bedrock	FLUTE	143 - 148	175	1																
Lockheed Martin	Wetland Parcel North Reading	Transect B	AE-105S	--	Overburden	2	35 - 40	42					1	1											
YRC Freight	95 Concord St North Reading	Transect B	AE-106M	--	Overburden	2	22.5 - 27.5	29.50	1				1	1	1	1	1	1	1	1	1	1			
YRC Freight	95 Concord St North Reading	Transect B	AE-106R	R1	Upper Bedrock	FLUTE	47 - 52	175	1																
YRC Freight	95 Concord St North Reading	Transect B	AE-106R	R3	Middle Bedrock	FLUTE	84 - 88	175	1						1	1	1	1	1	1	1	1	1	1	1
YRC Freight	95 Concord St North Reading	Transect B	AE-106R	R5	Lower Bedrock	FLUTE	164 - 169	175	1	1															
Lockheed Martin	Wetland Parcel North Reading	Transect B	TRC-301R	R4	Middle Bedrock	CMT	65.5 - 69.5	100.5	1				1	1	1	1	1	1	1	1	1	1	1	1	1
Lockheed Martin	Wetland Parcel North Reading	Transect B	TRC-301R	R3	Middle Bedrock	CMT	75.5 - 79.5	100.5	1																
Lockheed Martin	Wetland Parcel North Reading	Transect B	TRC-301R	R2	Middle Bedrock	CMT	81.5 - 85.5	100.5	1																
Lockheed Martin	Wetland Parcel North Reading	Transect B	TRC-301R	R1	Middle Bedrock	CMT	96.5 - 100.5	100.5	1																
YRC Freight	95 Concord St North Reading	Transect B	AE-111R	R1	Upper Bedrock	FLUTE	44 - 54	200	1																
YRC Freight	95 Concord St North Reading	Transect B	AE-111R	R2	Middle Bedrock	FLUTE	66 - 74	200	1																
YRC Freight	95 Concord St North Reading	Transect B	AE-111R	R6	Lower Bedrock	FLUTE	168 -173	200	1																
Howland	87 Concord St North Reading	Transect B 1/2	AE-112R	R1	Upper Bedrock	FLUTE	41 - 50	175	1																
Howland	87 Concord St North Reading	Transect B 1/2	AE-112R	R3	Middle Bedrock	FLUTE	91 - 101	175	1																
Howland	87 Concord St North Reading	Transect B 1/2	AE-112R	R5	Lower Bedrock	FLUTE	136 - 146	175	1						1	1	1	1	1	1	1	1	1	1	1
Howland	87 Concord St North Reading	Transect B 1/2	AE-112D	--	Overburden	2	24.5 - 29.5	30	1				1	1											
Town N. Reading	65 Concord St Right of Way N Reading	Transect C - Concord Street	STM-8D	--	Overburden	0.75	34.7 - 39.7	40	1	1															
Town N. Reading	65 Concord St Right of Way N Reading	Transect C - Concord Street	STM-8R	--	Upper Bedrock	0.75	46.5 - 51.5	52	1	1					1	1	1	1	1	1	1	1	1		
Wilmington Masonry	62 Concord St North Reading	Transect C - Concord Street	STM-8R1	--	Middle Bedrock	2	85 - 90	92	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1
HRP	40-50 Fordham Rd Wilmington	Upgradient	GZA-12	--	Overburden	1.5	9.5 - 24.5	24.50	1	1			1	1	1	1	1	1	1	1	1	1			
HRP	40-50 Fordham Rd Wilmington	EPL Area	AE-03	--	Overburden	2	3 - 13	15			1	1	1	1											
HRP	40-50 Fordham Rd Wilmington	EPL Area	AE-04	--	Overburden	2	3 - 13	14			1	1													
HRP	40-50 Fordham Rd Wilmington	EPL Area	GZA-102S	--	Overburden	1.5	1.7 - 10.7	10.70	1		1	1			1	1	1	1	1	1	1	1	1		
HRP	40-50 Fordham Rd Wilmington	EPL Area - long term groundwater	GZA-105D	--	Overburden	1.5	16 - 26	26	1	1	1	1													
HRP	40-50 Fordham Rd Wilmington	EPL Area - long term groundwater	GZA-105R	--	Upper Bedrock	0.5	34.5 - 36.5	36.50	1																
HRP	40-50 Fordham Rd Wilmington	EPL Area - long term groundwater	GZA-105S	--	Overburden	1.5	4 - 14	14	1		1	1	1	1											
HRP	40-50 Fordham Rd Wilmington	EPL Area	PZ-2S	--	Overburden	4	3.55 - 8.55	16.55			1	1													
HRP	40-50 Fordham Rd Wilmington	EPL Area	TRC-101	--	Overburden	1.25	1.5 - 10.5	10.50			1	1													
HRP	40-50 Fordham Rd Wilmington	EPL Area	TRC-102	--	Overburden	1.25	2.25 - 12.25	12.25	1		1	1	1	1											
HRP	40-50 Fordham Rd Wilmington	EPL Area	TRC-103	--	Overburden	1.25	1.25 - 11.25	11.25			1	1													
HRP	40-50 Fordham Rd Wilmington	Long term groundwater monitoring	EMW-10D	--	Overburden	2	19 - 29	29	1																
HRP	40-50 Fordham Rd Wilmington	Long term groundwater monitoring	GZA-6	--	Overburden	2	8 - 18	20					1	1											
HRP	40-50 Fordham Rd Wilmington	Long term groundwater monitoring	GZA-10	--	Overburden	1.5	13 - 38	40					1	1											
Centrella Trust	Wetland Parcel off Concord St N Reading	Source Control - Downgradient	MW4A	--	Overburden	1.5	38 - 48	51	1	1			1	1											
Int'l Family Church	99 Concord St North Reading	Source Control - Downgradient	MW-5	--	Overburden	1.5	28 - 38	61.50	1																
Int'l Family Church	99 Concord St North Reading	Source Control - Downgradient	MW-7	--	Overburden	1.5	15 - 25	27	1																
Lockheed Martin	99 Concord St North Reading	Source Control - Downgradient	PS-1D	--	Overburden	0.62	49.25 - 54.25	55.25	1																
Lockheed Martin	Wetland Parcel North Reading	Source Control - Downgradient	PS-1M	--	Overburden	0.62	34.25 - 39.25	40.25	1																
Lockheed Martin	Wetland Parcel North Reading	Source Control - Downgradient	PS-3	--	Overburden	0.62	2.7 - 7.7	8.70	1																
Lockheed Martin	Wetland Parcel North Reading	Source Control - Downgradient	PS-5D	--	Overburden	0.62	24.1 - 29.1	30.20	1																
Town N.Reading	Wooded Parcel off Furbish Pond Lane N Reading	Source Control - Downgradient	PS-8D	--	Overburden	0.62	51.8 - 56.8	57.80	1				1	1											
HRP	40-50 Fordham Rd Wilmington	Source Control - Onsite	AE2R	--	Upper Bedrock	5" open rock	22 - 36	36	1																
HRP	40-50 Fordham Rd Wilmington	Source Control - Onsite	TRC-201R	--	Lower Bedrock	6"	38 - 161.3	161.30	1																
HRP	40-50 Fordham Rd Wilmington	Source Control - Onsite	IP-1R2	--	Middle Bedrock	2	54 - 74	74	1																

Notes:

(1) All existing wells/ports site-wide to be measured during site-wide water level events

(2) 1 per 20 for wells with non-dedicated sampling equipment

EPL - Eastern Parking Lot

ft bgs - feet below ground surface

HRP - Hilco Redevelopment Partners

Totals

Total number of samples :	95	35	10	10	22	22	26	26	26	26	26	26	26	26	26	10	10	9
Duplicates (1 per 20):	6	3	1	1	2	2	2	2	2	2	2	2	2	2	2	0	0	0
Equipment blanks (1 per 20 [(2)]):	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Trip blanks (1 per shipment)	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total:	**117**	**39**	**12**	**12**	**25**	**25**	**29**	**29**	**29**	**29**	**29**	**29**	**29**	**29**	**29**	**10**	**10**	**9**

APPENDICES

Appendix A—Groundwater Sampling Field Records

Appendix B—LNAPL Monitoring Record Field Records

Appendix C—Waste Manifests

Appendix D—Indoor Air Sampling Field Records

Appendix E—Activity and Use Limitation

Appendix F—Laboratory Analytical and Data Validation Reports – Groundwater

Appendix G—Groundwater Concentration Trend Graphs

Appendix H—Ricker Method Plume Analytics Evaluation

Appendix I—Mass Flux Evaluation – 2021

Appendix J—CRAFLUSH Model Summary Memo – 2016

Appendix K—Laboratory Analytical and Data Validation Reports – Indoor Air

Appendix L—Public Notification Documentation

APPENDIX A
GROUNDWATER SAMPLING FIELD RECORDS

Tape 3020-1328 01-7741

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: mostly sunny 80's Recorder(s): Michaela Fitzgerald, Jillian Whitting

in front of loading dock

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-100R-1 (18-24)	8/31	2:15	5.64	87.87	0.4	
AE-100R-2 (43-48)	↓	↓	5.72	87.95	0.3	
AE-100R-3 (50-56)			5.007	87.92	0.3	
AE-100R-4 (63-68)			5.73	87.89	0.3	
AE-100R-5 (88-93)			5.85	87.86	0.3	
AE-100R-6 (108.5-113.5)			5.83	87.84	0.3	
AE-101R-1 (30 5-35.5)				79.07		
AE-101R-2 (55-60)				79.07		
AE-101R-3 (80-85)				79.07		
AE-101R-4 (153-158)				79.07		
AE-101R-5 (175-180)				79.07		
AE-101R-6 (227-232)				79.07		
AE-101S				79.34		
AE-101D				79.37		
AE-102RR-1 (43-48)				79.83		
AE-102RR-2 (75-80)				79.84		
AE-102RR-3 (111-116)				79.89		
AE-102RR-4 (125-130)				79.84		
AE-102RR-5 (141-146)				79.82		
AE-102RR-6 (153-158)				79.83		
AE-102S				80.12		
AE-102M				80.17		
AE-102D				80.16		
AE-103R-1 (48-53)				78.99		
AE-103R-2 (62-67)				78.99		
AE-103R-3 (70-78)				79.01		
AE-103R-4 (98-105)				79.00		
AE-103R-5 (122-128)				79.08		
AE-103R-6 (138-144)				79.00		
AE-103R-7 (162.5-168)				78.99		
AE-103S				79.43		
AE-103M				79.42		
AE-103D				79.42		
AE-104R-1 (48-54)				78.90		
AE-104R-2 (62-68)				78.85		
AE-104R-3 (97-102)				78.86		
AE-104R-4 (128-133)				78.86		
AE-104R-5 (156-162)				78.86		
AE-104R-6 (168-174)				78.85		

Notes: R = replicate field measurement

Water level meter make/model/SN: Heron Dipper

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s):_____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-104S				79.30		
AE-104M				79.28		
AE-104D				79.30		
AE-108R-1 (36.5-43.5)				78.81		
AE-108R-2 (68-73)				78.85		
AE-108R-3 (84-89)				78.82		
AE-108R-4 (145-150)				78.79		
AE-108R-5 (163-168)				78.80		
AE-105R-1 (90.5-95.5)				79.40		
AE-105R-2 (98-103)				79.40		
AE-105R-3 (107.5-112.5)				79.39		
AE-105R-4 (125-130)				79.37		
AE-105R-5 (143-148)				79.36		
AE-105R-6 (156-161)				79.37		
AE-105S				79.39		
AE-105M				79.35		
AE-105D				79.42		
AE-106R-1 (47-52)				79.15		SW=
AE-106R-2 (69.5-74.5)				79.12		
AE-106R-3 (84-88)				79.13		
AE-106R-4 (144.5-150.5)				79.15		
AE-106R-5 (164-169)				79.14		
AE-106S				78.42		SW=
AE-106M				78.44		
AE-106D				78.41		
TRC-301R-1 (96.5-100.5)				78.57		SW=
TRC-301R- 2 (81.5-85.5)				78.57		
TRC-301R-3 (75.5-79.5)				78.57		
TRC-301R-4 (65.5-69.5)				78.57		
PZ-9S				82.17		
PZ-9D				82.16		
PZ-9R				82.27		
GZA-12	8/31	9:58	8.10	87.62	0.6	
skinny GZA-101R	8/31	10:30	5.91	87.41	3.0	
AE-1S	8/31	9:36	6.96	86.26	0.3	R
AE-1I	8/31	9:43	7.36	86.68	0.3	Missing 1 Washer
AE-2R	8/31	10:22	6.32	85.23	0.8	more gasket
AE-2I	8/31	9:16	6.46	85.39	0.0	

Notes: R = replicate field measurement

Water level meter make/model/SN: PID reading above 0 in open air

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
TRC-101	8/31	4:06	6.13'	82.18		DTB: @ 6.89'
TRC-102	8/31	4:20	4.18'	81.21		DTB: 11.83'
TRC-103	8/31	3:57	4.93'	82.02		One bolt hole broken DTB = 10.92'
TRC-201R	8/31	8:53	6.38		0.0	Bolt/housing broken replace 6" expansion plug
TRC-202R	Sealed Bedrock Borehole (Grute)					
GZA-102S	8/31	3:50	5.53	82.38		DTB = 10.75'
GZA-102R1				85.18		
GZA-102R2				85.18		
PZ-2S	8/31	3:48	5.21	82.77		DTB = 7.79'
TRC-401R	8/31	4:35	4.34	82.00		
GZA-105S	8/31	4:25	4.86	81.89		Missing 1 bolt DTB = 13.74'
GZA-105D				81.82		
GZA-105R				81.80		
WE-105R2	8/31	4:52	3.59	82.05		
BRW-1 ?						
BRW-1R1 ?						
BRW-1R2				80.76		
BRW-1R3				80.57		
BRW-1R4				80.60		
EMW-10S				78.56		
EMW-10D				78.41		
EMD-10R				78.11		
EMW-11S				79.25		
EMW-11D				79.39		
EMW-11R1				79.43		
EMW-11R2				79.44		
EMW-11R3				79.45		
IP-1R1	8/31	5:01	4.58	82.12		Plow damage to ring will get worse
IP-1R2	8/31	5:02	4.50	82.07		
IP-1R3	8/31	5:03	3.64	82.04		
IP-2R1	8/31	5:10	4.97	82.17		
IP-2R2	8/31	5:11	4.62	82.14		
IP-2R3	8/31	5:11	4.48	82.12		
IP-2R4	8/31	5:12	4.30	82.08		
IP-3R1	8/31	4:50	3.79	81.02		
IP-3R2	8/31	4:48	3.57	80.98		
IP-4R1	8/31	4:44	3.70	80.84		
IP-4R2	8/31	4:43	3.68	80.79		
IP-4R3	8/31	4:42	3.55	80.77		

Notes: R = replicate field measurement

Water level meter make/model/SN: PID not working

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-23S	8/31	12:50	6.58	85.62	0.9	DTB=19.48'
AE-23R	8/31	1:15	7.46	85.54	285	Water in road box above well
AE-24	8/31	12:55	6.70	85.63	12.5	DTB = 15.15'
AE-25S	8/31	1:00	6.50	85.49	0.2	DTB= 31.95'
AE-25D	8/31	1:07	~~6.58~~	85.38	0.2	DTW = 8.51' DTB= 39.36'
AE-25R	8/31	1:04	6.66	85.35	0.2	DTB = 47.62'
AE-26S	8/31	2:45	7.03	85.49	0.9	DTB= 32.10'
AE-26D	8/31	2:45	6.82	85.25	0.1	DTB= 39.88
AE-27R	8/31	12:45	7.38	85.23	0.4	DTB: 60.97'
AE-3	8/31	4:05	5.33	82.41		DTB: 12.62'
AE-4	8/31	4:15	4.93	82.03		1 bolt hole broken
DP-1				80.01		
DP-2				79.75		
CW-1	8/31	5:19	3.83	80.94		~~DTP=~~ Visible sheen
CW-2	8/31	5:25	3.60	80.73		Visible sheen
PZ-8R				~~79.04~~		Destroyed
GZA-5				79.77		
GZA-6				80.37		
GZA-10				80.29		
STM-3S				82.93		
STM-3D				82.89		
STM-3R				82.90		
STM-8S				78.91		
STM-8M				78.87		
STM-8D				78.86		
STM-8R				78.78		
STM-8R1				79.08		
STM-10S				95.70		
STM-10R1				95.79		
STM-10R2				95.79		
TRC-402 (Reading)				97.47		
TRC-403 (Reading)				97.73		

No DNAPL

No product

DTB: 53.75' Bottom hard

R Gunk/mud Bottom hard

water in road box below casing

DTB = 12.19' 1 stripped

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): _____

Pres=9.6

Well	Date	Time	Sight Glass Reading (inches)	TOC Ref Elev	PID	Sight Glass Ruler Measurement (measures in 0.1 inches)	Height of sight glass from rim	Sight glass to flute rim
AE-26R-1 (50-56)	8/31	2:17	~~9.89~~ 9.87	84.83	0.1	6.07 in	1.55 ft	2.5 ft
AE-26R-2 (72-78)	8/31	2:25	9.47	84.83	1.3	6.35 in	1.55 ft	2.5 ft
AE-26R-3 (81-88)	8/31	2:30	9.57	84.83	2.0	7.42 in	1.57 ft	2.52 ft
AE-26R-4 (104-114)	8/31	2:40	9.51	84.83	2.0	6.25 in	1.57	2.52 ft
AE-26R-5 (123-132)	8/31	2:45	9.57	84.83	2.0	7.16 in	1.57	2.52 ft
AE-28R-1 (45-51)	8/31/21	2:55	9.51	84.81		4.40 in	1.67	2.64 ft
AE-28R-2 (75-85)	8/31/21	3:02	9.56	84.81		5.75 in	1.63	2.60 ft
AE-28R-3 (98-108)	8/31/21	3:09	9.61	84.81		6.58 in	1.63	2.60 ft
AE-28R-4 (132-142)	8/31/21	3:18	9.77	84.81		8.22 in	1.63	2.60 ft
AE-29R-1 (37-44)	8/31/21	11:05	10.23	85.83	0	5.97 in	1.53 ft	2.63 ft
AE-29R-2 (47-54)	↓	11:25	10.45	85.83	↓	5.60 in	1.67 ft	~~2.77 ft~~
AE-29R-3 (70-76)		11:32	10.67	85.83		6.38 in	1.67 ft	2.77 ft
AE-29R-4 (90-96)		11:41	10.96	85.83		8.83 in	1.67 ft	2.77 ft
AE-29R-5 (113-119)		11:50	10.38	85.83		3.95 in	1.67 ft	2.77 ft
AE-29R-6 (140-146)	↓	11:55	10.89	85.83	↓	9.55 in	1.67 ft	2.77 ft

Flute needs water

No gasket
No red caps

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-109R-1 (38-43)				80.20		
AE-109R-2 (66-76)				80.17		
AE-109R-3 (126-136)				80.19		
AE-109R-4 (174-180.5)				80.17		
AE-109R-5 (183-189)				80.18		
AE-109R-6 (196-201)				80.15		
AE-109R-7 (204-214)				80.17		
AE-109R-8 (245-250)				80.20		
AE-109D				80.36		
AE-110R-1 (34-44)				80.67		
AE-110R-2 (70-80)				80.68		
AE-110R-3 (128-138)				80.64		
AE-110R-4 (158-168)				80.62		
AE-110R-5 (171-182)				80.62		
AE-110R-6 (190-200)				80.62		
AE-110R-7 (224-234)				80.64		
AE-111R-1 (44-54)				89.03		
AE-111R-2 (66-74)				89.01		
AE-111R-3 (95-103)				89.02		
AE-111R-4 (140-150)				89.02		
AE-111R-5 (155-165)				89.05		
AE-111R-6 (168-173)				89.04		
AE-111R-7 (181-191)				89.06		

Notes: R = replicate field measurement
Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: | Recorders:

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-106S				78.42		
AE-106R-1 (47-52)				79.15		
TRC-301R-1 (96.5-100.5)				78.57		
MW-4				77.23		
MW-4A				76.46		
MW-5				78.99		
PS-1S				79.21		
PS-1M				77.30		
PS-1D				76.51		
PS-2S				77.71		
PS-2M				77.61		
PS-2D				76.91		
GZA-1 (wwtp)				79.05		
GZA-2 (wwtp)				79.12		
SG-1				75.78		
SG-2	9/1/21 D. Potter	13:20	1.12	70.82		
Concord Street Pond				75.91		Ref Elev is top of 2nd outfall pipe into Pond, west of Fordham Rd

For each of the MWs above, if there is standing water present at the well, measure depth to surface water from the TOC reference elevation. This may require two measurements from TOC to Rim of stickup then rim of stickup down to surface water.
At gauges SG-1 and SG-2, if no standing water, dig down up to 12 inches to see water is present; if yes, allow water to fill hole/stabilize and take measurement of depth to water below ground.

Notes: R = replicate field measurement

Peter Isabelle
781-858-1848

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: Sunny Mostly 80 F Recorder(s): Scott Olson

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-23S	8/31/21			85.62		
AE-23R				85.54		
AE-24				85.63		
AE-25S				85.49		
AE-25D				85.38		
AE-25R				85.35		
AE-26S				85.49		
AE-26D				85.25		
AE-27R				85.23		
AE-3				82.41		
AE-4				82.03		
IP-12						
IP-13						
IP-14						
IP-15						
DP-1						
DP-2						
CW-1				80.94		
CW-2				80.73		
PZ-8R				79.04		
GZA-5				79.77		
GZA-6				80.37		
GZA-10				80.29		
STM-3S				82.93		
STM-3D				82.89		
STM-3R				82.90		
STM-8S				78.91		
STM-8M				78.87		
STM-8D				78.86		
STM-8R				78.78		
STM-8R1				79.08		
STM-10S				95.70		
STM-10R1				95.79		
STM-10R2				95.79		
TRC-402 (Reading)	8/31/21	955	24.98			R = 24.98
TRC-403 (Reading)	"	955	25.22			

(560)

TD = 66.98

Notes: R = replicate field measurement

Water level meter make/model/SN: 1010

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: Mostly 50's Sunny Recorder(s): Sean Haggett & Nonshin Fallapour

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-100R-1 (18-24)				87.87		
AE-100R-2 (43-48)				87.95		
AE-100R-3 (50-56)				87.92		
AE-100R-4 (63-68)				87.89		
AE-100R-5 (88-93)				87.86		
AE-100R-6 (108.5-113.5)				87.84		
AE-101R-1 (30.5-35.5)	8/31/21	9:20	2.34	79.07	0.5	
AE-101R-2 (55-60)			2.31	79.07	0.5	
AE-101R-3 (80-85)			2.27	79.07	0.4	
AE-101R-4 (153-158)			2.22	79.07	0.3	
AE-101R-5 (175-180)			2.23	79.07	0.3	
AE-101R-6 (227-232)			2.23	79.07	0.3	
AE-101S	8/31/21	9:15	2.49	79.34	0.1	
AE-101D	8/31/21	9:15	2.59	79.37	1.9	
AE-102RR-1 (43-48)	8/31/21	9:30	3.06	79.83	0.4	
AE-102RR-2 (75-80)			3.00	79.84	0.4	
AE-102RR-3 (111-116)			2.99	79.89	0.4	
AE-102RR-4 (125-130)			2.87	79.84	0.3	
AE-102RR-5 (141-146)			2.92	79.82	0.3	
AE-102RR-6 (153-158)			2.91	79.83	0.3	
AE-102S	8/31/21	18:00	3.41	80.12		bolt rusted in place
AE-102M			3.48	80.17		bolt is bent / not
AE-102D			3.62	80.16		accessible
AE-103R-1 (48-53)	8/31/21	9:45	2.10	78.99	0.3	Gasket replacement
AE-103R-2 (62-67)			2.01	78.99	0.3	is needed
AE-103R-3 (73-76)			2.00	79.01	0.4	One bolt is also
AE-103R-4 (98-105)			1.95	79.00	0.6	missing (it is actually broken off in place
AE-103R-5 (122-128)			2.01	79.08	0.4	
AE-103R-6 (138-144)			2.02	79.00	0.3	
AE-103R-7 (162.5-168)			2.04	78.99	0.8	
AE-103S	8/31/21	9:50	2.59	79.43	0.2	
AE-103M			2.60	79.42	0.2	
AE-103D			2.66	79.42	0.3	
AE-104R-1 (48-54)	8/31/21	10:10	1.97	78.90	1.1	Missing Gasket
AE-104R-2 (62-68)			1.92	78.85	1.4	
AE-104R-3 (97-102)			1.90	78.86	1.2	
AE-104R-4 (128-133)			2.03	78.86	1.8	
AE-104R-5 (156-162)			2.34	78.86	3.8	
AE-104R-6 (168-174)			2.34	78.85	1.9	

D. Potter Opened/measured 8/31 & replaced bolts.

Notes: R = replicate field measurement

Water level meter make/model/SN:

Scan 3

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s):_____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-104S	8/31/21	10:00	2.42	79.30	0.2	
AE-104M	↓	↓	2.42	79.28	0.2	
AE-104D	↓	↓	2.43	79.30	0.3	
AE-108R-1 (36.5-43.5)	8/31/21	9:00	2.09	78.81	0.1	AE-108R
AE-108R-2 (68-73)	↓	↓	1.96	78.85	0.0	Gasket in poor condition
AE-108R-3 (84-89)	↓	↓	1.92	78.82	0.0	one missing bolt and
AE-108R-4 (145-150)	↓	↓	1.87	78.79	0.0	one broken hole (bolt)
AE-108R-5 (163-168)	↓	↓	1.86	78.80	0.0	
AE-105R-1 (90.5-95.5)				79.40		
AE-105R-2 (98-103)				79.40		
AE-105R-3 (107.5-112.5)				79.39		
AE-105R-4 (125-130)				79.37		
AE-105R-5 (143-148)				79.36		
AE-105R-6 (156-161)				79.37		
AE-105S				79.39		
AE-105M				79.35		
AE-105D				79.42		
AE-106R-1 (47-52)				79.15		SW=
AE-106R-2 (69.5-74.5)				79.12		
AE-106R-3 (84-88)				79.13		
AE-106R-4 (144.5-150.5)				79.15		
AE-106R-5 (164-169)				79.14		
AE-106S				78.42		SW=
AE-106M				78.44		
AE-106D				78.41		
TRC-301R-1 (96.5-100.5)				78.57		SW=
TRC-301R-2 (81.5-85.5)				78.57		
TRC-301R-3 (75.5-79.5)				78.57		
TRC-301R-4 (65.5-69.5)				78.57		
PZ-9S	8/31/21	13:40	4.41	82.17	0.0	
PZ-9D	↓	13:40	4.53	82.16	0.0	
PZ-9R	↓	13:40	4.68	82.27	0.0	
GZA-12				87.62		
GZA-101R				87.41		
AE-1S				86.26		
AE-1I				86.68		
AE-2R				85.23		
AE-2I				85.39		

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: _____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
TRC-101				82.18		
TRC-102				81.21		
TRC-103				82.02		
TRC-201R						
TRC-202R						
GZA-102S				82.38		
GZA-102R1	8/31/21	17:10	4.52	85.18	0.0	
GZA-102R2	8/31/21	17:10	5.56	85.18	0.0	
PZ-2S				82.77		
TRC-401R				82.00		
GZA-105S				81.89		
GZA-105D	8/31/21	17:00	4.78	81.82	0.1	
GZA-105R	8/31/21	17:00	4.56	81.80	0.1	
WE-105R2				82.05		
BRW-1 ?	~~8/31/21~~	DO	NOT EXIST			
BRW-1R1 ?						
BRW-1R2	8/31/21	11:00	3.98	80.76	0.1	
BRW-1R3	8/31/21	↓	3.59	80.57	0.5	
BRW-1R4	8/31/21	↓	3.69	80.60	0.4	
EMW-10S	8/31/21	11:10	3.90	78.56	0.1	
EMW-10D	↓	↓	4.01	78.41	0.6	
EMD-10R	↓	↓	4.17	78.11	0.3	
EMW-11S	8/31/21	10:50	3.42	79.25	0.4	
EMW-11D	↓	↓	3.74	79.39	1.4	
EMW-11R1	↓	↓	3.88	79.43	0.2	
EMW-11R2	↓	↓	3.77	79.44	2.6	
EMW-11R3	↓	↓	3.80	79.45	0.6	
IP-1R1				82.12		
IP-1R2				82.07		
IP-1R3				82.04		
IP-2R1				82.17		
IP-2R2				82.14		
IP-2R3				82.12		
IP-2R4				82.08		
IP-3R1				81.02		
IP-3R2				80.98		
IP-4R1				80.84		
IP-4R2				80.79		
IP-4R3				80.77		

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-23S				85.62		
AE-23R				85.54		
AE-24				85.63		
AE-25S				85.49		
AE-25D				85.38		
AE-25R				85.35		
AE-26S				85.49		
AE-26D				85.25		
AE-27R				85.23		
AE-3				82.41		
AE-4				82.03		
DP-1	8/31/21	11:25	3.04	80.01	0.1	
DP-2	8/31/21	11:20	2.78	79.75	0.2	
CW-1				80.94		
CW-2				80.73		
PZ-8R				79.04		
GZA-5	8/31/21	11:40	2.98	79.77	0.1	→ 2.98 DTW
GZA-6	8/31/21	11:30	[illegible]	80.37	~~0.0~~ 0.0	→ 3.76 DTW
GZA-10	8/31/21	11:35	3.64	80.29	0.7	
STM-3S				82.93		
STM-3D				82.89		
STM-3R				82.90		
STM-8S				78.91		
STM-8M				78.87		
STM-8D				78.86		
STM-8R				78.78		
STM-8R1				79.08		
STM-10S				95.70		
STM-10R1				95.79		
STM-10R2				95.79		
TRC-402 (Reading)				97.47		
TRC-403 (Reading)				97.73		

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
MW-1				78.81		
MW-4				77.23		SW=
MW-4A				76.46		SW=
MW-5	8/31/21	1640	2.73	78.99	0.4	SW=
MW-7	8/31/21	1442	3.95	80.33	0.5	
GZA-14	8/31/21	1453	6.35	82.64	0.9	
GZA-14A	8/31/21	1451	5.93	82.31	0.1	
PS-1S				79.21		SW=
PS-1M				77.30		SW=
PS-1D				76.51		SW=
PS-2S				77.71		SW=
PS-2M				77.61		SW=
PS-2D				76.91		SW=
PS-3				76.64		
PS-4				78.66		
PS-5S				80.49		
PS-5D				79.68		
PS-8S				83.77		
PS-8M				82.53		
PS-8D				82.77		DTB = 37.13
GZA-1 (wwtp)	8/31/21	12:15	2.33	78.93 ?	0.0	
GZA-2 (wwtp)	8/31/21	11:45	2.37	79.03 ?	0.0	22.01 = DTB
GZA-3 (wwtp)	8/31/21	12:00	2.91	79.68 ?	0.0	14.67 = DTB
GZA-4 (wwtp)	8/31/21	12:30	6.01	83.3 ?	0.0	DTB = 19.24
STM-7 (Wilm. Masonry)				75.57		
AE-112R-1 (41-51)				81.76		
AE-112R-2 (62-72)				81.78		
AE-112R-3 (91-101)				81.78		
AE-112R-4 (113-123)				81.80		
AE-112R-5 (136-146)				81.75		
AE-112R-6 (153-163)				81.73		
AE-112R-7 (168-175)				81.74		
AE-112D				82.27		
HOW-2 (MW-2)				84.35		
HOW-3 (MW-3)				81.83		
GZA-107M				80.87		
GZA-107D				81.08		
GZA-107R				80.58		

for GZA-2
TOR to TOW = 2.30
TOR to TOC = 0.1
→ Depth to bottom

Notes: R = replicate field measurement
Water level meter make/model/SN:

SG-1 Close GZA-1 | 0.94
water level

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: | Recorders:

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-106S				78.42		
AE-106R-1 (47-52)				79.15		
TRC-301R-1 (96.5-100.5)				78.57		
MW-4				77.23		
MW-4A				76.46		
MW-5				78.99		
PS-1S				79.21		
PS-1M				77.30		
PS-1D				76.51		
PS-2S				77.71		
PS-2M				77.61		
PS-2D				76.91		
GZA-1 (wwtp)		X	X	79.05		
GZA-2 (wwtp)		X	X	79.12		
SG-1		1220	0.94	75.78		Measured on staked measuring stick on ground
SG-2				70.82		
Concord Street Pond				75.91		Ref Elev is top of 2nd outfall pipe into Pond, west of Fordham Rd

3 Furbish Pond Ln:

For each of the MWs above, if there is standing water present at the well, measure depth to surface water from the TOC reference elevation. This may require two measurements from TOC to Rim of stickup then rim of stickup down to surface water.
At gauges SG-1 and SG-2, if no standing water, dig down up to 12 inches to see water is present; if yes, allow water to fill hole/stabilize and take measurement of depth to water below ground.

Notes: R = replicate field measurement

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: _____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-104S				79.30		
AE-104M				79.28		
AE-104D				79.30		
AE-108R-1 (36.5-43.5)				78.81		
AE-108R-2 (68-73)				78.85		
AE-108R-3 (84-89)				78.82		
AE-108R-4 (145-150)				78.79		
AE-108R-5 (163-168)				78.80		
AE-105R-1 (90.5-95.5)	6/31/21	1500	3.55	79.40	0.0	
AE-105R-2 (98-103)		1501	3.61	79.40	0.0	
AE-105R-3 (107.5-112.5)		1502	3.57	79.39	0.0	
AE-105R-4 (125-130)		1503	3.66	79.37	0.0	
AE-105R-5 (143-148)		1504	3.60	79.36	0.0	
AE-105R-6 (156-161)		—	—	79.37	0.0	Port not working
AE-105S		1507	3.21	79.39	0.9	
AE-105M		1508	3.18	79.35	0.0	
AE-105D		1506	~~2.9~~ 3.23	79.42	2.0	
AE-106R-1 (47-52)		1445	2.98	79.15	0.2	SW= 3.25
AE-106R-2 (69.5-74.5)		1446	3.14	79.12	0.2	R=3.14
AE-106R-3 (84-88)		1447	3.06	79.13	0.3	
AE-106R-4 (144.5-150.5)		1448	2.92	79.15	0.3	
AE-106R-5 (164-169)		1449	2.83	79.14	0.3	
AE-106S		1242	~~1.66~~ 4.66	78.42	1.8	SW=2.62 / 2.60
AE-106M		1243	~~0.4~~ 2.45	78.44	0.8	/ 2.45
AE-106D		1244	~~0.3~~	78.41	0.3	/ 2.49
TRC-301R-1 (96.5-100.5)		1230	2.45	78.57	0.0	SW= 2.72
TRC-301R-2 (81.5-85.5)		1231	2.49	78.57	0.0	
TRC-301R-3 (75.5-79.5)		1232	2.49	78.57	0.0	
TRC-301R-4 (65.5-69.5)		1233	2.47	78.57	0.0	
PZ-9S				82.17		
PZ-9D				82.16		
PZ-9R				82.27		
GZA-12				87.62		
GZA-101R				87.41		
AE-1S				86.26		
AE-1I				86.68		
AE-2R				85.23		
AE-2I				85.39		

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-23S				85.62		
AE-23R				85.54		
AE-24				85.63		
AE-25S				85.49		
AE-25D				85.38		
AE-25R				85.35		
AE-26S				85.49		
AE-26D				85.25		
AE-27R				85.23		
AE-3				82.41		
AE-4				82.03		
DP-1				80.01		
DP-2				79.75		
CW-1				80.94		
CW-2				80.73		
PZ-8R				79.04		
GZA-5				79.77		
GZA-6				80.37		
GZA-10				80.29		
STM-3S				82.93		
STM-3D				82.89		
STM-3R				82.90		
STM-8S				78.91		
STM-8M				78.87		
STM-8D				78.86		
STM-8R				78.78		
STM-8R1	8-31-21	1547	5.52	79.08	0.1	1 housing bolt
STM-10S				95.70		
STM-10R1				95.79		
STM-10R2				95.79		
TRC-402 (Reading)				97.47		S. Olson
TRC-403 (Reading)				97.73		S. Olson

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
MW-1	8/31/21	1531	2.24	78.81	0.0	
MW-4		0932	2.08	77.23	0.2	SW= 1.96
MW-4A		0924	1.37	76.46	0.1	SW= 1.32
MW-5				78.99		SW=
MW-7				80.33		
GZA-14				82.64		
GZA-14A				82.31		
PS-1S		1225	3.41	79.21	0.0	SW= ~~0~~ 3.64
PS-1M		1205	2.40	77.30	0.0	SW= 2.71 R=2.40
PS-1D		1204	0.16	76.51	0.0	SW= 0.82
PS-2S		1131	1.98	77.71	0.0	SW= 2.02 ~~blockage at repair~~ 2.99'
PS-2M		1133	2.04	77.61	0.0	SW= 2.04
PS-2D		1135	1.30	76.91	0.0	SW= 1.3
PS-3		1000	1.43	76.64	0.0	
PS-4		0940	3.48	78.66	0.0	R= 3.48
PS-5S		0947	4.93	80.49	0.0	
PS-5D		0948	6.53	79.68	0.0	had to remove tubing
PS-8S		1516	7.39	83.77	0.0	
PS-8M		1517	7.07	82.53	0.0	
PS-8D		1518	6.68	82.77	0.0	
GZA-1 (wwtp)				78.93 ?		SW=
GZA-2 (wwtp)				79.03 ?		SW=
GZA-3 (wwtp)				79.68 ?		SW=
GZA-4 (wwtp)				83.3 ?		
STM-? (Wilm. Masonry)		1503	3.28	75.57	0.0	
AE-112R-1 (41-51)				81.76		
AE-112R-2 (62-72)				81.78		
AE-112R-3 (91-101)				81.78		
AE-112R-4 (113-123)				81.80		
AE-112R-5 (136-146)				81.75		
AE-112R-6 (153-163)				81.73		
AE-112R-7 (168-175)				81.74		
AE-112D				82.27		
HOW-2 (MW-2)				84.35		
HOW-3 (MW-3)				81.83		
GZA-107M				80.87		
GZA-107D				81.08		
GZA-107R				80.58		

Notes: R = replicate field measurement
Water level meter make/model/SN:

3 Furbish Pond Ln 1711 18.62 0.0

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: 80's Sunny Recorder(s): Floyd Burton / Katy Teske

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-23S				85.62		
AE-23R				85.54		
AE-24				85.63		
AE-25S				85.49		
AE-25D				85.38		
AE-25R				85.35		
AE-26S				85.49		
AE-26D				85.25		
AE-27R				85.23		
AE-3				82.41		
AE-4				82.03		
DP-1				80.01		
DP-2				79.75		
CW-1				80.94		
CW-2				80.73		
PZ-8R				79.04		
GZA-5				79.77		
GZA-6				80.37		
GZA-10				80.29		
STM-3S	8/31/21	14:52	9.14	82.93		
STM-3D	8/31/21	14:50	9.18	82.89		
STM-3R	8/31/21	14:48	9.35	82.90		
STM-8S	8/31/21	15:32	4.13	78.91	0.1	
STM-8M	8/31/21	~~[illegible]~~		78.87	~~0.0~~	~~Clogged w dirt~~
STM-8D	8/31/21	15:34	4.97	78.86	0.1	
STM-8R	8/31/21	15:37	4.89	78.78	0.0	
STM-8M	8/31/21	15:39	4.95	79.08	0.0	R-4.95
STM-10S	8/31/21	1730	17.98	95.70	0.0	
STM-10R1	↓	1731	18.18	95.79	0.0	
STM-10R2	↓	1732	18.17	95.79	0.0	
TRC-402 (Reading)				97.47		
TRC-403 (Reading)				97.73		

Road

M →

Notes: R = replicate field measurement

Water level meter make/model/SN:

Skinny tape #1

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: 80's Sunny Recorder(s): Floyd Burton / Katy Teske

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
MW-1				78.81		
MW-4				77.23		SW=
MW-4A				76.46		SW=
MW-5				78.99		SW=
MW-7				80.33		
GZA-14				82.64		
GZA-14A				82.31		
PS-1S				79.21		SW=
PS-1M				77.30		SW=
PS-1D				76.51		SW=
PS-2S				77.71		SW=
PS-2M				77.61		SW=
PS-2D				76.91		SW=
PS-3				76.64		
PS-4				78.66		
PS-5S				80.49		
PS-5D				79.68		
PS-8S				83.77		
PS-8M				82.53		
PS-8D				82.77		
GZA-1 (wwtp)				78.93 ?		SW=
GZA-2 (wwtp)				79.03 ?		SW=
GZA-3 (wwtp)				79.68 ?		SW=
GZA-4 (wwtp)				83.3 ?		
STM-? (Wilm. Masonry)				75.57		
AE-112R-1 (41-51)	8/31/21	1213	6.00	81.76	0.2	
AE-112R-2 (62-72)	8/31/21	1214	5.89	81.78	0.1	
AE-112R-3 (91-101)	8/31/21	1215	5.80	81.78	0.1	
AE-112R-4 (113-123)	8/31/21	1216	5.86	81.80	0.1	
AE-112R-5 (136-146)	8/31/21	1217	5.85	81.75	0.1	
AE-112R-6 (153-163)	8/31/21	1218	5.80	81.73	0.0	
AE-112R-7 (168-175)	8/31/21	1219	5.79	81.74	0.1	
AE-112D	8/31/21	1221	6.69	82.27	5.8	R- 6.69
HOW-2 (MW-2)	8/31/21	1231	8.69	84.35	0.0	
HOW-3 (MW-3)	8/31/21	1210	6.32	81.83	0.0	No J-Plug
GZA-107M	8/31/21	1252	4.07	80.87	0.2	
GZA-107D	8/31/21	1250	4.29	81.08	0.4	
GZA-107R	8/31/21	1248	3.81	80.58	0.0	

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: 80 Sunny Recorder(s): Floyd Burton / Katy Teske

Well	Date	Time	Sight Glass Reading (inches)	TOC Ref Elev	PID	Sight Glass Ruler Measurement (measures in 0.1 inches)	Height of sight glass from rim
AE-26R-1 (50-56)				84.83			
AE-26R-2 (72-78)				84.83			
AE-26R-3 (81-88)				84.83			
AE-26R-4 (104-114)				84.83			
AE-26R-5 (123-132)				84.83			
AE-28R-1 (45-51)				84.81			
AE-28R-2 (75-85)				84.81			
AE-28R-3 (98-108)				84.81			
AE-28R-4 (132-142)				84.81			
AE-29R-1 (37-44)				85.83			
AE-29R-2 (47-54)				85.83			
AE-29R-3 (70-76)				85.83			
AE-29R-4 (90-96)				85.83			
AE-29R-5 (113-119)				85.83			
AE-29R-6 (140-146)				85.83			

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-109R-1 (38-43)	8-31-21	9:13 AM	3.33	80.20	0	
AE-109R-2 (66-76)	8-31-21	9:14 AM	3.30	80.17	0	
AE-109R-3 (126-136)	8-31-21	9:14 AM	3.34	80.19	0	
AE-109R-4 (174-180.5)	8-31-21	9:15 AM	3.57	80.17	0	
AE-109R-5 (183-189)	8-31-21	9:15 AM	3.57	80.18	0	
AE-109R-6 (196-201)	8-31-21	9:16 AM	3.57	80.15	0	
AE-109R-7 (204-214)	8-31-21	9:18 AM	3.56	80.17	0	
AE-109R-8 (245-250)	8-31-21	9:18 AM	3.53	80.20	0	R-3.53
AE-109D	8-31-21	9:00 AM	357	80.36	0.1	
AE-110R-1 (34-44)	8/31/21	1131	2.66	80.67	0.1	
AE-110R-2 (70-80)	8/31/21	1134	2.62	80.68	0.1	
AE-110R-3 (128-138)	8/31/21	1135	2.35	80.64	0.1	
AE-110R-4 (158-168)	8/31/21	1136	2.25	80.62	0.2	
AE-110R-5 (171-182)	8/31/21	1137	2.23	80.62	0.1	
AE-110R-6 (190-200)	8/31/21	1138	2.26	80.62	0.1	
AE-110R-7 (224-234)	8/31/21	1139	2.23	80.64	0.1	R-2.23
AE-111R-1 (44-54)	8/31/21	1013	12.75	89.03	0.1	
AE-111R-2 (66-74)	8/31/21	1015	12.69	89.01	0.3	
AE-111R-3 (95-103)	8/31/21	1016	12.65	89.02	0.2	
AE-111R-4 (140-150)	8/31/21	1018	12.58	89.02	0.1	R-12.58
AE-111R-5 (155-165)	8/31/21	1020	12.54	89.05	0.1	
AE-111R-6 (168-173)	8/31/21	1022	12.55	89.04	0.1	
AE-111R-7 (181-191)	8/31/21	1023	12.56	89.06	0.1	

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: 80's Sunny | Recorders: Floyd Burton / Katy Teske

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-106S				78.42		
AE-106R-1 (47-52)				79.15		
TRC-301R-1 (96.5-100.5)				78.57		
MW-4				77.23		
MW-4A				76.46		
MW-5				78.99		
PS-1S				79.21		
PS-1M				77.30		
PS-1D				76.51		
PS-2S				77.71		
PS-2M				77.61		
PS-2D				76.91		
GZA-1 (wwtp)				79.05		
GZA-2 (wwtp)				79.12		
SG-1				75.78		
SG-2				70.82		
Concord Street Pond		1501	0.70	75.91		Ref Elev is top of 2nd outfall pipe into Pond, west of Fordham Rd

For each of the MWs above, if there is standing water present at the well, measure depth to surface water from the TOC reference elevation. This may require two measurements from TOC to Rim of stickup then rim of stickup down to surface water.
At gauges SG-1 and SG-2, if no standing water, dig down up to 12 inches to see water is present; if yes, allow water to fill hole/stabilize and take measurement of depth to water below ground.

Notes: R = replicate field measurement

Skinny Tape #1

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: 80's Sunny | Recorders: Floyd Burton / Katy Teske

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
x MW-1R	↑	0953	11.41	89.48	89.48		0.0
x MW-1S	9/3/21	0950	11.51	89.56	89.56		0.0
MW-4N-R1				88.05	NM		
MW-4N-R2				88.02	NM		
MW-4N-R3				88.07	NM		
MW-4N-R4				88.06	NM		
MW-6N-R1				90.61	NM		
MW-6N-R2				90.40	NM		
MW-6N-R3				90.73	NM		
MW-6N-R4				90.51	NM		
MW-6N-R5				90.51	NM		
x MW-7S				86.57	86.57		
MW-12S		1044	5.59	92.43	NM	R 5.59	0.0
x MW-13R		1031	13.99	90.19	90.19		0.1
x MW-13S		1031	14.05	90.23	90.23		0.0
MW-14N-R1				91.09	NM		
MW-14N-R2				91.14	NM		
MW-14N-R3				91.26	NM		
MW-14N-R4				91.39	NM		

Notes: R = replicate field measurement
Water level meter make/model/SN:

From September 2020 - Small number of monitoring wells on YRC property measured by AECOM on 9/9/2020, one day following the site-wide water levels on 9/8/2020. Unable to measure depths to water in more YRC site wells on 9/8 due to ongoing groundwater remediation pumping/recirculation.

confirm with Scott - NO!!

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560
91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700
5C South Gold Dr, Hamilton, NJ 08691 (609) 570-6555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200
781 Industrial Dr, Elmhurst, IL 60126 (630) 501-1847

Order No.: R67603
Date: 8/31/2021
Technician: MA

Company: AECOM
Contact: DYLAN
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
PRO DSS	3520-1162	✓	
Handheld Display	3530-1349	✓	

Item	Tech	QC	Item	Tech	QC
Cable 12 '	✓		AC Adaptor	✓	
Flow Cell	✓		Stand		
Barb Kit	✓		D.O Kit		
Storage / Cal Cup	✓		Calibration Kit	✓	
Sensor Guard	✓				
Manual	✓				
Sonde Cap					
Software					
Extra Batteries					
Display Comm. Cable	✓				
Sonde Comm. Cable					

Calibration Report

PRO DSS		3520-1162		
Parameter	*Accuracy*	*Before*	*After*	*Lot #*
Conductivy 1000 µs/cm	*(+/- 5%)*	993	1000	15D515
pH 7 Buffer	*(+/- .2)*	7.30	7.05	0GH457
pH mV for 7 Buffer	*(0 +/- 50)*		**-29.0**	
pH 4 Buffer	*(+/- .2)*	4.38	4.00	OGB875
pH mV for 4 Buffer	*(180 +/- 50)*		**140.0**	
pH 10 Buffer	*(+/- .2)*	10.35	10.08	OGB986
pH mV for 10 Buffer	*(-180 +/- 50)*		**-198.7**	
ORP mV, 237.5	*(+/- 20 mV)*	227.0	236.00	9GC160
DO 100% Sat	*(+/- 2%)*	94.6%	99.9%	
0% DO Check	*(+/- 2%)*		2.00	
Turbidity 0 NTU	*(+/- 5%)*			
Turbidity 126 NTU	*(+/- 5%)*			

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verity that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

US Environmental Rental Corporation

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781 Industrial Dr, Elmhurst, IL 60126 (630) 501-1847

Order No.: R67603
Date: 8/31/2021
Technician: MA

Company: AECOM
Contact: DYLAN
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
Pro Series	0	✓	
Handheld Display	3530-1426	✓	

Item	Tech	QC	Item	Tech	QC
Cable 12 '	✓		AC Adaptor		
Flow Cell	✓		Stand		
Barb Kit	✓		D.O Kit	✓	
Storage / Cal Cup	✓		Calibration Kit	✓	
Sensor Guard	✓				
Manual	✓				
Sonde Cap					
Software					
Extra Batteries	✓				
Display Comm. Cable	✓				
Sonde Comm. Cable					

Calibration Report

Pro Series			0	
Parameter	***Accuracy***	***Before***	***After***	***Lot #***
Conductivy 1000 µs/cm	*(+/-.5%)*	1007	1000	15D515
pH 7 Buffer	*(+/- .2)*	7.08	7.03	0GH457
pH mV for 7 Buffer	*(0 +/- 50)*		**-11.3**	
pH 4 Buffer	*(+/- .2)*	4.12	4.00	OGB875
pH mV for 4 Buffer	*(180 +/- 50)*		**156.0**	
pH 10 Buffer	*(+/- .2)*	9.98	10.05	OGB986
pH mV for 10 Buffer	*(-180 +/- 50)*		**-178.9**	
ORP mV, 237.5	*(+/- 20 mV)*	234.0	239.00	9GC160
DO 100% Sat	*(+/- 2%)*	102.2%	99.8%	
0% DO Check	*(+/- 2%)*		2.00	
Turbidity 0 NTU	*(+/- 5%)*			
Turbidity 126 NTU	*(+/- 5%)*			

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1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200
781 Industrial Dr, Elmhurst, IL 60126 (630) 501-1847

Order No.: R67603
Date: 8/31/2021
Technician: MA

Company: AECOM
Contact: DYLAN
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
PRO DSS	3520-1083	✓	
Handheld Display	3530-1335	✓	

Item	Tech	QC	Item	Tech	QC
Cable 12 '	✓		AC Adaptor	✓	
Flow Cell	✓		Stand		
Barb Kit	✓		D.O Kit		
Storage / Cal Cup	✓		Calibration Kit	✓	
Sensor Guard	✓				
Manual	✓				
Sonde Cap					
Software					
Extra Batteries					
Display Comm. Cable	✓				
Sonde Comm. Cable					

Calibration Report

PRO DSS		3520-1083		
Parameter	**Accuracy**	**Before**	**After**	**Lot #**
Conductivy 1000 µs/cm	(+/-.5%)	964	1000	15D515
pH 7 Buffer	(+/- .2)	7.19	7.02	0GH457
pH mV for 7 Buffer	(0 +/- 50)		**-15.9**	
pH 4 Buffer	(+/- .2)	3.97	4.00	OGB875
pH mV for 4 Buffer	(180 +/- 50)		**143.9**	
pH 10 Buffer	(+/- .2)	10.13	10.05	OGB986
pH mV for 10 Buffer	(-180 +/- 50)		**-186.2**	
ORP mV, 237.5	(+/- 20 mV)	242.0	235.80	9GC160
DO 100% Sat	(+/- 2%)	101.0%	99.3%	
0% DO Check	(+/- 2%)		2.00	
Turbidity 0 NTU	(+/- 5%)			
Turbidity 126 NTU	(+/- 5%)			

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Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

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5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200
781 Industrial Dr, Elmhurst, IL 60126 (630) 501-1847

Order No.: R68563
Date: 9/10/2021
Technician: MA

Company: AECOM
Contact: DYLAN
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
Pro Series	0	✓	
Handheld Display	3530-1221	✓	

Item	Tech	QC	Item	Tech	QC
Cable 12 '	✓		AC Adaptor		
Flow Cell	✓		Stand		
Barb Kit	✓		D.O Kit	✓	
Storage / Cal Cup	✓		Calibration Kit	✓	
Sensor Guard	✓				
Manual	✓				
Sonde Cap					
Software					
Extra Batteries	✓				
Display Comm. Cable	✓				
Sonde Comm. Cable					

Calibration Report

Pro Series			0	
Parameter	**Accuracy**	**Before**	**After**	**Lot #**
Conductivy 1000 µs/cm	(+/-.5%)	878	1000	15D515
pH 7 Buffer	(+/- .2)	7.19	7.02	0GH457
pH mV for 7 Buffer	(0 +/- 50)		-21.2	
pH 4 Buffer	(+/- .2)	4.21	4.00	OGB875
pH mV for 4 Buffer	(180 +/- 50)		142.0	
pH 10 Buffer	(+/- .2)	10.23	10.05	OGB986
pH mV for 10 Buffer	(-180 +/- 50)		-177.5	
ORP mV, 237.5	(+/- 20 mV)	214.0	238.00	9GC160
DO 100% Sat	(+/- 2%)	106.3%	99.8%	
0% DO Check	(+/- 2%)		2.00	
Turbidity 0 NTU	(+/- 5%)			
Turbidity 126 NTU	(+/- 5%)			

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Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	Pro DSS
Fieldwork Dates	[redacted] 9/1/21 -	Serial Number:	19K100692
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/1/21
Air temperature:	AM 18°C PM 68°C	Calibration	Initials: BK
Solution Temperature:	AM PM		Time: 0740
Inst. Barometric Press.(mmHg):	AM 755.15 PM 755.8	Calibration Check	Initials: BK
Pressure Corrected / Source:	AM / PM /		Time: 1610

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	23.2	9.55	8.66	9.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	—	NA	—	Cal or Ck (circle)
pH	S.U.	7.00	23.0	7.00	7.18	7.00	4.00	22.8	4.00	4.65	4.00	10.00	22.6	10.00	9.95	10.00	NA	NA	NA	NA	NA
ORP*	mV	238.0	22.3	234.3	224.7	234.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	—	—	—	Cal or Ck (circle)
Sp. EC	µs/cm	1000	23.4	NA	982	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	24.2	NA	10.2	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	20.0	9.00	9.49	0.49
DO	mg/L	0	—	NA	—	—
pH	S.U.	7.0	23.4	7.0	7.21	0.21
ORP	mV	238.0	22.9	238.0	218.0	20.0
ORP	mV	223.0	—		—	—
Sp. EC	µs/cm	1000	23.4	NA	962	38
Sp. EC	µs/cm	0	23.4	NA	31.6	31.6

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity: 0.10

Reading 0.10

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044			Manufacture/Model:	YSI PRO QUATRO
Field Activity	Groundwater Sampling			Serial Number:	20K101353
Fieldwork Dates	9/8/2020-9/25/2020			CALIBRATION DATE:	9/1/21
Date & Result of Last Temp. Check				Calibration Initials:	FWB
Air temperature:	AM	PM		Time:	0530
Solution Temperature:	AM	PM		Calibration Check Initials:	FWB
Inst. Barometric Press.(mmHg):	AM 955	PM		Time:	1645
Pressure Corrected / Source:	AM /	PM /			

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	25.3		99.4%	99.3%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	22.6	NA	0.16	Cal or Ck (circle)
pH	S.U.	7.00	22.9	7.00	7.04	7.00	4.00	22.7	4.00	3.97	4.0	10.00	22.9	10.0	10.0	10.0	NA	NA	NA	NA	NA
ORP*	mV	238.0	23.1	238	239.4	238.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	23.2	NA	1029	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	22.9	NA	13	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	23.1		91.7%	1.3%
DO	mg/L	0	23.4	NA	0.14	0.02
pH	S.U.	7.0	23.6	7.00	7.01	0.01
ORP	mV	238.0	24.7	238	239.9	1.9
~~ORP~~	~~mV~~	223.0				
Sp. EC	µs/cm	1000	24.7	NA	1004	4
Sp. EC	µs/cm	0	23.9	NA	12	1

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington				
Field Activity	GW Sampling		Manufacture/Model:	YSI ProDSS	
Fieldwork Dates	9/2/21		Serial Number:	19H100692	
Date & Result of Last Temp. Check			CALIBRATION DATE:	9/2/21	
Air temperature:	AM 15°C	PM 22°C	Calibration	Initials: BK	
Solution Temperature:	AM [illegible]	PM		Time: 0745	
Inst. Barometric Press.(mmHg):	AM 750.9	PM 753.2	Calibration Check	Initials:	
Pressure Corrected / Source:	AM /	PM /		Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	16.7	9.62	10.80	9.62	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.7	NA	0.45	Cal or Ck (circle)
pH	S.U.	7.00	16.5	7.0	8.21	7.00	4.00	16.3	4.0	4.23	4.00	10.00	16.2	10.0	10.04	10.00	NA	NA	NA	NA	NA
ORP*	mV	238.0	16.0	238	229.7	238.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	16.9	NA	923	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	17.1	NA	415	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	[illegible]	[illegible]	7.52	0.10
DO	mg/L	0	21.0	NA	0.42	0.46
pH	S.U.	7.0	22.1	7.0	7.62	0.62
ORP	mV	238	24.0	238.0	238.3	9.7
Sp. EC	µs/cm	1000	20.8	NA	1781	781
Sp. EC	µs/cm	0	23.9	NA	43.9	43.9

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI PROQUATRO
Fieldwork Dates	~~9/8/2020-9/25/2020~~ 9/1/21 - 9/23/21	Serial Number:	20K101853
Date & Result of Last Temp. Check	9/2/21	CALIBRATION DATE:	9/2
Air temperature:	AM PM	Calibration Initials:	ZnB
Solution Temperature:	AM PM	Time:	1015
Inst. Barometric Press.(mmHg):	AM PM	Calibration Check Initials:	ZnB
Pressure Corrected / Source:	AM / PM /	Time:	1515

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	22.1	9.1	8.99	9.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	22.6	NA	0.09	Cal or Ck (circle)
pH	S.U.	7.00	21.9	7.00	7.01	7.00	4.00	21.8	4.00	4.01	4.00	10.00	22.3	10	10.03	10.00	NA	NA	NA	NA	NA
ORP*	mV	238.0	22.3	238	239.4	238	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	—	—	—	~~Cal or Ck (circle)~~
Sp. EC	µs/cm	1000	22.2	NA	1006	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	21.9	NA	8	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	22.1	9.1	8.93	0.17
DO	mg/L	0	22.3	NA	0.17	0.08
pH	S.U.	7.0	22.4	7.01	7.01	0
ORP	mV	238.0	22.5	238	238	0
~~ORP~~	~~mV~~	~~223.0~~				
Sp. EC	µs/cm	1000	22.6	NA	988	12
Sp. EC	µs/cm	0	22.3	NA	18	10

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp Cond	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044				
Field Activity	Groundwater Sampling		**Manufacture/Model:**	YSI Pro DSS	
Fieldwork Dates	9/8/2020-9/25/2020		**Serial Number:**	19K100091	
Date & Result of Last Temp. Check	9/2/21		**CALIBRATION DATE:**	9/2/21	
Air temperature:	AM 17.7	PM 17.0	**Calibration**	**Initials:** SH	
Solution Temperature:	AM 19.1	PM 18.0		**Time:** 0745	
Inst. Barometric Press.(mmHg):	AM 751.8	PM 753.9	**Calibration Check**	**Initials:** SH	
Pressure Corrected / Source:	AM YSI / 745	PM YSI / 1335		**Time:** 1335	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	17.7	9.44	9.51	9.44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.9	NA	0.21	Cal or Ck (circle)
pH	S.U.	7.00	17.1	7.03	7.13	7.03	4.00	16.9	4.00	3.92	4.00	10.00	16.9	10.10	10.12	10.16	NA	NA	NA	NA	NA
ORP*	mV	238.0	16.1	242.5	246.1	242.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	17.3	NA	954	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	16.3	NA	23.2	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	17.0	9.53	9.45	0.08
DO	mg/L	0	20.5	NA	0.31	0.31
pH	S.U.	7.0	18.9	7.03	7.13	0.10
ORP	mV	238.0	19.4	238.0	227.9	10.1
ORP	mV	223.0				
Sp. EC	µs/cm	1000	18.9	NA	989	11.0
Sp. EC	µs/cm	0	18.2	NA	19.1	19.1

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	µs/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	µs/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI ProDSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100692
Date & Result of Last Temp. Check		CALIBRATION DATE:	9-3-21
Air temperature:	AM 11°C PM [illegible]	Calibration Initials:	BK
Solution Temperature:	AM PM	Time:	0745
Inst. Barometric Press.(mmHg):	AM 759.3 PM 757.6	Calibration Check Initials:	BK
Pressure Corrected / Source:	AM / PM /	Time:	1420

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	11°C	9.09	9.23	9.09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	17.5	NA	[illegible]	Cal or Ck (circle)
pH	S.U.	7.00	17.3	7.0	6.96	7.0	4.00	17.2	4.0	3.82	4.0	10.00	18.4	10.0	9.38	10.0	NA	NA	NA	NA	NA
ORP*	mV	238.0	18.3	239.6	233.2	239.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	—	—	—	Cal or Ck (circle)
Sp. EC	µs/cm	1000	17.4	NA	[illegible]	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	18.1	NA	17.1	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	23.1	8.59	8.90	0.31
DO	mg/L	0	22.3	NA	0.46	0.46
pH	S.U.	7.0	23.2	7.0	7.08	0.08
ORP	mV	238.0	23.6	239	234.2	3.8
ORP	mV	223.0	—		—	—
Sp. EC	µs/cm	1000	[illegible] 24.2	NA	1018	18
Sp. EC	µs/cm	0	22.9	NA	49.4	49.4

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Quatro
Fieldwork Dates	~~9/8/2020-9/25/2020~~ 9/1/21 - 9/23/21	Serial Number:	20K101853
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/3/21
Air temperature:	AM 19.3 PM	Calibration	Initials: DP
Solution Temperature:	AM PM		Time: 0840
Inst. Barometric Press.(mmHg):	AM 758.2 PM 757.6	Calibration Check	Initials: ZwB
Pressure Corrected / Source:	AM / PM /		Time: 1445

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	19.3	9.2	8.81	9.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	19.6	NA	0.17	Cal or Ck (circle)
pH	S.U.	7.00	18.6	7.03	7.03	7.03	4.00	18.7	4.00	4.00	4.00	10.00	18.3	10.08	10.00	10.08	NA	NA	NA	NA	NA
ORP*	mV	238.0	18.9	~~240~~	242.1	240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	16.8			Cal or Ck (circle)
Sp. EC	µs/cm	1000	18.0	NA	978	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	~~19.3~~	NA	19.3	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	21.7	8.59	8.86	0.27
DO	mg/L	0	20.6	NA	0.14	0.03
pH	S.U.	7.0	20.9	7.02	7.01	0.01
ORP	mV	238.0	20.4	238	238.1	0.10
ORP	~~mV~~	~~223.0~~				
Sp. EC	µs/cm	1000	20.6	NA	1003	3
Sp. EC	µs/cm	0	22.0	NA	20.2	0.9

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Pro DSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K1000 91
Date & Result of Last Temp. Check	9/3/21	CALIBRATION DATE:	9/3/21
Air temperature:	AM 17.9 PM 26.8	Calibration Initials:	SH
Solution Temperature:	AM 18.7 PM 28.1	Time:	0730
Inst. Barometric Press.(mmHg):	AM 759.3 PM 757.8	Calibration Check Initials:	SH
Pressure Corrected / Source:	AM YSI; 730 PM YSI; 1430	Time:	1430

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	17.9	9.49	9.44	9.49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	16.2	NA	0.29	Cal or Ck (circle)
pH	S.U.	7.00	16.9	7.03	7.09	7.03	4.00	17.9	4.00	4.03	4.00	10.00	17.8	10.10	10.10	10.10	NA	NA	NA	NA	NA
ORP*	mV	238.0	18.1	242.1	241.5	242.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	18.0	NA	1025	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	18.9	NA	21.8	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	21.9	8.70	7.49	1.21
DO	mg/L	0	24.8	NA	0.21	0.21
pH	S.U	7.0	26.3	7.00	7.21	0.21
ORP	mV	238.0	26.8	229.9	218.9	9.0
ORP	mV	223.0				
Sp. EC	µs/cm	1000	27.2	NA	1008	8.0
Sp. EC	µs/cm	0	23.7	NA	17	17

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0 0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044				
Field Activity	Groundwater Sampling		Manufacture/Model:	YSI Pro Quatro	
Fieldwork Dates	9/8/2020-9/25/2020		Serial Number:	20K101953	
Date & Result of Last Temp. Check			CALIBRATION DATE:		
Air temperature:	AM	PM	Calibration	Initials:	ZnB
Solution Temperature:	AM	PM		Time:	0900
Inst. Barometric Press.(mmHg):	AM 758	PM 753	Calibration Check	Initials:	ZnB
Pressure Corrected / Source:	AM /	PM /		Time:	1430

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	20.7	8.83	8.82	8.83	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.5	NA	0.07	(Cal or Ck)
pH	S.U.	7.00	20.5	7.02	7.13	7.02	4.00	20.7	4.00	4.03	4.00	10.00	21.1	10.05	10.09	10.05	NA	NA	NA	NA	NA
ORP*	mV	238.0	21.7	227.8	235.0	227.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				(Cal or Ck)
Sp. EC	µs/cm	1000	20.6	NA	1002	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	20.9	NA	0.11	(Cal or Ck)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	26.7	8.10	8.14	0.04
DO	mg/L	0	25.1	NA	0.12	0.05
pH	S.U.	7.0	24.8	7.00	7.01	0.01
ORP	mV	238.0	24.5	238	236	2
~~ORP~~	~~mV~~	~~220.0~~				
Sp. EC	µs/cm	1000	24.7	NA	998	2
Sp. EC	µs/cm	0	25.0	NA	0.12	0.01

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S U	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI PRODSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100642
Date & Result of Last Temp. Check		CALIBRATION DATE:	9.7.21
Air temperature:	AM 15° PM	Calibration Initials:	BK
Solution Temperature:	AM PM	Time:	0745
Inst. Barometric Press.(mmHg):	AM 757.8 PM	Calibration Check Initials:	BK
Pressure Corrected / Source:	AM / PM /	Time:	1530

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	15°C	9.35	9.27	9.35	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	19.7	NA	0.25	Cal or Ck (circle)
pH	S.U.	7.00	18.6	7.03	6.97	7.03	4.00	18.6	4.00	3.99	4.00	10.00	18.6	10.09	9.96	10.00	NA	NA	NA	NA	NA
ORP*	mV	238.0	18.6	239.3	239.1	239.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	—	—	—	Cal or Ck (circle)
Sp. EC	µs/cm	1000	18.6	NA	1185	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	19°C	NA	96.3	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	29.4	~~7.62~~	7.90	~~0.28~~
DO	mg/L	0	23.2	NA	0.49	0.49
pH	S.U.	7.0	23.2	7.0	6.98	0.02
ORP	mV	238.0	27.6	234.1	237.8	96.3
ORP	mV	223.0	—		—	—
Sp. EC	µs/cm	1000	27.8	NA	968	32
Sp. EC	µs/cm	0	28.4	NA	86.3	86.3

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Pro DSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100091
Date & Result of Last Temp. Check	9/7/21	CALIBRATION DATE:	9/7/21
Air temperature:	AM 19.5 PM	Calibration Initials:	SH
Solution Temperature:	AM 21.0 PM	Time:	0800
Inst. Barometric Press.(mmHg):	AM 758.3 PM	Calibration Check Initials:	SH
Pressure Corrected / Source:	AM YSI / 0800 PM /	Time:	1430

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	19.5	9.16	10.20	9.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	19.9	NA	0.31	Cal or Ck (circle)
pH	S.U.	7.00	19.7	7.02	7.09	7.02	4.00	19.4	4.00	4.06	4.00	10.00	19.6	10.06	10.03	10.06	NA	NA	NA	NA	NA
ORP*	mV	238.0	20.0	238	233.5	238.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	19.3	NA	1062	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	19.8	NA	28	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	24.2	9.72	9.68	0.04
DO	mg/L	0	23.1	NA	0.43	0.43
pH	S.U.	7.0	24.9	7.10	7.06	0.06
ORP	mV	238.0	25.1	238.0	237.0	1.0
ORP	mV	223.0				
Sp. EC	µs/cm	1000	23.8	NA	998	2.0
Sp. EC	µs/cm	0	22.0	NA	69	69

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI ProQuatro
Fieldwork Dates	~~9/8/2020-9/25/2020~~	Serial Number:	20K101853
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/7/21
Air temperature:	AM 19.3 PM 29	Calibration	Initials: DP
Solution Temperature:	AM PM		Time: 0825
Inst. Barometric Press.(mmHg):	AM 707.0 PM 756.6	Calibration Check	Initials: DP
Pressure Corrected / Source:	AM / PM /		Time: 1450

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	19.3	9.2	9.58	9.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.0	NA	0.06	Cal or Ck (circle)
pH	S.U.	7.00	19.9	7.02	7.16	7.02	4.00	19.8	4.00	4.07	4.00	10.00	20.2	10.06	10.15	10.06	NA	NA	NA	NA	NA
ORP*	mV	238.0	21.3	236	239.7	236	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	19.4	NA	1001	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	19.8	NA	24	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	29.2	7.8	~~6.5~~ 7.58	~~0.7~~ 0.08
DO	mg/L	0	27.5	NA	0.02	0.02
pH	S.U.	7.0	27.1	~~6.~~ 7.00	6.98	0.02
ORP	mV	238.0	27.4	228	226.2	1.8
~~ORP~~	~~mV~~	~~223.0~~				
Sp. EC	µs/cm	1000	27.3	NA	992	8
Sp. EC	µs/cm	0	25.5	NA	17.1	17.1

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044				
Field Activity	Groundwater Sampling		Manufacture/Model:	Pro DSS	
Fieldwork Dates	9/8/2020-9/25/2020		Serial Number:	19K100692	
Date & Result of Last Temp. Check			CALIBRATION DATE:	9.8.21	
Air temperature:	AM 18°C	PM 28°C	Calibration	Initials: BK	
Solution Temperature:	AM	PM		Time: 0721S	
Inst. Barometric Press.(mmHg):	AM 757.6	PM 755.6	Calibration Check	Initials: BK	
Pressure Corrected / Source:	AM /	PM /		Time: 1500	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	18°	9.02	8.94	9.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.1	NA	0.31	Cal or Ck (circle)
pH	S.U.	7.00	20.9	7.02	7.08	7.02	4.00	20.9	4.00	3.98	4.00	10.00	20.9	10.08	9.78	10.08	NA	NA	NA	NA	NA
ORP*	mV	238.0	~~238.0~~	26.0	229.7	236.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	—	—	—	Cal or Ck (circle)
Sp. EC	µs/cm	1000	20.1	NA	921	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	20.4	NA	1.2	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	27.4	7.66	8.41	0.75
DO	mg/L	0	26.4	NA	~~0.27~~ 0.27	0.27
pH	S.U.	7.0	25.3	7.00	7.34	0.34
ORP	mV	238.0	27.3	227.9	224.2	3.7
ORP	mV	223.0	—			
Sp. EC	µs/cm	1000	26.0	NA	1007	7
Sp. EC	µs/cm	0	29.4	NA	46	46

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI PRO DSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100091
Date & Result of Last Temp. Check	9.8.21 21.2°C	CALIBRATION DATE:	9.8.21
Air temperature:	AM 21.2°C PM	Calibration Initials:	SH
Solution Temperature:	AM 23.1°C PM	Time:	0735
Inst. Barometric Press.(mmHg):	AM 758.1 PM	Calibration Check Initials:	SH
Pressure Corrected / Source:	AM YSI / 0735 PM /	Time:	1445

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	21.5	8.79	9.27	8.79	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.2	NA	0.32	Cal or Ck (circle)
pH	S.U.	7.00	21.4	7.02	7.14	7.02	4.00	22.1	4.00	4.04	4.00	10.00	21.5	10.09	10.03	10.09	NA	NA	NA	NA	NA
ORP*	mV	238.0	21.2	239.5	231.8	235.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	22.1	NA	982	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	21.3	NA	29	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	22.8	8.91	9.08	0.17
DO	mg/L	0	25.9	NA	0.34	0.34
pH	S.U.	7.0	25.1	7.00	7.08	0.08
ORP	mV	238.0	24.9	238.2	239.0	0.08
ORP	mV	223.0				
Sp. EC	µs/cm	1000	23.7	NA	991	9
Sp. EC	µs/cm	0	21.6	NA	28	28

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI ProDSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19H100692
Date & Result of Last Temp. Check		CALIBRATION DATE:	9.9.21
Air temperature:	AM 23°C PM 24°C	Calibration Initials:	BK
Solution Temperature:	AM PM	Time:	0925
Inst. Barometric Press.(mmHg):	AM 754.7 PM 754.2	Calibration Check Initials:	BK
Pressure Corrected / Source:	AM / PM /	Time:	1345

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	23.9	8.34	8.08	8.34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	24.2	NA	0.17	Cal or Ck (circle)
pH	S.U.	7.00	24.1	7.01	6.96	7.01	4.00	24.3	4.00	3.99	4.00	10.00	24.3	10.01	9.78	10.01	NA	NA	NA	NA	NA
ORP*	mV	238.0	24.5	231.6	227.2	231.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	—	—	—	Cal or Ck (circle)
Sp. EC	µs/cm	1000	23.5	NA	1174	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	23.4	NA	5.1	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	24.4	8.29	8.48	0.19
DO	mg/L	0	25.4	NA	0.29	0.29
pH	S.U.	7.0	24.7	7.01	7.29	0.28
ORP	mV	238.0	25.2	231.6	227.2	3.9
ORP	mV	223.0	—		—	—
Sp. EC	µs/cm	1000	24.7	NA	1309	309
Sp. EC	µs/cm	0	24.4	NA	16.1	16.1

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI PRO DSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100091
Date & Result of Last Temp. Check	9.9.21	CALIBRATION DATE:	9-9-21
Air temperature:	AM 24.7 PM	Calibration Initials:	SH
Solution Temperature:	AM 23.1 PM	Time:	1015
Inst. Barometric Press.(mmHg):	AM 755.3 PM	Calibration Check Initials:	
Pressure Corrected / Source:	AM YSI / 1015 PM /	Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	24.8	8.25	8.40	8.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	23.9	NA	0.38	Cal or CK (circle)
pH	S.U.	7.00	24.9	7.01	7.07	7.01	4.00	24.3	4.00	4.00	4.00	10.00	24.6	10.00	10.03	10.00	NA	NA	NA	NA	NA
ORP*	mV	238.0	24.6	231.5	239.6	231.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	24.3	NA	995	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	21.7	NA	12	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	24.6	8.36	8.30	0.06
DO	mg/L	0	25.8	NA	0.62	0.62
pH	S.U.	7.0	24.1	7.01	7.06	0.05
ORP	mV	238.0	23.9	236.8	239.2	2.4
ORP	mV	223.0				
Sp. EC	µs/cm	1000	24.8	NA	991	9
Sp. EC	µs/cm	0	23.8	NA	16	16

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0 0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0 3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI ProDSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100692
Date & Result of Last Temp. Check		CALIBRATION DATE:	9-10-21
Air temperature:	AM 17°C PM 24°C	Calibration	Initials: BK
Solution Temperature:	AM PM		Time: 0745
Inst. Barometric Press.(mmHg):	AM 753.1 PM 754.0	Calibration Check	Initials: BK
Pressure Corrected / Source:	AM / PM /		Time: 1400

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	21.5	8.77	8.55	8.77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	19.7	NA	0.26	Cal or Ck (circle)
pH	S.U.	7.00	20.0	7.02	7.19	7.02	4.00	19.3	4.00	3.88	4.00	10.00	19.6	10.06	9.91	10.06	NA	NA	NA	NA	NA
ORP*	mV	238.0	19.1	238.7	245.1	238.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	—	—	—	Cal or Ck (circle)
Sp. EC	µs/°cm	1000	19.6	NA	1048	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/°cm	20.5	NA	61.4	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	24°C	7.45	7.74	0.29
DO	mg/L	0	23.1	NA	0.21	0.21
pH	S.U.	7.0	21.9	7.01	[illegible]	[illegible] 7.21/0.20
ORP	mV	238.0	25.2	230.7	231.6	0.9
ORP	mV	223.0	—		—	—
Sp. EC	µs/°cm	1000	22.7	NA	1121	121
Sp. EC	µs/°cm	0	29.1	NA	16.1	16.1

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/°cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/°cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#					
Field Activity			Manufacture/Model:	YSI Pro Quatro	
Fieldwork Dates			Serial Number:	20K101853	
Date & Result of Last Temp. Check			CALIBRATION DATE:	9/10/21	
Air temperature:	AM	PM	Calibration	Initials:	ZB
Solution Temperature:	AM	PM		Time:	0845
Inst. Barometric Press.(mmHg):	AM 752.9	PM 752.1	Calibration Check	Initials:	ZB
Pressure Corrected / Source:	AM /	PM /		Time:	1420

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	21.2	8.8	8.72	8.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.7	NA	0.11	Cal or Ck (circle)
pH	S.U.	7.00	21.6	7.02	7.03	7.02	4.00	22.0	4.00	4.02	4.00	10.00	21.9	10.05	10.01	10.05	NA	NA	NA	NA	NA
ORP*	mV	2.23	21.3	228	231.6	228	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	22.0	NA	943	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	21.4	NA	16	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	26.0	8.0	7.85	0.15
DO	mg/L	0	22.9	NA	0.13	0.02
pH	S.U.	7.0	23.2	7.01	7.04	0.03
ORP	mV	2.23	23.0	225	225.9	0.9
Sp. EC	µs/cm	1000	22.7	NA	998	2
Sp. EC	µs/cm	0	23.2	NA	15	1

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington GW Sampling		
Field Activity	GW Sampling	Manufacture/Model:	YSI Pro DSS
Fieldwork Dates	9.10.21	Serial Number:	19K100091
Date & Result of Last Temp. Check	9.10.21	CALIBRATION DATE:	9.10.21
Air temperature:	AM 18.3 PM	Calibration Initials:	SH
Solution Temperature:	AM 20.1 PM	Time:	0750
Inst. Barometric Press.(mmHg):	AM 753.6 PM	Calibration Check Initials:	SH
Pressure Corrected / Source:	AM YSI / 0745 PM /	Time:	1355

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	18.3	9.32	9.36	9.32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	18.6	NA	0.31	Cal or Ck (circle)
pH	S.U.	7.00	18.6	7.03	7.13	7.03	4.00	18.3	4.00	3.98	4.00	10.00	18.3	10.08	9.98	10.08	NA	NA	NA	NA	NA
ORP*	mV		18.8	239.1	237.4	239.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	18.2	NA	981	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	18.3	NA	51	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	26.7	8.91	9.02	0.11
DO	mg/L	0	23.8	NA	0.38	0.38
pH	S.U.	7.0	24.2	7.01	7.03	0.02
ORP	mV	238	24.6	237.1	236.8	0.03
Sp EC	µs/cm	1000	23.6	NA	998	~~200~~ 2
Sp EC	µs/cm	0	24.8	NA	16	16

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp Cond	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044				
Field Activity	Groundwater Sampling		Manufacture/Model:	YSI ProDSS	
Fieldwork Dates	9/8/2020-9/25/2020		Serial Number:	19K100692	
Date & Result of Last Temp. Check			CALIBRATION DATE:	9-13-21	
Air temperature:	AM 18°C	PM 20°C	Calibration	Initials:	BK
Solution Temperature:	AM	PM		Time:	0745
Inst. Barometric Press.(mmHg):	AM 758.6	PM 758.9	Calibration Check	Initials:	BK
Pressure Corrected / Source:	AM /	PM /		Time:	1730

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	21.4	8.87	8.87	8.83	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.8	NA	0.29	Cal or Ck (circle)
pH	S.U.	7.00	21.8	7.02	7.26	7.02	4.00	21.4	4.00	4.18	4.00	10.00	21.5	10.04	9.95	10.04	NA	NA	NA	NA	NA
ORP*	mV	238.0	20.9	236.3	233.8	236.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	—	—	—	Cal or Ck (circle)
Sp. EC	µs/°cm	1000	22.3	NA	969	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/°cm	25.4	NA	15.3	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	20.4	8.98	9.24	8.98
DO	mg/L	0	24.0	NA	0.38	0.38
pH	S.U.	7.0	23.7	7.00	7.11	0.11
ORP	mV	238.0	23.9	232.4	228.5	3.9
ORP	mV	223.0	—		—	—
Sp. EC	µs/°cm	1000	24.0	NA	1246	246
Sp. EC	µs/°cm	0	27.5	NA	14.7	14.7

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/°cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/°cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Pro DSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100091
Date & Result of Last Temp. Check	9/13/21	CALIBRATION DATE:	9/13/21
Air temperature:	AM 22.5 PM	Calibration Initials:	SH
Solution Temperature:	AM 23.8 PM	Time:	935
Inst. Barometric Press.(mmHg):	AM 759.0 PM	Calibration Check Initials:	
Pressure Corrected / Source:	AM YSI / 735 PM /	Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	22.2	8.69	8.74	8.69	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.6	NA	0.21	Cal or Ck (circle)
pH	S.U.	7.00	23.0	7.02	7.12	7.02	4.00	21.3	4.00	4.06	4.00	10.00	21.0	10.06	10.09	10.06	NA	NA	NA	NA	NA
ORP*	mV	238.0	23.1	237.7	231.8	237.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	23.2	NA	1149	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm		NA		Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	24.2	8.79	8.81	0.02
DO	mg/L	0	23.9	NA	0.38	0.38
pH	S.U.	7.0	24.1	7.01	7.08	0.07
ORP	mV	238.0	24.0	237.6	240.1	2.5
ORP	mV	223.0	23.6			
Sp. EC	µs/cm	1000	21.8	NA	1010	1010
Sp. EC	µs/cm	0	23.9	NA	17	17

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Field Activity		Manufacture/Model:	YSI Pro DSS
Fieldwork Dates		Serial Number:	14K100041
Date & Result of Last Temp. Check		CALIBRATION DATE:	
Air temperature:	AM 66°F PM	Calibration	Initials: AG
Solution Temperature:	AM ~~63°F~~ 70 PM		Time: 750
Inst. Barometric Press (mmHg):	AM 770.1 PM 770.0	Calibration Check	Initials: AG
Pressure Corrected / Source:	AM / PM /		Time:

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

Parameter	Units	STANDARD #1 Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	STANDARD #2 Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	STANDARD #3 Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	CHECK Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	16.7		9.54	9.83	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	17.2	NA	0.49	Cal or C (circle)
pH	S.U.	7.00	17.4	7.03	6.88	7.03	4.00	17.8	4.00	3.70	4.00	10.00	18.1	10.08	10.14	10.10	NA	NA	NA	NA	NA
ORP*	mV	238	17.5	-	~~264~~ 258.5	238.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/°cm	1000	17.4	NA	1000	~~100~~ 99.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/°cm	17.3	NA	12.5	Cal or C (circle)

1000

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	30.7		8.26	
DO	mg/L	0	28.4 ~~30.70~~	NA	0.38	
pH	S.U.	7.0	24.8		7.04	
ORP	mV	238	25.6		220.0	
Sp. EC	µs/°cm	1000	26.4	NA	978	
Sp. EC	µs/°cm	0	22.3	NA	6.4	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/°cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/°cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI pro DSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100041
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/14/21
Air temperature:	AM 60's PM	Calibration Initials:	AB
Solution Temperature:	AM PM	Time:	750
Inst. Barometric Press.(mmHg):	AM 763.6 PM 762.3	Calibration Check Initials:	
Pressure Corrected / Source:	AM / PM /	Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	17.8	9.5	9.23	9.55	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	19.4	NA	0.49	Cal or Ck (circle)
pH	S.U.	7.00	18.5	7.03	7.26	7.03	4.00	18.2	4.00	4.36	4.00	10.00	19.0	10.03	10.24	10.04	NA	NA	NA	NA	NA
ORP*	mV	238.0	14.8	-	206.1	237.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	19.1	NA	933	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	19.2	NA	12.9	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	/ Reading	Difference
DO	mg/L	NA	21.7		9.16	
DO	mg/L	0	23.6	NA	0.45	
pH	S.U.	7.0	23.5		7.05	
ORP	mV	238.0	22.0		238	
ORP	mV	223.0				
Sp. EC	µs/cm	1000	23.4	NA	932	
Sp. EC	µs/cm	0	22.3	NA	11.4	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp Cond	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity: Geotech

0.02 → 0.06 / 100 → 100 / 102
20 → 200 / 17.0 800 = 800 / 1060

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI pro DSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100692
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/14/21
Air temperature:	AM 50.3°F PM 32°C	Calibration Initials:	AG
Solution Temperature:	AM PM	Time:	815
Inst. Barometric Press.(mmHg):	AM 763.6 PM 760.5	Calibration Check Initials:	
Pressure Corrected / Source:	AM / PM /	Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	18.2	4.6	9.38	9.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L		NA		Cal or Ck (circle)
pH	S.U.	7.00	18.8	7.03	7.47	7.03	4.00	22.6	4.00	5.44	4.00	10.00	22.4	10.03	10.54	10.05	NA	NA	NA	NA	NA
ORP*	mV	238.0	21.0	—	169.0	237.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	20.2	NA	946	1001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	22.4	NA	13	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	30.9	~~760.5~~	7.09	0.11
DO	mg/L	0	24.5	NA	0.19	0.19
pH	S.U.	7.0	25.1	7.00	7.13	0.13
ORP	mV	238.0	25.0	238	241.8	3.8
ORP	mV	223.0				
Sp. EC	µs/cm	1000	25.5	NA	1021	21
Sp. EC	µs/cm	0	30.8	NA	8.7	8.7

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

*– ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity: GeoTech PTM 17061357

Value	Cal	Post cal
>0.1	0.07	1.60
20.0	14.9	20.6
100	100	99.0
600	596	

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Pro DSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100091
Date & Result of Last Temp. Check	9.15.21	CALIBRATION DATE:	9.15.21
Air temperature:	AM 21.9 PM	Calibration Initials:	SH
Solution Temperature:	AM 23.8 PM	Time:	0745
Inst. Barometric Press.(mmHg):	AM 760.3 PM	Calibration Check Initials:	15005
Pressure Corrected / Source:	AM YSI / 0745 PM /	Time:	54

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	21.7	8.77	8.53	8.77	NA	23.1	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	23.1	NA	0.23	Cal or Ck (circle)
pH	S.U.	7.00	21.8	7.40	7.02	7.02	4.00	22.0	10.07	9.62	10.07	10.00	22.0	4.00	4.55	4.00	NA	NA	NA	NA	NA
ORP*	mV	238.0	23.3	233.8	239.5	233.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	23.8	NA	1168	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	23.8	NA	10.6	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	29.1	7.57	8.00	0.43
DO	mg/L	0	28.1	NA	0.37	0.37
pH	S.U.	7.0	26.2	7.00	7.16	0.16
ORP	mV	238.0	27.9	239.7	238.2	1.5
ORP	mV	223.0	28.3			
Sp. EC	µs/cm	1000	29.2	NA	997	3.0
Sp. EC	µs/cm	0	28.7	NA	10.1	10.1

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GWS	Manufacture/Model:	YSI ProQuatro
Fieldwork Dates	8/31 - 9/24/21	Serial Number:	20K101853
Date & Result of Last Temp. Check		CALIBRATION OATE:	9/15/21
Air temperature:	AM 29.6 PM 32.5	Calibration Initials:	DP
Solution Temperature:	AM PM	Time:	0920
Inst. Barometric Press.(mmHg):	AM 758.1 PM 756	Calibration Check Initials:	
Pressure Corrected / Source:	AM / PM /	Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	30	7.5	6.62	7.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	25.9	NA	0.04	Cal or Ck (circle)
pH	S.U.	7.00	26	7.00	6.97	7.00	4.00	26.1	4.01	3.87	4.01	10.00	26.7	9.98	9.99	9.98	NA	NA	NA	NA	NA
ORP*	mV	231	25.1	231	241.3	231	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	26	NA	820	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	26.4	NA	17.4	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	32.5	7.3	7.54	0.24
DO	mg/L	0	33.7	NA	0.14	0.14
pH	S.U.	7.0	33.4	6.98	6.99	0.01
* ORP	mV	231	30.0	225	188.4	36.6
Sp. EC	µs/cm	1000	32.3	NA	995	5
Sp. EC	µs/cm	0	33.0	NA	9.0	9.0

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

* ORP was reading very high, roughly 394 mV during post-cal.
- restored default cal and it corrected to 188.4 mV

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC		
Field Activity	GWS	Manufacture/Model:	YSI Pro DSS
Fieldwork Dates		Serial Number:	19K 10009)
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/15/21
Air temperature:	AM	PM	Calibration Initials: AZ
Solution Temperature:	AM	PM	Time: 745
Inst. Barometric Press.(mmHg):	AM 760.3	PM	Calibration Check Initials:
Pressure Corrected / Source:	AM /	PM /	Time:

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	22.5		8.81	8.59	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	22.0	NA	0.34	Cal or Ck (circle)
pH	S.U.	7.00	22.9	7.01	7.08	7.01	4.00	22.4	4.00	4.13	4.00	10.00	23.0	10.02	10.15	10.03	NA	NA	NA	NA	NA
ORP*	mV 238	~~240~~	24.2	—	231.2	231.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	23.0	NA	1011	1001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	22.5	NA	15.3	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	33.7		7.54	
DO	mg/L	0	30.2	NA	0.35	
pH	S.U.	7.0	30.1		6.45	
ORP	mV	238	29.6		219	
Sp EC	µs/cm	1000	32.4	NA	994	
Sp. EC	µs/cm	0	33.1	NA	10.1	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AEC

Site Name / TO# / Job#	LMC		
Field Activity	OWS	Manufacture/Model:	YSI Pro DS3
Fieldwork Dates		Serial Number:	19K100692
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/15/21
Air temperature:	AM 60.5 PM	Calibration	Initials: AG
Solution Temperature:	AM PM		Time: 750
Inst. Barometric Press.(mmHg):	AM 769.4 PM 767.6	Calibration Check	Initials: AG
Pressure Corrected / Source:	AM / PM /		Time: 1600

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	18.3		9.46	9.47	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	18.7	NA	0.45	Cal or Ck (circle)
pH	S.U.	7.00	19.4	7.02	6.88	7.02	4.00	19.1	4.00	3.36	4.00	10.00	19.5	10.07	10.30	10.05	NA	NA	NA	NA	NA
ORP*	mV	238	18.3	–	234.4	234.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	19.5	NA	634	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	18.7	NA	2.8	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	20.6		9.06	
DO	mg/L	0	21.2	NA	0.46	
pH	S.U.	7.0	20.9		7.12	
ORP	mV	238	22.4	–	224.7	
Sp EC	µs/cm	1000	20.8	NA	~~9780~~ 991	
Sp. EC	µs/cm	0	21.8	NA	5.5	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

~~7004/478 98.5/101.20~~ 2121
0.1 / 1.37

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington GW Sampling		
Field Activity	GW Sampling	Manufacture/Model:	YSI ProDSS
Fieldwork Dates	9.16.21	Serial Number:	19K100091
Date & Result of Last Temp. Check	9.16.21	CALIBRATION DATE:	9.16.21
Air temperature:	AM 20.3 PM 20.9	Calibration Initials:	SH
Solution Temperature:	AM 23.2 PM 21.6	Time:	0745
Inst. Barometric Press.(mmHg):	AM 765.5 PM 768.1	Calibration Check Initials:	SH
Pressure Corrected / Source:	AM YSI / 0745 PM YSI / 17	Time:	1450

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	20.3	9.09	9.02	9.09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.5	NA	0.30	Cal or Ck (circle)
pH	S.U.	7.00	22.6	7.02	7.21	7.02	4.00	21.6	4.00	4.06	4.00	10.00	21.6	10.04	10.21	10.04	NA	NA	NA	NA	NA
ORP*	mV	238	21.1	236.1	256.1	236.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	21.6	NA	1091	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	23.1	NA	10.6	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	20.2	9.13	9.21	0.18
DO	mg/L	0	21.3	NA	0.21	0.21
pH	S.U	7.0	21.6	7.04	7.16	0.12
ORP	mV	238	20.8	236.5	238.0	1.5
Sp. EC	µs/cm	1000	21.7	NA	991	9.0
Sp. EC	µs/cm	0	23.8	NA	8.7	8.7

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
OO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI ProDSS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	19K100692
Date & Result of Last Temp. Check		CALIBRATION DATE:	9.16.21
Air temperature:	AM 22.9 PM 18.6	Calibration Initials:	BK
Solution Temperature:	AM PM	Time:	0745
Inst. Barometric Press.(mmHg):	AM 765.6 PM 767.9	Calibration Check Initials:	[redacted] BK
Pressure Corrected / Source:	AM / PM /	Time:	1510

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	22.9	8.65	8.60	8.65	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.8	NA	[redacted] 0.29	Cal or Ck (circle)
pH	S.U.	7.00	21.4	7.02	7.24	7.02	4.00	21.4	4.00	4.11	4.00	10.00	21.5	10.09	9.72	10.04	NA	NA	NA	NA	NA
ORP*	mV	238.0	21.2	235.9	266.4	235.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	—	—	—	Cal or Ck (circle)
Sp. EC	µs/cm	1000	22.3	NA	1308	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	22.1	NA	19.6	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	18.7	9.43	9.57	0.14
DO	mg/L	0	21.5	NA	0.49	0.49
pH	S.U.	7.0	21.5	7.00	7.38	0.38
ORP	mV	238.0	21.2	235.8	211.4	24.4
ORP	mV	223.0	—		—	—
Sp. EC	µs/cm	1000	21.7	NA	754	246
Sp. EC	µs/cm	0	21.1	NA	6.3	6.3

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington GW Sampling 2021				
Field Activity	GW sampling		Manufacture/Model:	YSI Pro DSS	
Fieldwork Dates	9.17.21		Serial Number:	19K100091	
Date & Result of Last Temp. Check	9.17.21		CALIBRATION DATE:	9.17.21	
Air temperature:	AM 19.4	PM	Calibration	Initials: SH	
Solution Temperature:	AM 20.6	PM		Time: 0730	
Inst. Barometric Press.(mmHg):	AM 769.0	PM	Calibration Check	Initials:	
Pressure Corrected / Source:	AM YSI / 0730	PM /		Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	19.6	9.32	9.17	9.32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	17.9	NA	039	Cal or Ck (circle)
pH	S.U.	7.00	18.7	7.03	7.06	7.03	4.00	18.5	4.00	3.71	4.06	10.00	18.3	10.08	10.04	10.08	NA	NA	NA	NA	NA
ORP*	mV	238	18.2	239.1	214.3	239.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	20.0	NA	978	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	16.9	NA	16	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	20.5	9.09	9.21	9.09
DO	mg/L	0	20.1	NA	0.28	0.28
pH	S.U	7.0	19.9	7.06	7.17	0.11
ORP	mV	238	19.9	237.6	240.9	3.2
Sp. EC	µs/cm	1000	20.5	NA	1093	93
Sp. EC	µs/cm	0	21.8	NA	13	13

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	±
DO	mg/L	0.0	
pH	S.U.	7.0 Temp. Adj.	
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI PRO plus
Fieldwork Dates	~~9/8/2020-9/25/2020~~	Serial Number:	10D101383
Date & Result of Last Temp. Check		CALIBRATION DATE:	~~9/17/21~~ 9/20/21
Air temperature:	AM PM	Calibration	Initials: AG
Solution Temperature:	AM PM		Time: 750
Inst. Barometric Press.(mmHg):	AM 759.4 PM 770.6	Calibration Check	Initials: AG
Pressure Corrected / Source:	AM / PM /		Time: 1630

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	20.4	9.0	8.76	9.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	20.5	NA	0.15	Cal or Ck (circle)
pH	S.U.	7.00	20.7	7.02	7.14	7.02	4.00	20.8	4.00	4.19	4.00	10.00	20.6	10.05	10.05	10.04	NA	NA	NA	NA	NA
ORP*	mV	238.0	20.6	–	211.5	238.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	20.4	NA	964	1413	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	21.5	NA	5.9	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	15.0	10.2	10.12	
DO	mg/L	0	15.9	NA	0.39	
pH	S.U.	7.0 15.8	~~28.0~~	7.04	7.08	
ORP	mV	238.0	~~26.7~~ 15.7	–	~~180.0~~ 259.3	
ORP	mV	~~223.0~~				
Sp. EC	µs/cm	1000	15.2	NA	1011	
Sp. EC	µs/cm	0	16.5	NA	14.9	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:
Geotech
Turbidity meter

50 0-2 →
20 →
100 →
800 →

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corp. #60552044				
Field Activity	GW Sampling		Manufacture/Model:	YSI / ProDSS	
Fieldwork Dates	9/8/20 - 9/25/20		Serial Number:	19H100692	
Date & Result of Last Temp. Check			CALIBRATION OATE:	9.20.21	
Air temperature:	AM 11.0C	PM 23.0C	Calibration	Initials:	BK
Solution Temperature:	AM	PM		Time:	0750
Inst. Barometric Press.(mmHg):	AM 768.8	PM 770.2	Calibration Check	Initials:	BK
Pressure Corrected / Source:	AM /	PM /		Time:	1500

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	17.2	9.56	9.81	9.56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	17.1	NA	0.29	Cal or Ck (circle)
pH	S.U.	7.00	17.2	7.03	7.18	7.03	4.00	17.7	4.00	4.13	4.00	10.00	17.6	10.09	9.92	10.09	NA	NA	NA	NA	NA
ORP*	mV	220.0	17.4	233.5	209.9	238.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	17.1	NA	1011	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	17.8	NA	69.2	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	32.0	7.16	6.92	7.16
DO	mg/L	0	25.0	NA	0.41	0.41
pH	S.U.	7.0	22.6	7.01	7.21	7.20
ORP	mV	232.0	24.9	238.0	241.8	3.8
Sp. EC	µs/cm	1000	25.8	NA	972	28
Sp. EC	µs/cm	0	33.3	NA	32.6	32.6

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
OO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Co. 60552044						
Field Activity	GW Sampling			Manufacture/Model:	YSI Pro DSS		
Fieldwork Dates	9/8 - 9/22			Serial Number:	19K100692		
Date & Result of Last Temp. Check				CALIBRATION DATE:	9.21.21		
Air temperature:	AM	10°C	PM	22°C	Calibration Initials:	BK	
Solution Temperature:	AM		PM		Time:	0745	
Inst. Barometric Press.(mmHg):	AM	770.06	PM	769.9	Calibration Check Initials:	BK	
Pressure Corrected / Source:	AM	/	PM	/	Time:	1425	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	15.9	10.04	10.22	10.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.8	NA	0.35	Cal or Ck (circle)
pH	S.U	7.00	15.9	7.04	7.10	7.04	4.00	15.4	4.00	3.97	4.00	10.00	15.1	10.12	10.03	10.12	NA	NA	NA	NA	NA
ORP*	mV	238.0	15.7	235.1	241.2	243.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	16.3	NA	903	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	16.1	NA	0.6	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	27.8	7.76	7.38	0.38
DO	mg/L	0	25.0	NA	0.96	0.96
pH	S.U.	7.0	25.0	7.00	7.27	0.27
ORP	mV	240	25.1	238.0	219.9	18.1
Sp. EC	µs/cm	1000	24.1	NA	1007	7
Sp. EC	µs/cm	0	26.9	NA	15.8	15.8

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC		
Field Activity		Manufacture/Model:	YSI Pro DSS
Fieldwork Dates		Serial Number:	14K 100092
Date & Result of Last Temp. Check		CALIBRATION DATE:	4/21/21
Air temperature:	AM 50's	PM	Calibration Initials: JL
Solution Temperature:	AM	PM	Time: AL
Inst. Barometric Press.(mmHg):	AM 770.6	PM 764.6	Calibration Check Initials: AL
Pressure Corrected / Source:	AM /	PM /	Time: 1600

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	15.0	10.2	10.12	10.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.4	NA	0.34	Cal or Ck (circle)
pH	S.U.	7.00	15.8	7.04	7.08	7.04	4.00	15.4	4.00	4.04	4.00	10.00	15.2	10.12	10.16	10.13	NA	NA	NA	NA	NA
ORP*	mV	238	15.7	—	254.3	238.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	15.2	NA	~~492~~	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	16.5	NA	14.9	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	26.4		8.24	
DO	mg/L	0	27.7	NA	0.40	0.44
pH	S.U.	~~7.238~~ 7.00	28.0		7.11	7.04
ORP	mV	~~26.7~~ 238	26.7	—	180.3	
Sp. EC	µs/cm	1000	28.0	NA	888	
Sp. EC	µs/cm	0	28.0	NA	7.2	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC		
Field Activity	GWS	Manufacture/Model:	YSI Pro DSS
Fieldwork Dates		Serial Number:	14K100491
Date & Result of Last Temp. Check		CALIBRATION DATE:	4/22/21
Air temperature:	AM 60's	PM	Calibration Initials: AG
Solution Temperature:	AM	PM	Time: 750
Inst. Barom. Press.(mmHg):	AM 766.3	PM 763	Calibration Check Initials: AG
Pressure Corrected / Source:	AM /	PM /	Time: 1590

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	20.2 ~~14.80~~	9.1	9.27	9.11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	19.8	NA	0.30	Cal or Ck (circle)
pH	S.U.	7.00	20.5	7.02	7.02	7.02	4.00	20.4	4.00	4.02	4.00	10.00	20.4	10.05	1206	1206	NA	NA	NA	NA	NA
ORP*	mV	238	21.0	—	200.1	238.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	203	NA	998	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	21.5	NA	2.8	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	24.2	8.41	8.60	
DO	mg/L	0	24.0	NA	0.46	
pH	S.U.	7.0	24.1		6.99	
ORP	mV	238	24.3	—	238.5	
Sp. EC	µs/cm	1000	24.0	NA	989	
Sp. EC	µs/cm	0	24.7	NA	11.3	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10 0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#					
Field Activity			Manufacture/Model:	YSI	Pro Quatro
Fieldwork Dates			Serial Number:	20K101853	
Date & Result of Last Temp. Check			CALIBRATION DATE:	9/22/21	
Air temperature:	AM	PM	Calibration Initials:	JMB	
Solution Temperature:	AM	PM	Time:	0745	
Inst. Barometric Press.(mmHg):	AM 764.5	PM	Calibration Check Initials:		
Pressure Corrected / Source:	AM /	PM /	Time:		

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	19.6	9.2	8.92	9.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	20.4	NA	0.11	Cal or Ck (circle)
pH	S.U.	7.00	19.9	7.02	7.05	7.02	4.00	20.1	4.00	4.03	4.00	10.00	20.1	10.05	10.00	10.05	NA	NA	NA	NA	NA
ORP*	mV	238	20.4				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	20.2	NA	1003	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	20.1	NA	14	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	23.5	8.5	8.62	0.12
DO	mg/L	0	22.9	NA	0.10	0.01
pH	S.U.	7.0	22.2	7.02	7.02	0
ORP	mV	238	23.0	235	234.1	0.9
Sp. EC	µs/cm	1000	22.6	NA	1001	1
Sp. EC	µs/cm	0	22.1	NA	15	1

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity Meter Calibration Log

AECOM

Site Name	LMC	Manufacturer	GeoTech
Field Activity	GWS	Model Number:	PTM
Fieldwork Dates	9/8 - 9/25	Serial Number	17061391

Instrument Number

Date	Time	Initials	Temp (°C)	Standard #1		Standard #2		Standard #3			Comments
				Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)		
9/1	0815	ZnB	NA	0.10	0.02	20.0	20.4	100	101	800	808
9/1	1615	ZnB	NA	0.10	0.13	20.0	19.5	100	101	800	802
9/2	1025	ZnB	NA	0.10	0.09	20.0	20.2	100	101	800	804
9/2	1510	ZnB	NA	0.10	0.16	20.0	21.4	100	106	800	803
9/3	0830	DP	NA	0.10	0.02	20.0	19.8	100	101	800	797
9/3	1430	ZnB	NA	0.10	0.08	20.0	20.4	100	101	800	803
9/7	0845	DP	NA	0.10	0.12	20.0	20.0	100	100	800	800
9/7	1510	DP	NA	0.10	0.19	20.0	19.7	100	99.4	800	788
9/8	0800	FWB	NA	0.10	0.02	20.0	19.6	100	102	800	784
9/8	1400	FWB	NA	0.10	0.02	20.0	19.2	100	99.4	800	806
9/9	1015	FWB	NA	0.10	0.02	20.0	19.7	100	99.6	800	804
9/9	1430	FWB	NA	0.10	0.02	20.0	19.4	100	101	800	809
9/10	0845	FWB	NA	0.10	0.06	20.0	19.2	100	100	800	791
9/10	1430	ZnB	NA	0.10	0.05	20.0	19.7	100	102	800	798
9/13	1015	ZnB	NA	0.10	0.07	20.0	19.6	100	104	800	796
9/13	1600	ZnB	NA	0.10	0.09	20.0	19.3	100	107	800	806
9/14	0830	ZnB	NA	0.10	0.02	20.0	19.4	100	101	800	802
9/14	1530	ZnB	NA	0.10	0.06	20.0	19.8	100	100	800	806

Acceptance Criteria	± 0.10 NTU	± 0.50 NTU	± 5.0 NTU

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line

Turbidity Meter Calibration Log

pg 2

AECOM

Site Name	LMC Wilmington	Manufacturer	GeoTech
Field Activity	GWS	Model Number:	PTM
Fieldwork Dates	8/31 - 9/24/21	Serial Number	17061391

Instrument Number

Date	Time	Initials	Temp (°C)	Standard #1		Standard #2		Standard #3		Comments	
				Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)		
9/15	0930	DP	26	0.02	0.07	20.0	19.9	100	101	800	812 cal
9/15	1530	DP	32	0.02	0.47	20.0	20.3	100	98.4	800	786 check
9/16	0930	ZnB	NM	0.10	0.02	20.0	20.2	100	100	800	799
9/16	1430	ZnB	NM	0.10	0.06	20.0	20.0	100	101	800	794
9/17	0900	ZnB	NM	0.10	0.08	20.0	20.0	100	100	800	802
9/17	1200	ZnB	NM	0.10	0.08	20.0	20.3	100	102	800	799
9/21	0800	ZnB	NM	0.10	0.10	20.0	20.0	100	100	800	794
9/21	1145	ZnB	NM	0.10	0.11	20.0	20.3	100	101	800	802
9/22	0745	ZnB	NM	0.10	0.10	20.0	20.2	100	100	800	800
9/22	1100	ZnB	NM	0.10	0.12	20.0	20.2	100	100	800	804

Acceptance Criteria	± 0.10 NTU	± 0.50 NTU	± 5.0 NTU

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line

Turbidity Meter Calibration Log

AECOM

Site Name	Wilmington MA	Manufacturer	Geotech
Field Activity	GW Sampling	Model Number:	Turbidimeter
Fieldwork Dates	9/2/21	Serial Number	17061375

Instrument Number

Date	Time	Initials	Temp (°C)	Standard #1 Value (NTU)	Standard #1 Reading (NTU)	Standard #2 Value (NTU)	Standard #2 Reading (NTU)	Standard #3 Value (NTU)	Standard #3 Reading (NTU)	Comments
9/2/21	0740	SH	17.6	0.02	0.02	20.0	19.9	100	101	800=800 ~~check~~ cal
9/2/21	1340	SH	17.0	0.02	0.02	20.0	19.2	100	98.1	800=792 check
9/3/21	0735	SH	17.5	0.02	0.02	20.0	19.8	100	99.1	800=807 cal
9/3/21	1435	SH	26.2	0.02	1.33	20.0	20.8	100	99.0	800=791 check
9/7/21	0800	SH	19.8	0.02	0.02	20.0	20.9	100	100	800=801 cal
9/7/21	1510	SH	27.9	0.02	0.02	20.0	20.7	100	99.7	800=781 check
9/8/21	0745	SH	21.2	0.02	0.02	20.0	19.0	100	101	800=805 cal
9/8/21	1455	SH	25.8	0.02	0.02	20.0	18.9	100	95.9	800=799 check
9/9/21	1015	SH	24.8	0.02	0.02	20.0	19.8	100	101	800=800 cal
9/9/21	1610	SH	26.8	0.02	0.02	20.0	20.1	100	98.7	800=801 check
9/10/21	0750	SH	20.6	0.02	0.02	20.0	18.9	100	100	800=799 cal
9/10/21	1350	SH	23.8	0.02	0.02	20.0	19.7	100	100	800=801 check
9/13/21	0730	SH	22.2	0.02	0.02	20.0	19.8	100	99.7	800=798 cal
9/13/21	1400	SH	28.2	0.02	0.02	20.0	20.0	100	103	800=801 check
9/14/21	0745	SH	20.1	0.02	0.02	20.0	20.3	100	100	800=799 cal
9/14/21	1435	SH	20.7	0.02	0.02	20.0	18.7	100	99.7	800=800 check
9/17/21	0745	SH	21.0	0.02	0.02	20.0	21.5	100	102	800=802 cal
9/17/21	1320	SH	28.8	0.02	0.02	20.0	21.6	100	101	800=808 check
Acceptance Criteria				± 0.10 NTU		± 0.50 NTU		± 5.0 NTU		

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line

Turbidity Meter Calibration Log

AECOM

Site Name	LMC Wilmington	Manufacturer	GeoTech
Field Activity	GW Sampling	Model Number:	
Fieldwork Dates	9.20.21	Serial Number	17061375

Instrument Number

Date	Time	Initials	Temp (°C)	Standard #1		Standard #2		Standard #3		Comments
				Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	
9.20.21	0715	BK	11°C	0.02	0.02	20	20	100	100	800 = 800 cal
9.20.21	1515	BK	23°C	0.02	0.02	20	17.5	100	94.7	800 = 781 dk
9.21.21	0810	BK	12°C	0.02	0.02	20	20	100	100	800 = 800 cal
9.21.21	1455	BK	22°C	0.02	6.17	20	27.4	100	102	800 = 817 dk

Acceptance Criteria ± 0.10 NTU ± 0.50 NTU ± 5.0 NTU

- **Record information for one instrument per sheet**
- **One sheet can be used on multiple days on the same site**
- **Use pen only; cross out errors with a single line**

Turbidity Meter Calibration Log

AECOM

Site Name	LCM Wilmington	Manufacturer	GeoTech
Field Activity	GW Sampling	Model Number:	
Fieldwork Dates	9/1/21 -	Serial Number	19062099

Instrument Number

Date	Time	Initials	Temp (°C)	Standard #1		Standard #2		Standard #3		Comments
				Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	
9/1/21	0815	BK	18°C	0.10	0.10	20	20	100	100	800 : = 800 cal
9/1/21	1615	BK	20°C	0.10	0.02	20	18.6	100	100	800 : = 800 chk
9/2/21	0815	BK	16°C	0.10	0.10	20	20	100	100	800 = 800 cal
9/2/21	1355	BK	18°C	0.02	0.02	20.0	19.6	100	99.1	800 = 787
9/3/21	0735	BK	11°C	0.02	0.02	20.0	20.0	100	100	800 = 800 cal
9/3/21	1440	BK	20°C	0.02	0.02	20	18.1	100	98.2	800 = 783
9/7/21	0815	BK	16°C	0.02	0.02	20	20	100	100	800 = 800 cal
9/7/21	1530	BK	24°C	0.02	0.02	20.0	18.2	100	96.2	800 = 771 check
9/8/21	0830	BK	20°C	0.02	0.02	20.0	20.0	100	100	800 = 800 cal
9/8/21	1500	BK	24°C	0.02	0.02	20.0	18.8	100	96.8	800 = 772 chk.
9/9/21	1020	BK	24°C	0.02	0.02	20.0	20.0	100	100	800 = 800 cal
9/9/21	1350	BK	24°C	0.02	0.02	20.0	19.7	100	100	800 = 812 chk
9/10/21	0740	BK	17°C	0.02	0.02	20	20	100	100	800 = 800 cal
9/10/21	1600	BK	24°C	0.02	0.02	20.0	19.9	100	102	800 = 794 chk
9/13/21	0815	BK	18°C	0.02	0.02	20.0	20.0	100	100	800 = 800 cal
9/13/21	1745	BK	20°C	0.02	0.02	20.0	19.2	100	99.7	800 = 814 chk
9/15/21	0835	AG	—	0.02	0.04	20	20.5	100	101	800 = 794
"	1630	"	"	"	0.02	"	18.7	"	97.9	800 = 786
Acceptance Criteria					± 0.10 NTU		± 0.50 NTU		± 5.0 NTU	

- **Record information for one instrument per sheet**
- **One sheet can be used on multiple days on the same site**
- **Use pen only; cross out errors with a single line**

Turbidity Meter Calibration Log

AECOM

Site Name	LMC Wilmington	Manufacturer	GeoTech
Field Activity	GW Sampling	Model Number:	
Fieldwork Dates	9·16·21 -	Serial Number	19062099

Instrument Number

Date	Time	Initials	Temp (°C)	Standard #1 Value (NTU)	Standard #1 Reading (NTU)	Standard #2 Value (NTU)	Standard #2 Reading (NTU)	Standard #3 Value (NTU)	Standard #3 Reading (NTU)	Comments
9·16·21	0815	BK	22°C	0.02	0.02	20.0	20.0	100	100	800 = 800 cal
9.16.21	1530	BK	21°C	0.02	0.02	20.0	19.9	100	101	800 = 799 dk

Acceptance Criteria ± 0.10 NTU ± 0.50 NTU ± 5.0 NTU

- **Record information for one instrument per sheet**
- **One sheet can be used on multiple days on the same site**
- **Use pen only; cross out errors with a single line**

RAC2 SOP-025
Calibration Sheet Rev. 00
April 15, 2010

Turbidity Meter Calibration Log

AECOM

Site Name	LMC Wilmington	Manufacturer	Geotech
Field Activity	GW Sampling	Model Number:	Turbidimeter
Fieldwork Dates	9.15.21 –	Serial Number	17111530

Instrument Number

Date	Time	Initials	Temp (°C)	Standard #1		Standard #2		Standard #3		Comments
				Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	
9/13/21	0800	SH	22.3	0.02	0.02	20.0	19.8	100	99.1	800=802 cal
9/13/21	1500	SH	29.6	0.02	0.02	20.0	20.1	100	99.6	800=801 check
Acceptance Criteria				± 0.10 NTU		± 0.50 NTU		± 5.0 NTU		

- **Record information for one instrument per sheet**
- **One sheet can be used on multiple days on the same site**
- **Use pen only; cross out errors with a single line**

Turbidity Meter Calibration Log

AECOM

Site Name: LMC
Field Activity: OWS
Fieldwork Dates:
Manufacturer: Geotech
Model Number: -
Serial Number: 1711530

Instrument Number:

Date	Time	Initials	Temp (°C)	Standard #1 Value (NTU)	Standard #1 Reading (NTU)	Standard #2 Value (NTU)	Standard #2 Reading (NTU)	Standard #3 Value (NTU)	Standard #3 Reading (NTU)	Comments
4/15/21	835	AG	-	0.02	~~0.0~~ 0	20	20.2	100	98.5	800 = 794
4/15/21	1600	AG	-	"	1.37	"	21.2	"	101	800 = 978
4/20/21	830	AG	-	0.02	0.05	20	20.6	100	100	800: 804
4/20/21	1600	AG	-	"	0.18	"	19.6	"	100	" : 791 PC
4/21/21	845	AG	-	0.02	0.02	20	19.6	100	99.8	800 : 803
"	1540	AG	-	"	0.02	"	19.2	"	98.3	" 962
4/22/21	840	AG	-	0.02	0.02	20	20.2	100	99.8	800 : 800
"	1600	AG	-	"	0.02	"	19.4	"	99.2	" : 790

Acceptance Criteria: ± 0.10 NTU | ± 0.50 NTU | ± 5.0 NTU

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line

AECOM

Well ID: **AE-2I**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-10-21 Time: Start 1255 am/pm
Project No: 60478638 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 70s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 18' c. Screen Length 10 (8-18') 2" PVC Casing
b. Water Table Depth 5.88 d. Pump Intake 13'
c. Water Column (a-b) _____ e. Calculated System Purge Volume _____ L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProDSS Serial Number 19H100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1300	0.9	19.5	6.11	1064	5.11	177.4	20.0	180	5.92	clear/No
1305	1.8	18.8	5.57	1188	4.81	199.1	4.53	180	5.93	" "
1310	2.7	19.1	5.96	1288	4.60	207.5	3.08	180	5.93	" "
1315	3.6	18.8	5.48	1316	4.50	212.6	2.98	180	5.92	" "
1320	4.5	18.3	5.40	1344	4.46	215.0	2.61	180	5.93	" "
1325	5.4	18.5	5.38	1368	4.36	217.6	2.20	180	5.94	" "
1330	6.3	18.3	5.39	1363	4.23	221.6	2.01	180	5.93	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

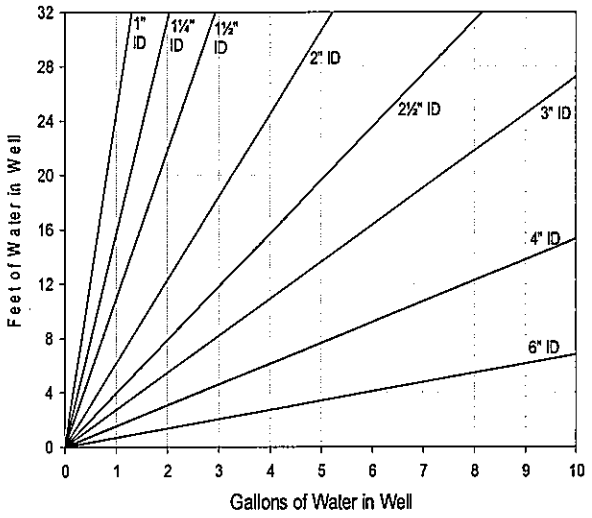
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE2I-091021-1	40mL VOA	3	HCL	VOCs 8260C	1315

Comments _____

Signature _____ Date 9-10-21

AECOM

Well ID: AE-2I



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L ; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: AE-2R

Low Flow Ground Water Sample Collection Record 1100

Client: Lockheed Martin Corp. Date: 9.10.21 Time: Start ~~[illegible]~~ am/pm
Project No: 60478638 Finish ____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 70s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 36' c. Screen Length 14 (22' - 36') 4.75" open bedrock
b. Water Table Depth 5-71 d. Pump Intake 29'
c. Water Column (a-b) ____ e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro ~~[illegible]~~ Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1050	1.0	17.3	6.73	2921	0.56	12.7	>1000	200	5.71	From flock
— Noticed tubing clob → new tubing and started over —										
1105	2.0	18.0	6.51	2932	0.20	-53.1	>1080	200	5.72	cloudy/dark brown
1110	3.0	17.9	6.217	2921.2	0.18	-621.2	182	200	5.73	" "
1115	4.0	17.9	6.48	2942	0.18	-67.7	192	200	5.73	" "
1120	5.0	18.0	6.48	2946	0.18	-69.1	180	200	5.73	Clear w/ brown speck
1125	6.0	17.9	6.49	2942	0.17	-73.0	166	200	5.72	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

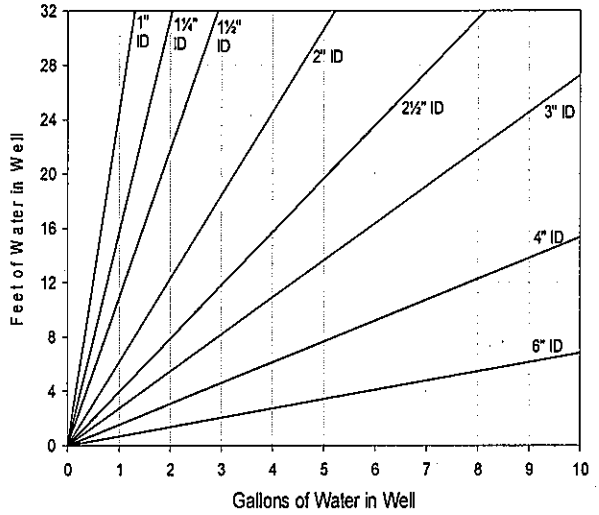
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE2R-091021	40mL VOA	3	HCL	VOCs 8260C	1140

Comments

Signature [signature] Date 9.10.21

AECOM

Well ID: AE-2R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663 L ; 0.633 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1130	7.0	17.9	6.50	2942	0.17	-75.6	163	200	5.72	Clear w/ brown specks
1135	8.0	17.8	6.50	2943	0.16	-76.4	162	200	5.71	" "

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **AE-3**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/15/21 Time: Start 850 am/pm
Project No: 60552044 Finish 1330 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 80s, mostly sunny Collector(s): A Groz Smm

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 13' c. Screen Length 10 (3' - 13') 2" PVC Casing
b. Water Table Depth 4.70 d. Pump Intake 8'
c. Water Column (a-b) e. Calculated System Purge Volume 1.15 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProDSS	19K100091
	Geotech	Turbidity	17111159

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
916		22.7	6.10	1816	0.30	-67.1	2.56	144	0.24	Clr/ Solvent-like
921		22.2	6.15	1748	0.22	-74.1	1.78	144	0.24	" "
926		22.6	6.14	1747	0.14	-83.0	1.22	210	0.24	" "
931		22.8	6.14	1729	0.18	-85.6	0.99	168	0.24	" "
936		22.7	6.20	1774	0.17	-87.3	1.14	168	0.24	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

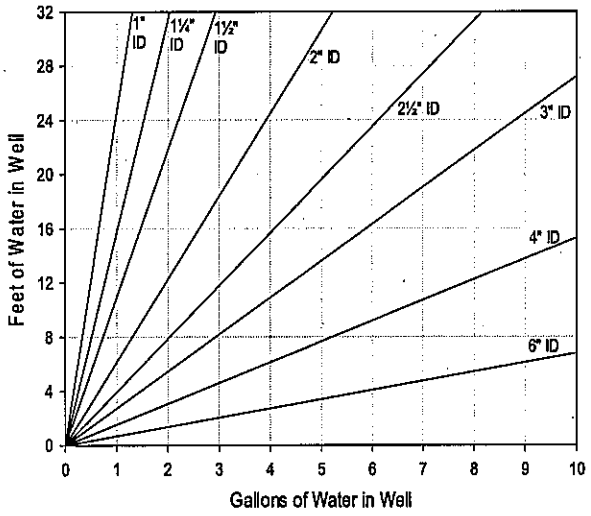
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE3-091521-1	40mL VOA	5	HCL	VOCs 8260C, VPH	955
	40mL V	3	BZK Cl	M, Ethe, Ace, Pr	
	1L A	3	HCL/None	EPH	
	250mL P	1	HNO3	Total/Diss (Fe, Mn, As)	
	500mL P	1	None	Cl, SO4, NO2, NO3	
	250mL P	1	Zn Ace	Sulfide	
	250mL A	1	H3PO4	TOC	
	vial	1	None	Diss. Hydrogen	
	filter	1	None	Microbial	

Comments MS/MSD

Signature [signature] Date 9/24/21
9/15/21

AECOM

Well ID: AE-3



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[11 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.382 L ; 0.382 L x 3 well vol. = 1.15 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: AE-4

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.15.21 Time: Start 1410 am/pm
Project No: 60552044 Finish ____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 13' c. Screen Length 10 (3' - 13') 2" PVC Casing
b. Water Table Depth 4.68 d. Pump Intake 8'
c. Water Column (a-b) ____ e. Calculated System Purge Volume 1.15 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	19k100692
	geotech	turbidimeter	17111530

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1426	1.00	26.2	5.95	608.1	0.93	81.8	41.3	200	0.00	clear w/ Iron floc / none
1425	2.00	25.2	5.59	1088	0.32	57.5	22.0	200	0.00	" "
1430	3.00	25.2	5.69	1102	0.29	40.2	16.8	200	0.00	" "
1435	4.00	25.1	5.71	1129	0.27	31.3	9.22	200	0.00	" "
1440	5.00	25.0	5.80	1180	0.29	14.1	6.81	200	0.00	clear
1445	6.00	25.0	5.83	1186	0.21	12.2	3.01	200	0.00	" "
1450	7.00	25.0	5.84	1191	0.19	10.6	3.21	200	0.00	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

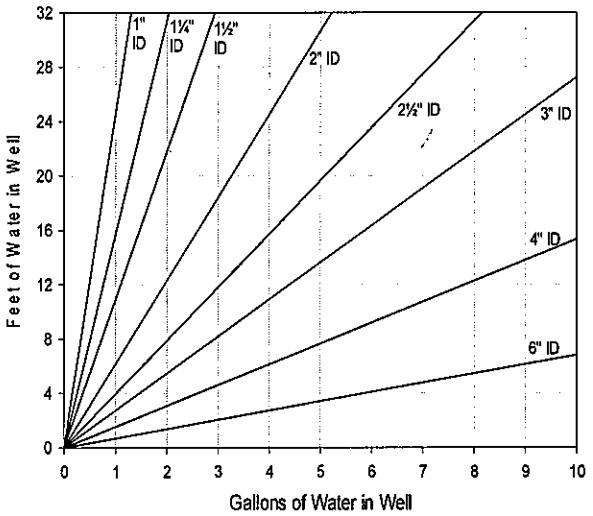
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE4-091521-1	40mL VOA	3	HCL	VOCs 8260C	1455
	1L A	2	HCL/None	EPH	1455
	40mL V	3	HCL	VPH	1455

Comments ____

Signature [signature] Date 9.15.21

AECOM

Well ID: AE-4



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[11 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.382 L ; 0.382 L x 3 well vol. = 1.15 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-23R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.3.21 Time: Start 0930 am/pm
Project No: 60552044 Finish 1145 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 55' c. Screen Length 10 (44.7' - 54.7') 1.5" PVC Casing
b. Water Table Depth 7.22 d. Pump Intake 49'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 2.48 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: hydrolift to evacuate well, then peristaltic to sample after recharge

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProDSS	19K100091
	geo Tech	turbidimeter	17061775

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1215	NA	16.1	6.77	1808	3.07	-19.7	17.61	NA	NA	clear/ org decay
1220	NA	15.8	7.09	1918	0.80	-82.4	21.7	NA	NA	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☐	☐	☑
Have parameters stabilized	☐	☐	☑

If no or N/A - Explain below.
grab sample after purging

3. SAMPLE COLLECTION: Method: grab

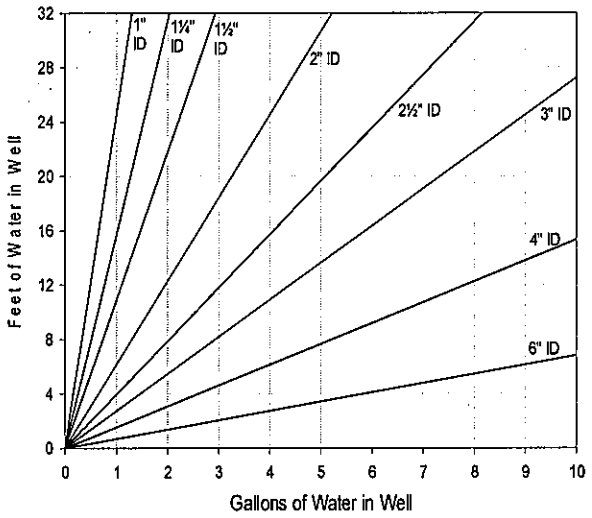
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE23R-090331-1	40mL VOA	3	HCL	VOCs 8260C	1150
	250 mL A	1	NaHSO4	1,4-dioxane	1150
	40mL V	2	HCL	VPH	1150
	1L A	3	HCl/None	EPH	1150

Comments Purged 4.75 gallons down to 45.0 Ft bgs (TOS)

Signature _____ Date 9.3.21

AECOM

Well ID: AE-23R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[57 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.828 L ; 0.828 L x 3 well vol. = 2.48 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-23S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.3.21 Time: Start 0945 am/pm
Project No: 60478638 Finish 1030 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 20' c. Screen Length 10 (10' - 20') 2" PVC Casing
b. Water Table Depth 5.57 d. Pump Intake 15'
c. Water Column (a-b) 14.43 e. Calculated System Purge Volume 1.49 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	19K100091
	geotech	turbidimeter	1706137.5

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1060	1.00	18.0	6.79	605	3.99	1492	21.2	200	0.00	Clear/org decay
1005	2.00	18.1	5.41	480.1	4.04	211.3	17.7	200	0.00	" "
1010	3.00	17.7	5.11	359.1	4.03	226.9	11.5	200	0.00	" "
1015	4.00	17.6	5.09	351.0	4.03	239.2	9.18	200	0.00	" "
1020	5.00	17.6	5.10	348.7	4.04	240.1	7.18	200	0.00	" "
1025	6.00	17.5	5.10	347.9	4.04	240.8	7.09	200	0.00	" "
				- Stable @ 6						

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

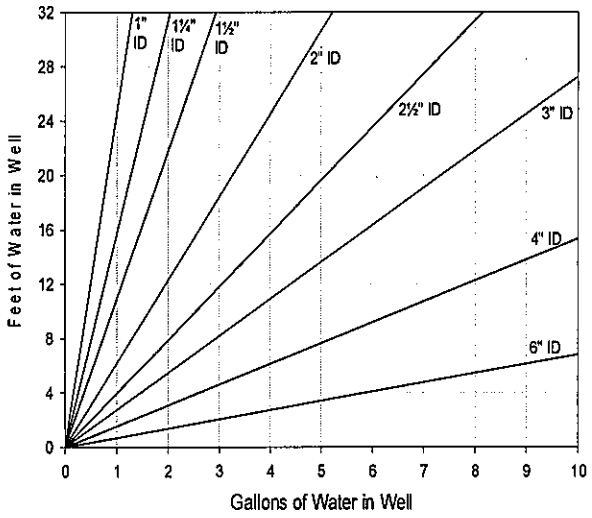
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE23S-090321-1	40mL VOA	3	HCL	VOCs 8260C	1030

Comments

Signature Date 9.3.21

AECOM

Well ID: AE-23S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[23 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.498 L ; 0.498 L x 3 well vol. = 1.49 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **AE-24**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.3.21 Time: Start 1040 am/pm
Project No: 60552044 Finish 1145 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny, 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 17.25' c. Screen Length 10 (7.25' - 17.25') 2" PVC Casing
b. Water Table Depth 5.59 d. Pump Intake 12.25'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.41 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	19K100091
	geotech	turbidimeter	17061375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1050	[redacted]	17.7	6.32	355.9	7.19	139.9	123	200	0.00	Clear/ organic decay
1055	2	17.6	6.27	353.7	7.16	149.5	85.9	200	0.00	" "
1100	3	17.6	6.25	352.7	7.36	158.3	58.1	200	0.00	" "
1105	4	17.6	6.23	352.7	7.28	164.5	31.6	200	0.00	" "
1110	5	17.5	6.21	351.2	7.33	171.3	19.6	200	0.00	" "
1115	6	17.5	6.19	351.7	7.48	175.1	15.7	200	0.00	" "
1120	7	17.5	6.18	350.5	7.60	179.5	11.8	200	0.00	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

_____

3. SAMPLE COLLECTION: Method: grab

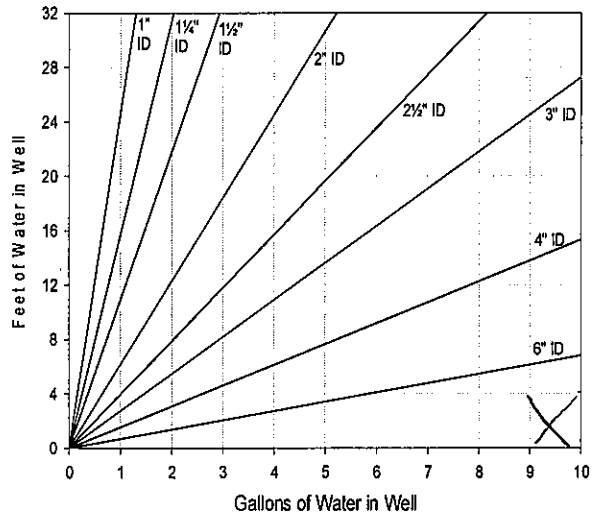
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE24-090321-1	40mL VOA	3	HCL	VOCs 8260C	1145
	250 mL VOA	1	NaHSO4	1,4-Dioxane	

Comments _____

Signature _____ Date 9.3.21

AECOM

Well ID: AE-24



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[20 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.469 L ; 0.469 L x 3 well vol. = 1.41 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1125	8	17.5	6.17	349.2	7.66	183.2	16.7	200	0.00	Clear / organics
1130	9	17.5	6.17	348.5	7.64	186.3	7.18	200	0.00	" "
1135	10	17.5	6.17	347.9	7.65	187.8	6.94	200	0.00	" "
1140	11	17.5	6.17	347.1	7.65	189.1	5.10	200	0.00	" "
				- Stable @ 1140						
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **AE-25D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/3/21 Time: Start 1105 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 39.5 c. Screen Length 5 (34.5-39.5') 2" PVC
b. Water Table Depth 5.12 d. Pump Intake 37'
c. Water Column (a-b) 34.38 e. Calculated System Purge Volume _____ L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20K101853
	GeoTech	TPM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1115	0	15.4	5.66	1453	2.60	152.6	3.6	200	0.08	clear/none
1120	1	15.6	5.45	1220	2.11	159.9	2.4	200	0.11	clear/none
1125	2	15.6	5.45	1222	2.17	160.6	2.1	200	0.13	clear/none
1130	3	15.6	5.45	1227	2.18	160.7	2.1	200	0.15	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

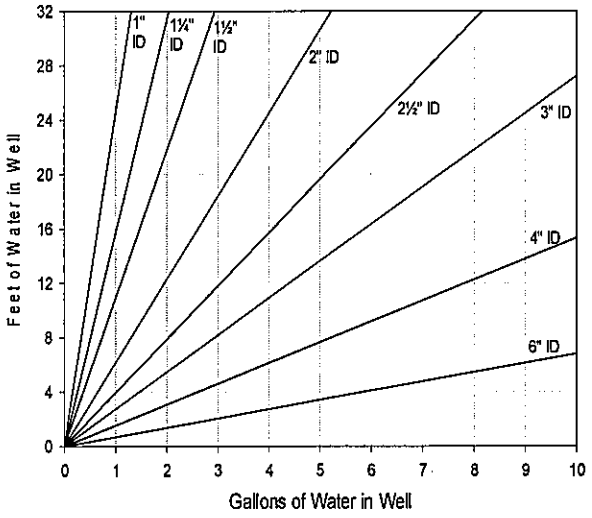
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE25D-09032[1-1	40mL VOA	3	HCL	VOCs 8260C	1135

Comments _____

Signature Floyd Burton Date 9/3/21

AECOM

Well ID: AE-25D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L ; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **AE-25R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/3/21 Time: Start 1145 am/pm
Project No: 60552044 Finish 1225 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 62 c. Screen Length 17 (45-62') Open Rock 5"
b. Water Table Depth 5.72 d. Pump Intake 53.5'
c. Water Column (a-b) 56.28 e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	±10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K 101853
GeoTech	TPM	1706 1391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1200	0	17.0	10.87	1183	0.71	57.4	349.6	200	0	Clear/none
1205	1	17.0	11.47	1203	0.29	-45.9	7.4	200	0	Clear/none
1210	2	17.0	11.47	1204	0.28	-47.2	7.5	200	0	Clear/none
1215	3	17.0	11.47	1204	0.27	-50.7	7.5	200	0	Clear/non

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

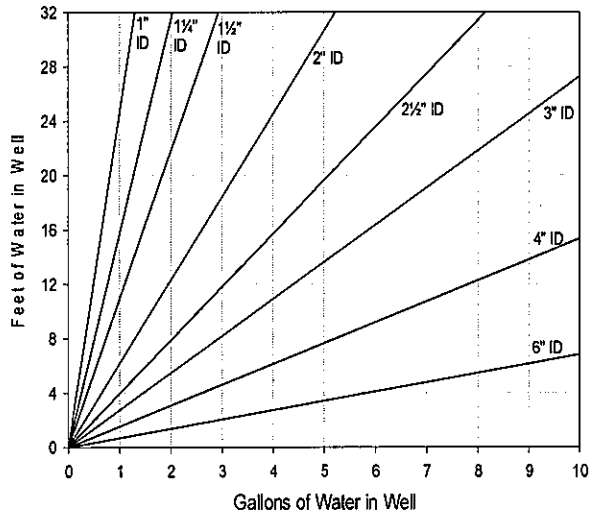
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE25R-09032-1	40mL VOA	3	HCL	VOCs 8260C	1220

Comments Black silt @ very start of purge.

Signature [signature] Date 9/3/21

AECOM

Well ID: AE-25R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L ; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-25S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/3/21 Time: Start 1030 am/pm
Project No: 60552044 Finish 1100 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: indoors Collector(s): D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 30 c. Screen Length 10 (20-30') 2" PVC Casing
b. Water Table Depth 5.19 d. Pump Intake 25'
c. Water Column (a-b) e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101853
Geotech	~~1706~~	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1035	1.4	15.4	5.78	921	2.29	124.4	0.68	280	5.46	clear/none
1040	2.4	15.7	5.42	869	1.89	142.9	0.57	200	5.41	clear/none
1045	3.4	15.6	5.33	862	1.72	151.7	1.27	200	5.41	clear/none
1050	4.4	15.5	5.30	865	1.71	155.6	0.02	200	5.41	clear/none
1055	5.4	15.4	5.28	863	1.69	158.5		200	5.41	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

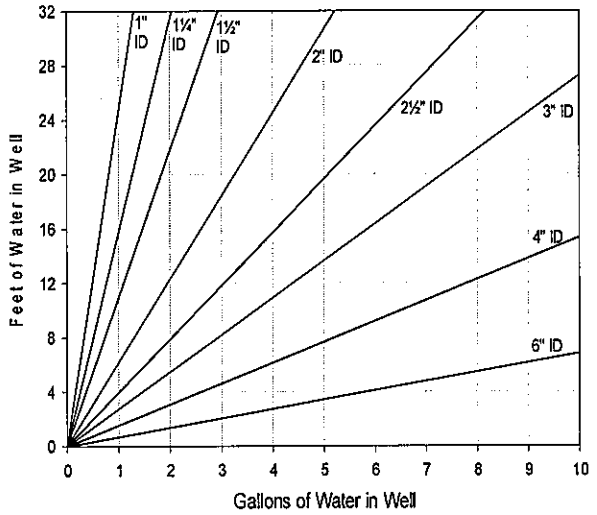
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE25S-090321-1	40mL VOA	3	HCL	VOCs 8260C	1100

Comments

Signature [signature] Date 9/3/21

AECOM

Well ID: AE-25S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L ; L x 3.well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-26D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/3/21 Time: Start 1105 am/pm
Project No: 60478638 Finish 1145 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): _____

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 40.5' c. Screen Length 5 (35' - 40') 2" PVC Casing
b. Water Table Depth 5.54 d. Pump Intake 37.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 2.09 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro DSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1110	0.8	17.4	6.59	622	3.03	94.2	1.22	160	5.61	Clear / No
1115	1.6	17.1	6.00	551	2.67	91.7	1.62	160	5.61	" "
1120	2.4	17.1	5.54	543	2.61	105.32	0.94	160	5.61	" "
1125	3.2	16.8	5.31	540	2.53	116.6	0.49	160	5.61	" "
1130	4.0	16.9	5.18	540	2.61	125.5	0.50	160	5.60	" "
1135	4.8	16.7	5.13	539	2.53	131.9	0.51	160	5.61	" "
1140	5.6	16.7	5.11	538		132.6	0.42	160	5.60	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

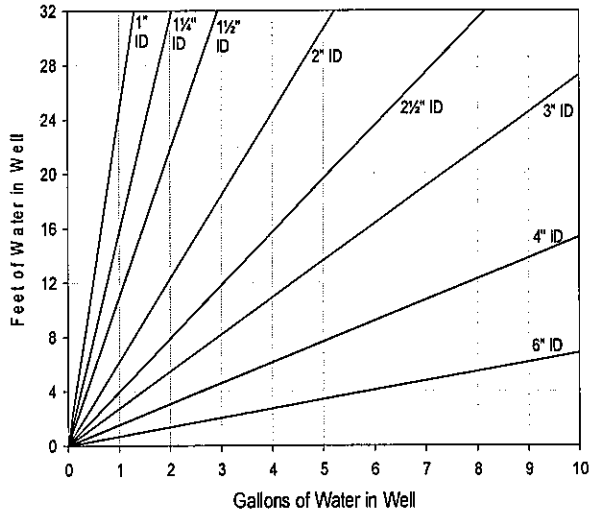
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE26D-090321-1	40mL VOA	3	HCL	VOCs 8260C	1145

Comments _____

Signature _____ Date 9/3/21

AECOM

Well ID: AE-26D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[43.5 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.697 L ; 0.697 L x 3 well vol. = 2.09 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **AE-26R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/1/21 Time: Start 1140 am/pm
Project No: 60552044 Finish 1535 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 150' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 1.0 e. Purge Pressure NA f. Sample Pressure NA

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Port Depth (ft BGS)	Recommended Purge Volume (Liters)	Actual Purge Volume (Liters)	Max Flow Rate expected (mL/min)	Actual Flow Rate (mL/min)	Expected Purge Time (min)	Actual Purge Time (min)
1	50-56	49	2.2	2.2	200	200	10.66	~~10~~ 11
2	72-78	71	2.4	2.38	140	140	17.10	17
3	81-88	80	2.8	2.8	120	120	22.36	23
4	104-114	103	3.9	4.0	100	100	40.32	40
5	123-132	122	3.8	3.81	80	~~85~~	46.63	46

Got one pump as low as possible without shutting off

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProDSS	19K100692
GeoTech		4062099

Port	Time (24hrs)	Purge Time	pH 10.60	Temp. (°C) 10.3	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1145	~~1000~~	10	~~7.16~~	~~17.8~~	709	0.25	-255.9	0.02		Clear ~~No~~ slight H_2S smell
2	1000	17	7.16	17.8	572	0.29	-174.9	2.17		Clear / No
3	1342	23	7.83	17.6	713	0.39	-198.9	1.04		Clear / No
4	1442 ~~30~~	40	7.60	17.6	1228	0.36	-180.4	1.98		Clear / slight H_2S
5	1534	46	7.69	18.8	1467	0.21	-27.5	1.08		Clear / No

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE26R1-090121-1	VOCs, 1,4-Diox, VPH, EPH, Total/Dissolved (As), PIANO	1150
21A-AE26R2-090121-1	VOCs, Total/Diss. (Fe, Mn), Cl, NO2, NO3, SO4, Sulfide, TOC	1000
	(M, Ethe, Etha, Ace, Pr), Diss H, Microbial, CSIA 13C/ 12C	
21A-AE26R3-090121-1	VOCs	1345
21A-AE26R4-090121-1	VOCs	1440
21A-AE26R5-090121-1	VOCs, 1,4-dioxane	1535

Notes:

Hydrogen purge time and rate = 1055 - 1145 @ 110 mL/m

Signature Date 9.1.21

AECOM

Well ID: **AE-26S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/3/21 Time: Start 1150 am/pm
Project No: 60552044 Finish 1235 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 32' c. Screen Length 10 (20' - 30') 2" PVC Casing
b. Water Table Depth 5.81 d. Pump Intake 25'
c. Water Column (a-b) e. Calculated System Purge Volume 1.84 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model PRO DSS Serial Number 19K100698

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1155	1.0	17.6	5.42	146.0	0.45	120.6	4.01	160	5.85	Clear / No
1200	1.6	17.3	5.43	135.0	0.28	122.4	2.08	160	5.86	" "
1205	2.4	17.2	5.31	134.2	0.43	134.2	2.15	160	5.85	" "
1210	3.2	17.1	5.28	288.9	0.74	139.2	1.42	160	5.86	" "
1215	4.0	17.0	5.29	312.7	0.63	140.1	1.31	160	5.87	" "
1220	4.8	16.9	5.33	349.8	0.90	144.8	1.28	160	5.87	" "
1225	5.6	16.7	5.22	352.9	0.95	147.6	0.42	160	5.87	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

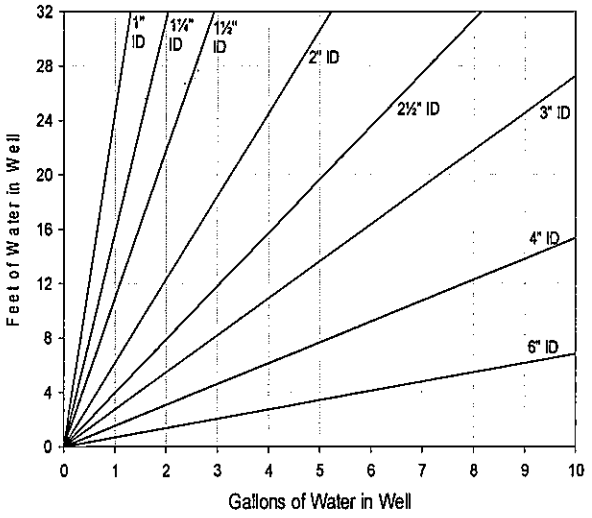
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE26S-090321-1	40mL VOA	3	HCL	VOCs 8260C	1235
	500mL P	1	HNO3	Total (As)	1235
	500mL P	1	HNO3	Diss. (As) FF	1235

Comments

Signature Date 9-3-21

AECOM

Well ID: AE-26S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[35 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.615 L ; 0.615 L x 3 well vol. = 1.84 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1230	6.4	16.8	5.21	354.9	0.97	149.3	0.31	160	5.82	Clear / No
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **AE-27R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-3-21 Time: Start 1010 am/pm
Project No: 60478638 Finish 1045 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 60 c. Screen Length 10 (50-60') 2" PVC Casing
b. Water Table Depth 9.15 d. Pump Intake 55'
c. Water Column (a-b) 50.85 e. Calculated System Purge Volume _____ (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model PRO DSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1015	0.8	17.3	7.53	1954	0.63	-169.2	73.6	160	7.25	Clear/No
1020	1.6	17.0	7.41	1961	0.56	-168.3	110	160	7.72	Clear/No
1025	2.4	16.9	7.38	1960	0.60	-169.2	42.1	160	7.84	Clear/No
1030	3.2	16.8	7.37	1959	0.43	-169.8	42.0	160	8.00	Clear/No
1035	4.0	16.8	7.37	1960	0.40	-171.6	43.6	160	8.02	Clear/No
~~1040~~	~~4.8~~									

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

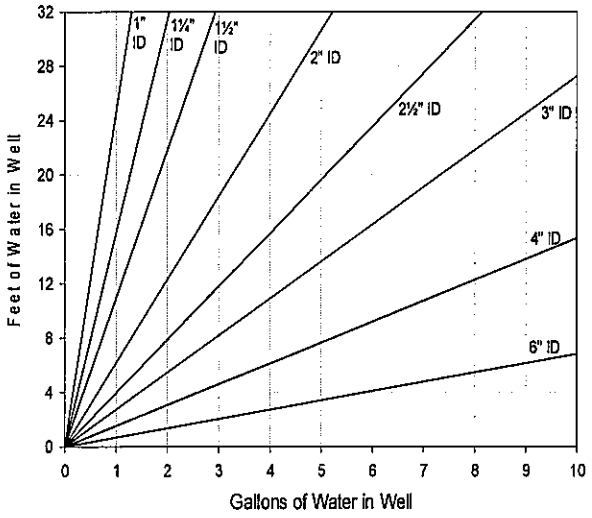
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE27R-[illegible]-1	40mL VOA	3	HCL	VOCs 8260C	1040

Comments _____

Signature _____ Date 9-3-21

AECOM

Well ID: AE-27R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L ; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

AECOM

Well ID: **AE-28R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/1/21 Time: Start 0940 am/pm
Project No: 60552044 Finish ____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: ____ Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 150' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.92 e. Purge Pressure NA f. Sample Pressure NA

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Port Depth (ft BGS)	Recommended Purge Volume (Liters)	Actual Purge Volume (Liters)	Max Flow Rate expected (mL/min)	Actual Flow Rate (mL/min)	Expected Purge Time (min)	Actual Purge Time (min)
1	45-51	44	2.1	2.1	230	210	9.5	10
2	75-85	74	3.6	3.6	130	130	26.70	28
3	98-108	97	3.8	3.8	100	95	37.5	40
4	132-142	131	4.2	4.5	80	80	55.5	56

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	20K101853
GeoTech	PTM	17061391

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1005	10	6.96	17.4	2362	0.17	-128.0	2.96	NA	clear/none
2	1347	28	7.55	17.4	1689	0.21	-257.4	1.27	↓	clear/none
3	1505	40	7.53	17.5	1508	0.09	-264.7	0.83	↓	clear/none
4	1206	56	7.53	17.5	1616	0.11	-274.8	1.89	↓	clear/none

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE28R1-9-1-21-1	VOC	1010
21A-AE28R2-9-1-21-1	VOCs, 1,4-diox., VPH, EPH,Total/Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S,	1415
	TOC, Diss. H, Gases (Ace., Prop., Meth., Ethe., Etha.), Microbial, CSIA, PIANO	
21A-AE28R3-9-1-21-1	VOCs, 1,4-Dioxane	1055
21A-AE28R4-9-1-21-1	VOCs	1211

Notes: ____

Hydrogen purge time and rate = 25 min @ 130ml / sampled @ 1525

Signature FW Burton Date 9/1/21

AECOM

Well ID: **AE-29R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.10.21 Time: Start 0850 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 150' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 340 e. Purge Pressure NA f. Sample Pressure NA

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Port Depth (ft BGS)	Recommended Purge Volume (Liters)	Actual Purge Volume (Liters)	Max Flow Rate expected (mL/min)	Actual Flow Rate (mL/min)	Expected Purge Time (min)	Actual Purge Time (min)
1	37-44	36	2.3	2.8	320	320	7.23	7.23
2	47-54	46	2.4	2.5	250	250	9.65	~~9.65~~ 9.65
3	70-76	69	2.4	2.5	170	170	14.18	14.18
4	90-96	89	2.6	2.6	130	130	19.9	19.96
5	113-119	112	2.8	2.9	100	100	27.36	27.36
6	140-146	139	3.1		80	80	37.35	37.35

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro DSS	19K100091
Geotech	turbidimeter	17061375

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	0910	7.23	5.81	14.5	2680	0.25	115.7	0.02		Clear/none org dg
2	0926	10.05	5.70	15.3	2703	0.31	131.5	0.02		" "
3	0945	14.18	5.97	16.4	2769	0.20	55.8	0.02		" "
4	1015	19.90	6.74	16.9	~~1595~~	0.16	-187.6	0.02		" "
5	1045	27.36	7.29	17.0	535	0.18	-188.4	0.02		" "
6	1140	37.5	7.29	19.1	1676	0.20	-176.5	4.64		~~" "~~

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE29R1-091021-1	VOCs	0910
21A-AE29R2-091021-1	VOCs	0930
21A-AE29R3-091021-1	VOCs	0945
21A-AE29R4-091021-1	VOCs	1015
21A-AE29R5-091021-1	VOCs	1045
21A-AE29R6-091021-1	VOCs, 1,4-diox, VPH, EPH, Total/Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S,	1140 COC (9/14/21)
	TOC, Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.), CSIA, PIANO	~~1333-1403~~

Notes: _____

Hydrogen purge time and rate = 100 mL/min 1333-1403

Signature _____ Date 9.10.21 / (9/14/21)

AECOM

Well ID: **AE-100R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/9/2021 Time: Start 0800 am/pm
Project No: 60552044 Finish 1455 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Cloudy / 70s Collector(s): ~~EB~~ BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 114' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner _____ e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	DTW @0800 (Initial)	DTW @ 0855 (Before 2nd Purge)	DTW @0945 (Before 3rd Purge)
1	18-24	98	4.03	3.07	0.224	5.08	5.48	5.47
2	43-48	99	4.10	3.07	0.239	5.16	5.54	5.52
3	50-56	100	4.14	3.07	0.242	5.27	5.45	5.48
4	63-68	101	4.18	3.07	0.244	5.27	5.58	5.54
5	88-93	102	4.23	3.07	0.246	5.27	5.67	5.68
6	108.5-113.5	103	4.37	3.07	0.248	5.30	5.59	5.67

a. Field Testing Equipment used: Make YSI Model ProD33 Serial Number 19K100692

b. 1st Purge Time/Duration on 8/30/21
c. 2nd Purge Time/Duration 0811-0816 / 5 mins
d. 3rd Purge Time/Duration 0908-0913 / 5 mins
e. 4th Purge Time/Duration 0945-0950 / 5 mins

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1042	5	6.60	15.1	2458	0.33	-50.8	0.02		Clear / No
2	1049	5	6.04	15.0	2692	0.28	226	0.02		" "
3	1056	5	5.93	15.2	1991	0.18	438	0.02		" "
4	1103	5	6.15	15.1	1732	0.21	67.5	0.02		" "
5	1110	5	6.34	15.0	1323	0.27	68.2	0.02		" "
6	1117	5	6.87	15.2	598	0.26	-7.9	0.02		" "

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE100R1-090921-1	VOCs, VPH, EPH, Total/Diss (Fe, Mn), Cl, NO2, NO3, SO4, S, TOC	1125
	Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.), CSIA, Microbial, PIANO	
21A-AE100R2-090921-1	VOCs	1340
21A-AE100R3-090921-1	VOCs, 1,4-dioxane	1345
21A-AE100R4-090921-1	VOCs, 1,4-dioxane	1350
21A-AE100R5-090921-1	VOCs, Total (As, Fe, Mn), Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S,	1130
	Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.), CSIA, Microbial	
21A-AE100R6-090921-1	VOCs, 1,4-dioxane	1355

Notes:

Hydrogen purge time and rate = R7: 1415-1430 @ 240 ml/min | R5: 1435-1455 = 200 ml/min

Signature _____ Date 9.9.21

AECOM

Well ID: **AE-101D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/7/21 Time: Start 1002 am/pm
Project No: 60552044 Finish 1038 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70s, sunny Collector(s): Dylan Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 25.5' c. Screen Length 5 (20' - 25') 2" PVC Casing
b. Water Table Depth 2.27 d. Pump Intake 22.5'
c. Water Column (a-b) 23.23 e. Calculated System Purge Volume 1.55 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20k101853
GeoTech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1007	1	18.1	5.78	2007	0.13	-13.4	26.8	200	2.35	clear/none
1012	2	17.7	5.74	2180	0.13	-6.5	18.3	200	2.35	clear/none
1017	3	17.5	5.75	2213	0.12	-6.3	20.3	200	2.36	clear/none
1022	4	17.4	5.77	2220	0.10	-8.3	9.14	200	2.36	clear/none
1027	5	17.5	5.78	2225	0.09	-9.8	8.12	200	2.36	clear/none
1032	6	17.1	5.79	2227	0.09	-10.5		200	2.36	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

(continued on back)

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

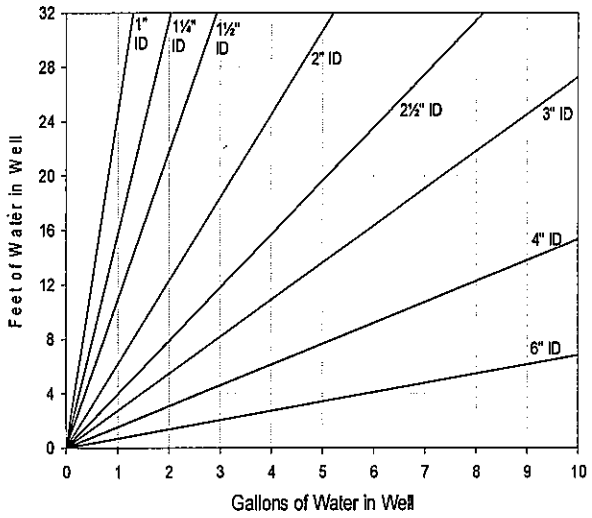
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE101D-090721-1	40mL VOA	3	HCL	VOCs 8260C	1035
	250 mL Amber	1	NaHSO4	1,4-dioxane	1038

Comments

Signature [signature] Date 9/7/21

AECOM

Well ID: AE-101D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[25 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.5175; 0.5175 L x 3 well vol. = 1.55 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-101R1**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/10/21 Time: Start 0900 am pm
Project No: 60552044 Finish 0945 am pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 65°F Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 35.5' c. Screen Length 5 (30.5' - 35.5') 0.5" CMT Channel
b. Water Table Depth 1.74 d. Pump Intake 33'
c. Water Column (a-b) _____ e. Calculated System Purge Volume _____ L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101853
GeoTech	PTM	1706-1391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0915	0	20.1	7.41	1879	2.21	-56.5	1.4	200	NM	clear/none
0920	1	17.0	5.70	2280	0.66	38.4	0	200	NM	clear/none
0925	2	16.5	5.55	2299	0.41	60.4	0	200	NM	clear/none
0930	3	16.3	5.54	2301	0.36	65.8	0	200	NM	clear/none
0935	4	16.3	5.54	2301	0.34	66.6	0	200	NM	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

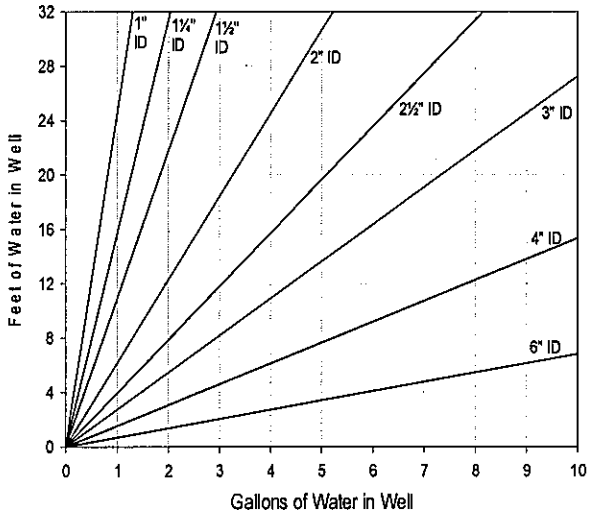
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE101R1-09102I-1	40mL VOA	3	HCL	VOCs 8260C	0940

Comments _____

Signature FWB Date 9/10/21

AECOM

Well ID: AE-101R1



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[36 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-101R2**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/10/21 Time: Start 0950 am/pm
Project No: 60552044 Finish 1020 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 65°F Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 60' c. Screen Length 5 (55' - 60') 0.5" CMT Channel
b. Water Table Depth 1.73 d. Pump Intake 57.5'
c. Water Column (a-b) e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	±10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro	20K101853
GeoTech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0955	0	17.2	6.35	1400	1.36	-73.4	1.1	200	NM	Clear/none
1000	1	16.7	6.59	1574	0.89	-95.9	0	200	NM	Clear/none
1005	2	16.6	6.63	1586	0.62	-99.6	0	200	NM	Clear/none
1010	3	16.6	6.71	1587	0.42	-107.5	0	200	NM	Clear/none
1015	4	16.5	6.72	1587	0.42	-107.8	0	200	NM	Clear/none
1020	5	16.5	6.72	1586	0.40	-108.1	0	200	NM	Clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

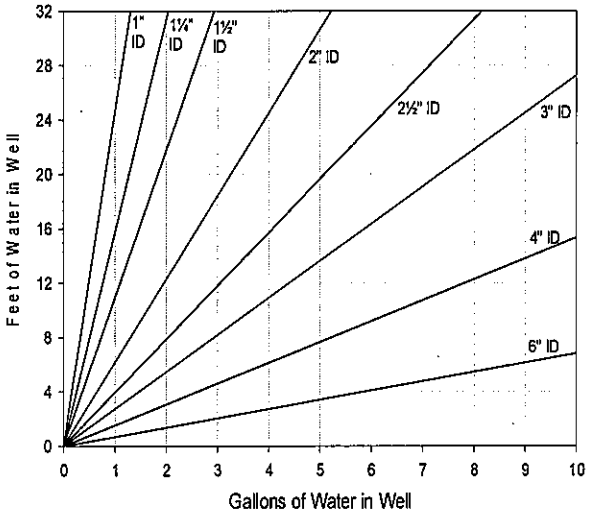
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE101R2-091021-1	40mL VOA	3	HCL	VOCs 8260C	1025
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments

Signature Floyd Burton Date 9/10/21

AECOM

Well ID: AE-101R2



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[60 ft (channel length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-101R3**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/10/21 Time: Start 1035 am/pm
Project No: 60552044 Finish 1115 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 85' c. Screen Length 5 (80' - 85') 0.5" CMT Channel
b. Water Table Depth 1.73 d. Pump Intake 82.5'
c. Water Column (a-b) e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	±10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro	20K101853
GeoTech	PTM	1706-1391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1045	0	20.8	6.86	1040	2.48	-59.3	1.2	200	NM	clear/none
1050	1	16.5	6.59	2152	0.67	-104.7	0	200	NM	clear/none
1055	2	16.5	6.60	2153	0.64	-105.2	0	200	NM	clear/none
1100	3	16.5	6.61	2155	0.62	-105.3	0	200	NM	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

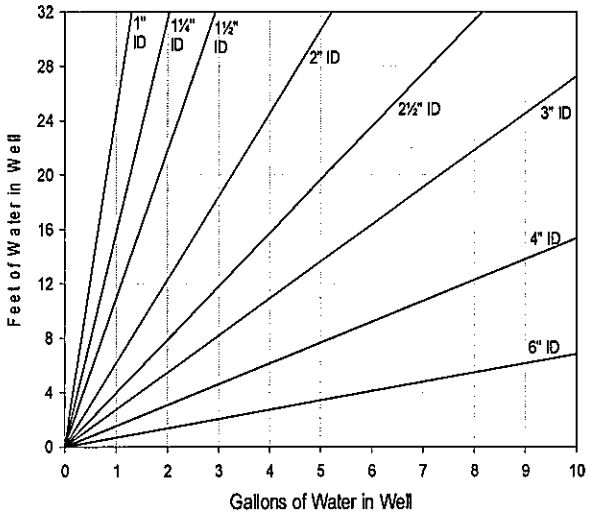
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE101R3-091021-1	40mL VOA	3	HCL	VOCs 8260C	1105
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments

Signature Floyd Burton Date 9/10/21

AECOM

Well ID: AE-101R3



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[85 ft (channel length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-101R4**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/10/21 Time: Start 1250 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 158' c. Screen Length 5 (153'-158') 0.5" CMT Channel
b. Water Table Depth 1.83 d. Pump Intake 155.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume _____ L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	±10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro	20K101853
GeoTech	PTM	1706-1391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1300	0	19.5	6.78	684	5.08	-40.1	1.6	200	NM	clear/none
1305	1	18.2	6.15	388	2.25	-53.5	0	200	NM	clear/none
1310	2	18.1	6.15	386	2.23	-55.8	0	200	NM	clear/none
1315	3	18.0	6.16	385	2.21	-55.9	0	200	NM	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

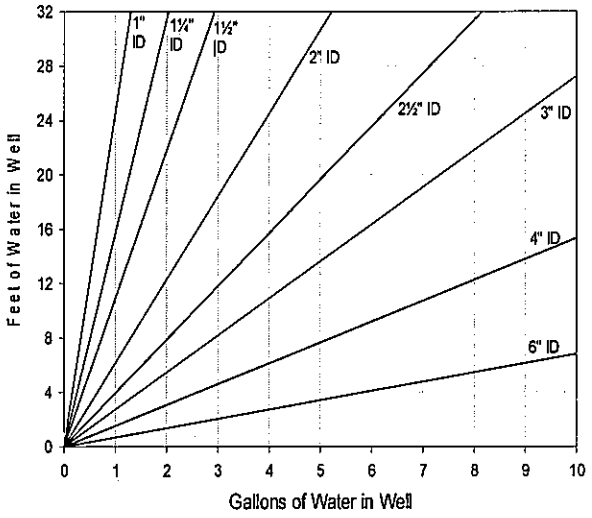
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE101R4-09/02/-1	40mL VOA	3	HCL	VOCs 8260C	1300
	~~250 mL Amber~~	~~1~~	NaHSO4	~~1,4-dioxane~~	

Comments _____

Signature _____ Date 9/10/21

AECOM

Well ID: AE-101R4



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[85 ft (channel length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-101R5**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/16/21 Time: Start 0900 am/pm
Project No: 60552044 Finish 0950 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's clouds Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 180' c. Screen Length 5 (175' - 180') 0.5" CMT Channel
b. Water Table Depth 2.14 d. Pump Intake 177.5'
c. Water Column (a-b) e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101853
GeoTech	PTM	1706-1391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0920	0	18.1	6.62	566	1.90	-18.9	0	200	NM	Clear/none
0925	1	17.4	6.09	533	1.42	-28.4	0	200	NM	Clear/none
0930	2	17.0	6.33	553	0.92	-40.7	0	200	NM	Clear/none
0935	3	17.0	6.38	554	0.89	-41.9	0	200	NM	Clear/none
0940	4	17.0	6.40	555	0.88	-42.8	0	200	NM	Clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

(continued on back)

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

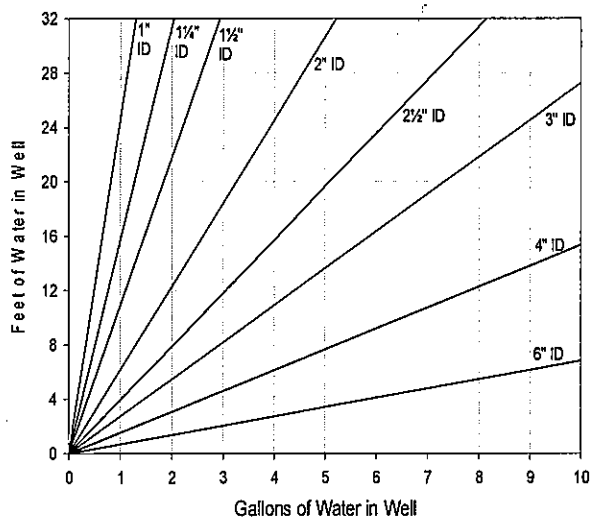
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE101R5-09162[-1	40mL VOA	3	HCL	VOCs 8260C	0945
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments

Signature Floyd Burton Date 9/16/21

AECOM

Well ID: AE-101R5



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[180 ft (channel length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-101R6**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/16/21 Time: Start 0955 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70 clouds Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 232' c. Screen Length 5 (227' - 232') 0.5" CMT Channel
b. Water Table Depth 2.18 d. Pump Intake 229.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume _____ L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	±10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model _____ Serial Number _____

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1000	0	16.5	6.61	548	4.14	-59.5	1.4	200	NM	clear/none
1005	1	15.7	6.96	600	0.61	-112.6	0	200	NM	clear/none
1010	2	15.7	6.98	598	0.60	-114.9	0	200	NM	clear/none
1015	3	15.8	6.99	596	0.59	-115.8	0	200	NM	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

_____

3. SAMPLE COLLECTION: Method: grab

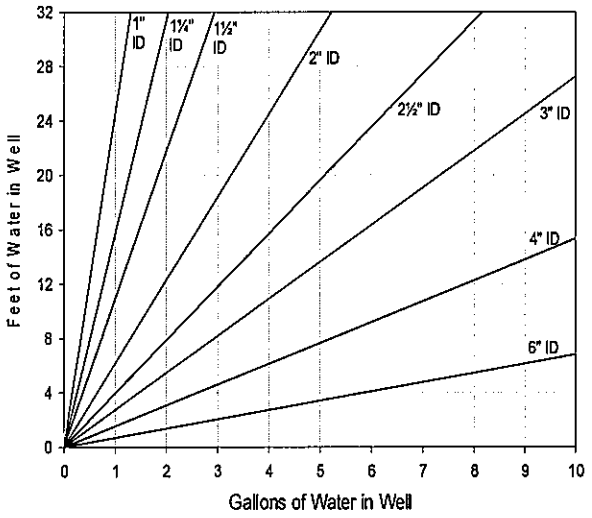
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE101R6-091621-1	40mL VOA	3	HCL	VOCs 8260C	1020
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments _____

Signature _____ Date 9/16/21

AECOM

Well ID: AE-101R6



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[232 ft (channel length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-101S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/7/2021 Time: Start 0928 am/pm
Project No: 60552044 Finish 0950 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny, 70s Collector(s): Dylan Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 17' c. Screen Length 5 (10' - 15') 2" PVC Casing
b. Water Table Depth 2.20 d. Pump Intake 12.5'
c. Water Column (a-b) 14.8 e. Calculated System Purge Volume 1.26 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProQuatro	20K101853
	Geotech	PID	1706391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
0938	1.4	20.3	5.88	2215	0.29	-9.0	8.85	140	2.24	clear/none
0943	2.1	20.1	5.82	2209	0.18	-10.0	7.88	140	2.24	clear/none
0948	2.8	20.0	5.81	2211	0.16	-10.1	7.62	140	2.24	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

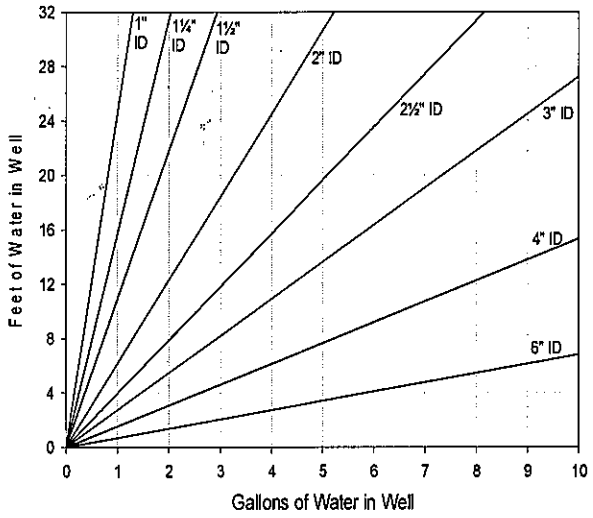
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE101S-090721-1	40mL VOA	3	HCL	VOCs 8260C	0950
	250 mL Amber	1	NaHSO4	1,4-dioxane	0950

Comments

Signature [signature] Date 9/7/21

AECOM

Well ID: AE-101S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[15 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.4205; 0.4205 L x 3 well vol. = 1.26 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-102D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/15/2021 Time: Start 1320 am/pm
Project No: 60552044 Finish 1355 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny, 80s Collector(s): D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 38.5' c. Screen Length 5 (33' - 38') 2" PVC Casing
b. Water Table Depth 2.98 d. Pump Intake 35.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.93 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20H101853
	Geotech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1325	1	18.5	6.59	2345	0.93	137.8	7.67	200	3.93	Clear/none
1330	2	19.1	6.54	2338	0.39	116.8	1.63	200	4.06	"
1335	3	19.1	6.54	2335	0.22	107.4	5.76	200	4.09	"
1340	4	19.0	6.56	2322	0.17	102.5	6.16	200	4.09	"
1345	5	18.8	6.55	2323	0.15	99.3	2.78	200	4.09	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

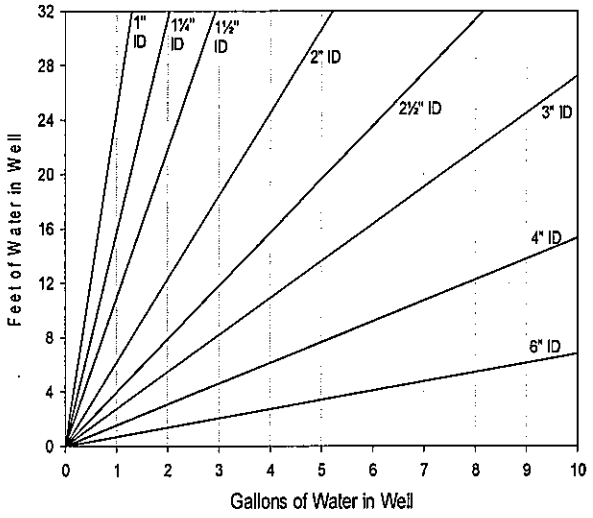
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE102D-091521-1	40mL VOA	3	HCL	VOCs 8260C	1350
	250 mL Amber	1	NaHSO4	1,4-dioxane	↓

Comments

Signature [signature] Date 9/15/21

AECOM

Well ID: AE-102D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[38 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.6436; 0.6436 L x 3 well vol. = 1.93 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **AE-102M**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/15/21 Time: Start 0955 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny; 80 Collector(s): DPotter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 30' c. Screen Length 5 (23' - 28') 2" PVC Casing
b. Water Table Depth 3.24 d. Pump Intake 25.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.64 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101853
Geotech	PID	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet) DTW	Color/Odor
1000	1.2	18.2	6.35	2792	0.37	226.5	2.36	200	3.35	clear/none
1005	2.4	17.9	6.09	2709	0.16	230.4	1.28	200	3.35	"
1010	3.6	17.7	6.06	2619	0.14	224.4	0.57	200	3.36	"
1015	4.8	17.7	6.06	2552	0.12	220.4	0.20	200	3.36	"
1020	6	17.5	6.05	2519	0.10	217.9	1.01	200	3.36	"
1025	7.2	17.4	6.06	2446	0.09	215.0	0.91	220	3.36	"
1030	8.4	17.6	6.06	2418	0.08	213.5		220	3.36	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

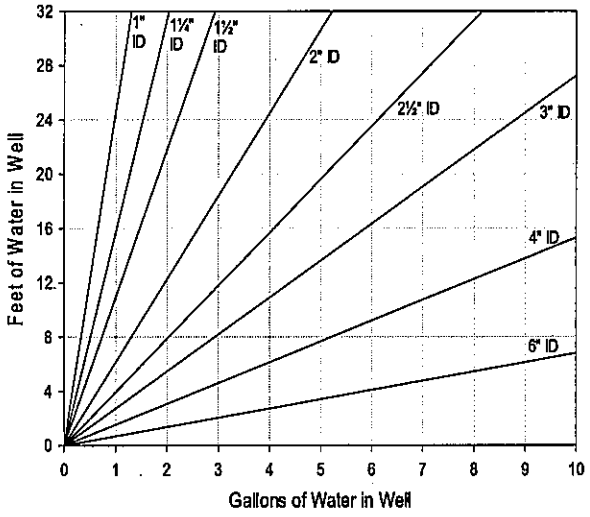
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE102M-091521-1	40mL VOA	3	HCL	VOCs 8260C	1040
	250 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	filter	1	None	Microbial	
	vial	1	none	Diss. Hydrogen	
	40 mL VOA	4	HCl	CSIA 13C/ 12C	1040
	250 mL Amber	1	NaHSO4	1,4-dioxane	
	40mL V	3	belzal.chlor.	gases (Acet, Prop, Meth, Eth, Etha)	

Comments _____

Signature _____ Date 9/15/21

AECOM

Well ID: AE-102M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[28 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.5466; 0.5466 L x 3 well vol. = 1.64 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	DTW ~~Drawdown~~ (ft)	Color/Odor
1035	~~8~~ 9.6	17.6	6.06	2414	0.08	213.0	0.21	220	3.36	clear/none
Hydrogen Bubble Strip Sampling:										
Purge rate= 220 mL/min				Purge Duration= 15 min			Sample time= 1117-1132			

AECOM

Well ID: **AE-102RR**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.7.21 Time: Start 0850 am/pm
Project No: 60552044 Finish 1320 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny, 70s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 167' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 1.51 e. Purge Pressure 55 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @0850	Before 2nd Purge DTW @0937	Before 3rd Purge DTW @1020
1	43-48	99.4	4.23	3.26	0.234	2.78	3.04	3.02
2	75-80	100.4	4.30	3.26	0.250	2.72	2.89	2.88
3	111-116	101.4	4.34	3.26	0.252	2.55	2.74	2.87
4	125-130	102.4	4.39	3.26	0.254	2.62	2.71	2.72
5	141-146	103.4	4.43	3.26	0.257	2.58	2.73	2.71
6	153-158	104.4	4.47	3.26	0.259	2.57	2.76	2.71

a. Field Testing Equipment used: Make YSI Model Pro DSS Serial Number 19K100692

b. 1st Purge Time/Duration Dom. @130
c. 2nd Purge Time/Duration 0852 - 0858
d. 3rd Purge Time/Duration 0938 - 0944
e. 4th Purge Time/Duration 1022 - 1028

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1205	6	8.72	14.2	379.6	0.51	-113.1	10.6		Clear / No
2	1213	6	7.65	14.4	371.6	0.30	-68.2	0.68		" "
3	1221	6	7.27	14.3	314.4	OHI	-73.2	0.02		" "
4	1228	6	7.21	14.2	344.0	0.35	-38.9	0.02		" "
5	1235	6	7.11	14.3	443.0	0.37	-36.6	0.02		" "
6	1242	6	6.84	14.4	745	0.29	-95.7	0.30		" "

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE102RR1-090721-1	VOCs	1250
21A-AE102RR2-090721-1	VOCs, 1,4-dioxane	1255
21A-AE102RR3-090721-1	VOCs	1300
21A-AE102RR4-090721-1	VOCs, 1,4-dioxane	1305
21A-AE102RR5-090721-1	VOCs	1310
21A-AE102RR6-090721-1	VOCs, Total (As), Dissolved (As), VPH, EPH, 1,4-dioxane, PIANO	1320

Notes:

Hydrogen purge time and rate =

Signature [signature] Date 9.7.21

AECOM

Well ID: **AE-102S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/15/2021 Time: Start 1405 am/pm
Project No: 60552044 Finish 1500 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 80s Collector(s): D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 18' c. Screen Length 5 (13' - 18') 2" PVC Casing
b. Water Table Depth 3.20 d. Pump Intake 15.5'
c. Water Column (a-b) e. Calculated System Purge Volume (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20k101883
	Geotech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1410	1	20.5	6.23	1871	0.26	187.0	42.1	200	3.22	~~orange~~ floc
1415	2	20.3	6.21	1871	0.16	183.9	158	200	3.22	floc/none
1425	4	20.1	6.20	1884	0.12	178.8	7.25	200	3.22	floc/none
1440	7	19.8	6.19	1882	0.10	177.0	0.90	200	3.22	clear/none
1445	8	19.6	6.19	1882	0.09	177.2	0.95	200	3.22	clear/none
1450	9	19.4	6.19	1885	0.08	175.9	0.85	200	3.22	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

(continued on back)

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

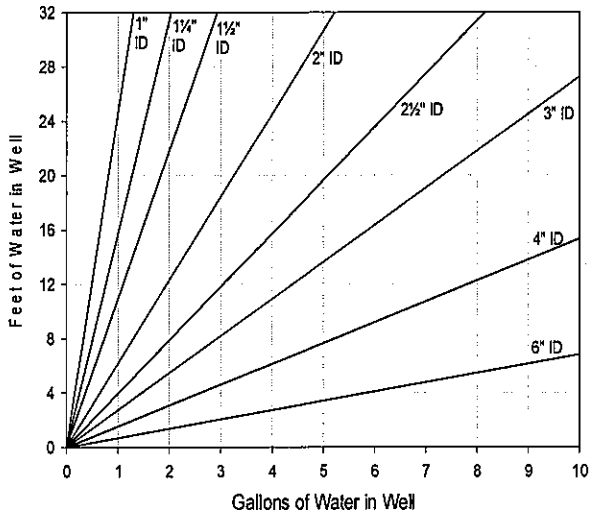
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE102S-091521-1	40mL VOA	3	HCL	VOCs 8260C	1455

Comments

Signature Date 9/15/2021

AECOM

Well ID: AE-102S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **AE-103D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/14/21 Time: Start 1015 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 65°F Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 40.5' c. Screen Length 5 (35' - 40') 2" PVC Casing
b. Water Table Depth 2.16 d. Pump Intake 37.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro	20K101853
GeoTech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1025	0	17.0	6.93	2490	0.77	130.5	3.9	200	0	Clear/none
1030	1	16.2	5.65	2486	0.37	131.8	0	200	0	
1035	2	16.2	5.64	2489	0.36	131.9	0	200	0	
1040	3	16.2	5.64	2489	0.36	132.0	0	200	0	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

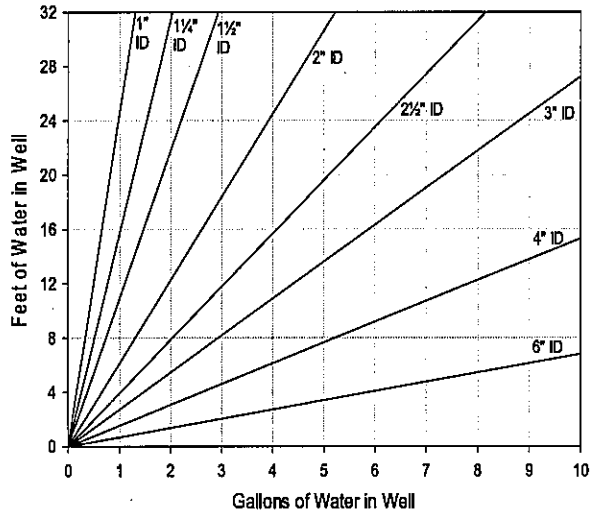
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE103D-091421-1	40mL VOA	3	HCL	VOCs 8260C	1045
	250 mL Amber	1	NaHSO4	1,4 dioxane	
	250mL P	2	HNO3	Total & Diss (As, Fe, Mn)	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	500mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	vial	3	BZK Cl	Gases (M, Eth, Etha, Ac, Pr)	
	vial	1	none	Diss Hydrogen	

Comments MS/MSD Hydrogen purge @ 250ML / START - 1208 / SAMPLE TIME - 1223

Signature Floyd Burton Date 9/14/21

AECOM

Well ID: AE-103D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-103M**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.16.21 Time: Start 0955 am/pm
Project No: 60552044 Finish 1020 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: cloudy, 60s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 30 c. Screen Length 5 (25' - 30') 2" PVC Casing
b. Water Table Depth 2.38 d. Pump Intake 27.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume _____ (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	±10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro DSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1000	0.9	18.0	6.62	243.0	0.31	-108.4	7.45	180	2.62	Clear / No
1005	1.8	17.8	6.51	237.5	0.22	-107.3	5.20	180	2.64	" "
1010	2.7	17.5	6.45	238.6	0.20	-108.5	4.64	180	2.63	" "
1015	3.6	17.3	6.39	241.7	0.19	-109.1	3.52	180	2.64	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

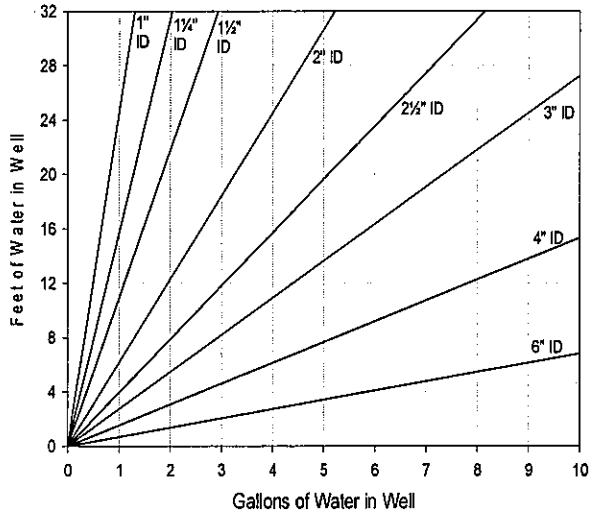
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE103M-091621-1	40mL VOA	3	HCL	VOCs 8260C	1020

Comments _____

Signature _____ Date 9.16.21

AECOM

Well ID: AE-103M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **AE-103R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.9.21 Time: Start 0815 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner _____ e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @0815	Before 2nd Purge DTW @0910	Before 3rd Purge DTW @1005
1	48-53	98	4.15	3.23	0.232	1.79	1.82	1.98
2	62-67	99	4.22	3.23	0.250	1.62	1.62	1.87
3	70-76	100	4.27	3.23	0.252	1.48	1.49	1.86
4	98-105	101	4.31	3.23	0.254	1.76	1.78	1.87
5	122-128	102	4.35	3.23	0.257	1.75	1.75	1.93
6	138-144	103	4.4	3.23	0.259	1.78	1.79	1.93
7	162.5-168	104	4.44	3.23	0.261	1.65	1.65	1.92

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	19K100079
	geotech	turbidimeter	17061375

b. 1st Purge Time/Duration 8/30 - purged c. 2nd Purge Time/Duration 9/9 08:19 - 08:27:48 (5:48) mins.
d. 3rd Purge Time/Duration 9/9 09:15 - 09:20:13 (5:13) mins e. 4th Purge Time/Duration 9/9 10:05 - 10:10:02 (5:02) mins

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1110	3:00	5.96	13.9	2170	0.80	114.8	0.02		clear/ org decay
2	1115	3:00	6.01	14.2	1575	0.51	109.8	0.02		" "
3	1120	3:00	6.38	14.2	955	0.59	93.1	0.02		" "
4	1125	3:00	6.59	14.1	866	0.73	54.1	0.02		" "
5	1130	3:00	6.59	14.2	1084	2.76	47.6	0.02		" "
6	1135	3:00	6.78	14.3	785	0.71	-19.9	0.02		" "
7	1140	3:00	6.99	14.3	6.92	0.60	-33.9	0.02		" "

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE103R1-090921-1	VOCs, 1,4-dioxane, VPH, EPH, Total(As, Fe, Mn), Diss.(As, Fe, Mn), Cl, NO2,	1110 Diss'd: 1505-1525
	NO3, SO2, S, TOC, Gases(meth, Ethe, Etha, Acety, Prop), Diss. H, PIANO	
21A-AE103R2-090921-1	VOCs	1115
21A-AE103R3-090921-1	VOCs	1120
21A-AE103R4-090921-1	VOCs, 1,4-dioxane	1125
21A-AE103R5-090921-1	VOCs, CSIA, Microbial, 1,4-dioxane, Total/ Diss(As, Fe, Mn), Cl, NO2,	1130 Diss'd: 1540-1600
	NO3, SO2, S, TOC, Gases(meth, Ethe, Etha, Acety, Prop), Diss. H	
21A-AE103R6-090921-1	VOCs	1135
21A-AE103R7-090921-1	VOCs	1140

Notes: _____

Hydrogen purge time and rate = R1= 200mL/min 20min sample time. R5= 200mL/min 20min

Signature _____ Date 9.9.21

AECOM

Well ID: **AE-103S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.16.21 Time: Start 0900 am/pm
Project No: 60552044 Finish 0945 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: cloudy, 60's Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 22' c. Screen Length 5 (15' - 20') 2" PVC Casing
b. Water Table Depth 2.35 d. Pump Intake 17.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.41 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProPSS	19F100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0905	1.0	17.1	7.40	202.5	0.37	-99.1	32.4	200	3.08	Slight iron stock / No odor
0910	2.0	17.2	6.94	201.6	0.43	-105.1	31.7	200	3.06	" "
0915	3.0	16.8	6.69	199.4	0.26	-109.2	27.4	200	3.05	" "
0920	4.0	16.7	6.56	199.7	0.24	-112.6	19.8	200	3.06	" "
0925	5.0	16.8	6.49	199.8	0.22	-115.5	14.8	200	3.06	" "
0930	6.0	16.7	6.43	201.0	0.21	-117.6	6.78	200	3.05	Clear / No
0935	7.0	16.7	6.39	201.1	0.20	-119.7	7.28	200	3.06	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

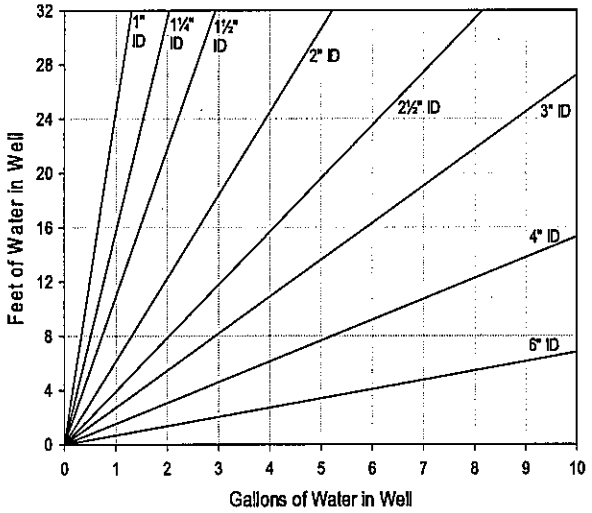
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE103S-091621-1	40mL VOA	3	HCL	VOCs 8260C	0945
	250mL P	1	HNO3	total As	
	250mL P	1	HNO3	Diss. As (FF)	

Comments

Signature [signature] Date 9.16.21

AECOM

Well ID: AE-103S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[20 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.469; 0.469 L x 3 well vol. = 1.41 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
0940	8.0	16.6	6.37	2023	0.20	-120.4	5.00	200	3.06	Clear / No

AECOM

Well ID: **AE-104D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/22/21 Time: Start 1015 (am)/pm
Project No: 60552044 Finish 1050 (am)/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's clouds Collector(s): Fburton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 40.5' c. Screen Length 5 (35' - 40') 2" PVC Casing
b. Water Table Depth 2.09 d. Pump Intake 37.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20K101853
	GeoTech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1020	0	19.2	5.80	2578	3.91	136.1	0.9	200	0	Clear/none
1025	1	18.2	5.44	2932	0.83	157.5	0	200	0	"
1030	2	18.2	5.44	2941	0.81	157.6	0	200	0	"
1035	3	18.2	5.44	2942	0.79	157.7	0	200	0	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

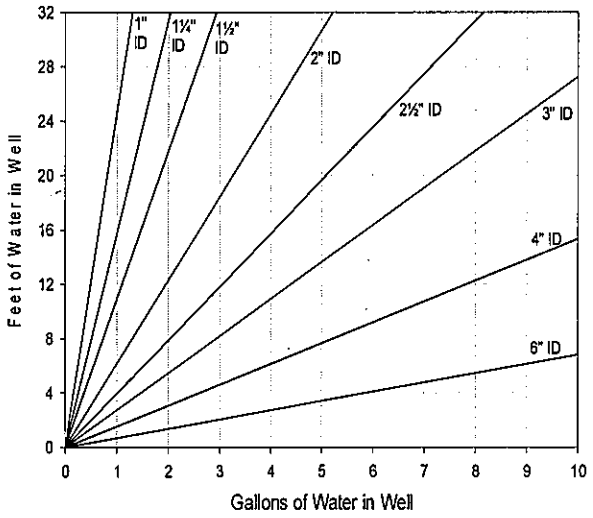
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE104D-09222I-1	40mL VOA	3	HCL	VOCs 8260C	1040
	250 mL Amber	1	NaHSO4	1,4 dioxane	

Comments

Signature F Burton Date 9/22/21

AECOM

Well ID: AE-104D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-104M**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/22/21 Time: Start 0940 am/pm
Project No: 60552044 Finish 1010 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's clouds Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 30 c. Screen Length 5 (25' - 30') 2" PVC Casing
b. Water Table Depth 2.06 d. Pump Intake 27.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume _____ (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20K101853
	GeoTech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0945	0	18.2	6.47	431	0.52	40.0	3.2	200	0	clear/none
0950	1	17.5	6.10	284	0.23	87.5	0	200	0	"
0955	2	17.8	6.10	283	0.23	87.9	0	200	0	"
1000	3	17.8	6.09	282	0.22	88.8	0	200	0	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

(continued on back)

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

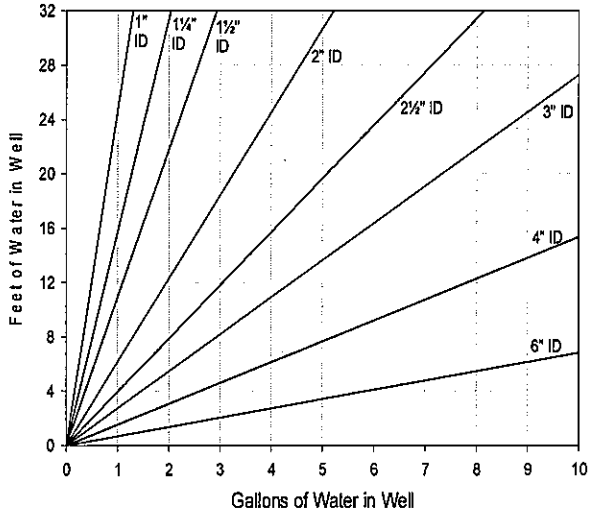
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE104M-[illegible] -1	40mL VOA	3	HCL	VOCs 8260C	1005

Comments _____

Signature [signature] Date 9/22/21

AECOM

Well ID: AE-104M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **AE-104R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.2.21 Time: Start 0900 am/pm
Project No: 60552044 Finish 1400 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast 70's Collector(s): Sean Hagnoff

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner ____ e. Purge Pressure 55 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @911	Before 2nd Purge DTW @1006	Before 3rd Purge DTW @1101
1	48-54	99	4.23	3.27	0.234	1.38	1.62	1.69
2	62-68	100	4.30	3.27	0.250	1.46	1.59	1.50
3	97-102	101	4.34	3.27	0.252	1.09	1.16	1.10
4	128-133	102	4.39	3.27	0.254	1.41	1.43	1.42
5	156-162	103	4.43	3.27	0.257	1.68	1.72	1.70
6	168-174	104	4.47	3.27	0.259	1.70	1.76	1.73

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro DSS	19K100091
geotech	turbidimeter	17061375

b. 1st Purge Time/Duration on 8/30
c. 2nd Purge Time/Duration 0915-0920 - 4:54 mins
d. 3rd Purge Time/Duration 1006-1010 4:32 mins e. 4th Purge Time/Duration 1101-1105 - 4:16 mins

Port	Time (24hrs)	Purge Time	pH 8.52	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1245	3.00	[illegible]	13.5	981	0.31	-183.7	0.05		Clear/ org decay
2	1249	3.00	8.27	13.8	826	0.19	-170.3	0.02		" "
3	1254	3.30	8.15	13.6	700	0.18	-133.3	0.02		" "
4	1257	3.30	8.03	13.5	890	0.19	-138.2	0.02		" "
5	1301	3.30	7.97	13.5	782	0.19	-161.2	0.02		" "
6	1305	3.30	7.94	13.5	733	0.20	-159.2	0.02		" "

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE104R1-090221-1	VOCs, 1,4-dioxane	1335
21A-AE104R2-090221-1	VOCs	1340
21A-AE104R3-090221-1	VOCs, 1,4-dioxane	1345
21A-AE104R4-090221-1	VOCs, 1,4-dioxane, VPH, EPH, PIANO	1350
21A-AE104R5-090221-1	VOCs	1355
21A-AE104R6-090221-1	VOCs, 1,4-dioxane	1400

Notes: ____

Signature [signature] Date 9.2.21

AECOM

Well ID: **AE-104S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/22/21 Time: Start 0900 am/pm
Project No: 60552044 Finish 0935 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70s Clouds Collector(s): FBurton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 22' c. Screen Length 5 (15' - 20') 2" PVC Casing
b. Water Table Depth 2.92 d. Pump Intake 17.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.41 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	±10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101553
GeoTech	PTM	1706139I

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0910	0	17.7	6.67	371	0.33	36.1	2.2	200	0	Clear/none
0915	1	17.4	6.07	345	0.15	25.5	0	200	0	
0920	2	17.4	6.07	344	0.16	25.6	0	200	0	
0925	3	17.4	6.07	345	0.14	25.6	0	200	0	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

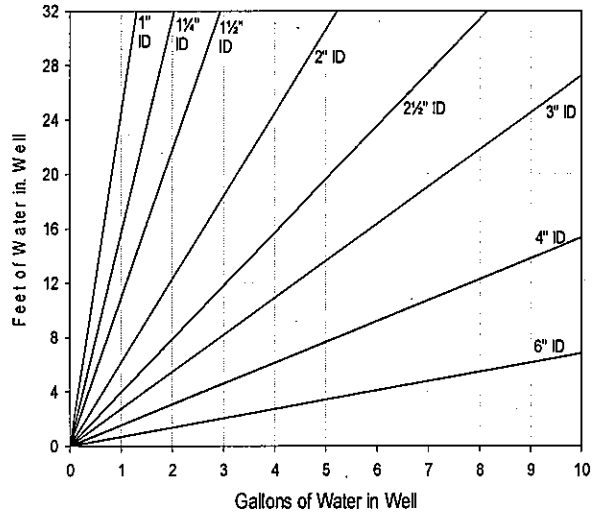
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE104S-092221 -1	40mL VOA	3	HCL	VOCs 8260C	0930

Comments

Signature FBurton Date 9/22/21

AECOM

Well ID: AE-104S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[20 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.469; 0.469 L x 3 well vol. = 1.41 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-105D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/17/21 Time: Start 1100 am/pm
Project No: 60552044 Finish 1135 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60s Clouds Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 78.5' c. Screen Length 5 (73' - 78') 2" PVC Casing
b. Water Table Depth 3.08 d. Pump Intake 75.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 3.09 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101853
GeoTech	PiM	1706158/

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1105	0	13.0	6.42	1021	1.14	-3.0	1.2	200	0	Clear/none
1110	1	12.4	7.02	1000	0.15	-113.8	0	200	0	
1115	2	12.4	7.03	1001	0.14	-114.5	0	200	0	
1120	3	12.4	7.03	1001	0.14	-115.6	0	200	0	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

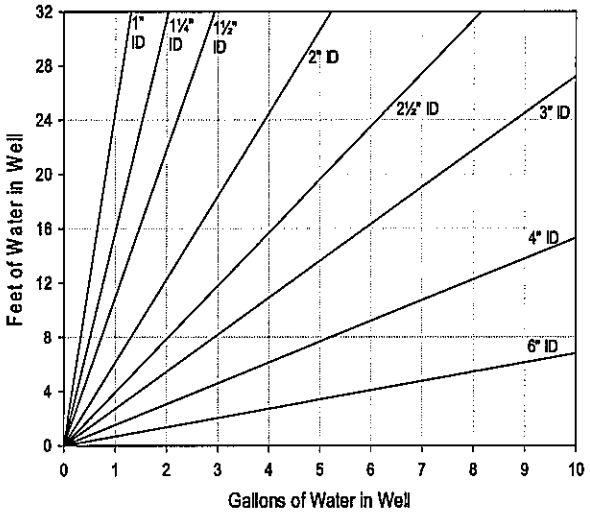
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE105D-09/721 -1	40mL VOA	3	HCL	VOCs 8260C	1125
	250 mL Amber	1	NaHSO4	1,4 dioxane	

Comments _____

Signature _____ Date 9/17/21

AECOM

Well ID: AE-105D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

78 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.03; 1.03 L x 3 well vol. = 3.09 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-105M**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/17/21 Time: Start 1020 am/pm
Project No: 60478638 Finish 1055 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60's clouds Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 57 c. Screen Length 5 (52-57') 2" PVC Casing
b. Water Table Depth 3.04 d. Pump Intake 54.5'
c. Water Column (a-b) e. Calculated System Purge Volume (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20K101853
	GeoTech	PTM	170G1391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1030	0	12.3	6.49	800	0.50	-6.5	1.6	200	0	Clear/none
1035	1	12.0	6.47	537	0.19	38.5	0	200	0	
1040	2	12.0	6.46	534	0.19	38.7	0	200	0	↓
1045	3	12.0	6.46	534	0.19	39.2	0	200	0	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

(continued on back)

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

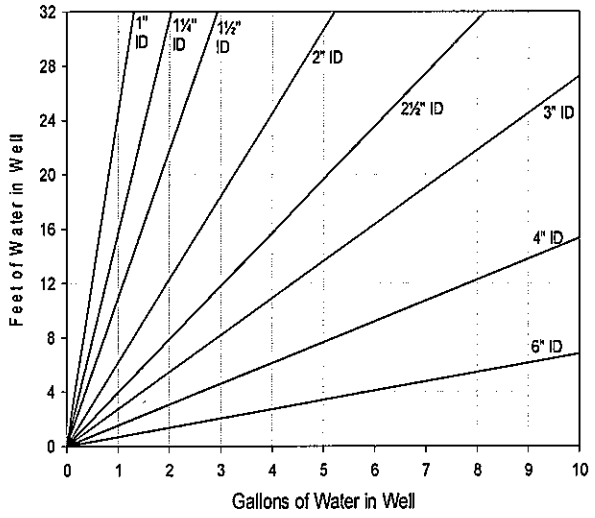
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE105M-09172l -1	40mL VOA	3	HCL	VOCs 8260C	1050

Comments

Signature Floyd Burton Date 9/17/21

AECOM

Well ID: AE-105M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **AE-105R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/13/21 Time: Start 0930 (am)/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60's Sunny Collector(s): Floyd Button

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner _____ e. Purge Pressure 54 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	DTW Initial @0956	DTW Before 2nd Purge @1040	DTW Before 3rd Purge @1140
1	90.5-95.5	96.7	4.23	3.29	0.234	3.20	4.12	3.24
2	98-103	97.7	4.30	3.29	0.250	3.27	3.50	3.32
3	107.5-112.5	98.7	4.34	3.29	0.252	3.23	3.40	3.26
4	125-130	99.7	4.39	3.29	0.254	3.30	3.38	3.35
5	143-148	100.7	4.43	3.29	0.257	3.28	3.38	3.31
6	156-161	101.7	4.47	3.29	0.259	3.50	NM	NM

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro	20K101853
GeoTech	PTM	

b. 1st Purge Time/Duration on 8/ /21 c. 2nd Purge Time/Duration 1000/9min
d. 3rd Purge Time/Duration 1050/5 mins e. 4th Purge Time/Duration 1143/6 mins

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1325	5	7.39	11.2	383	0.33	92.7	0	NA	Clear/none
2	1331	5	7.17	11.8	756	0.13	8.6	0		Clear/none
3	1337	5	7.28	12.3	756	0.15	-17.2	0		Clear/none
4	1343	5	7.37	13.6	755	0.20	-44.9	0		Clear/none
5	1349	5	7.41	13.3	754	0.20	-58.2	0		Clear/none
MW										

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE105R1-091321-1	VOCs, Total/Diss (Fe, Mn), NO3, NO2, Cl, SO4, S, TOC	1355
	Diss. H, Gases (Acety., Prop., Meth., Etha.), CSIA	
21A-AE105R2-091321-1	VOCs, 1,4-dioxane, VPH, EPH, Total/Diss (As)	1405
21A-AE105R3-091321-1	VOCs	1415
21A-AE105R4-091321-1	VOCs, 1,4-dioxane, VPH, EPH	1425
21A-AE105R5-091321-1	VOCs	1455

Notes: Post-Co Broken, NOT SAMPLED

Hydrogen purge time and rate = 10 min @ 315 ml/p, START @ 1650 / SAMPLE @ 1700

Signature _____ Date 9/13/21

AECOM

Well ID: **AE-105S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/17/21 Time: Start 0930 am/pm
Project No: 60552044 Finish 1015 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60's Clouds Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 42' c. Screen Length 5 (35' - 40') 2" PVC Casing
b. Water Table Depth 3.13 d. Pump Intake 37.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101853
GeoTech	peTm	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0940	0	12.7	6.46	1264	2.42	6.9	1.4	200	0	Clear/none
0945	1	12.0	6.11	1347	0.17	-10.0	0	200	0	↓
0950	2	12.0	6.11	1347	0.14	-10.8	0	200	0	
0955	3	12.0	6.11	1347	0.13	-11.1	0	200	0	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

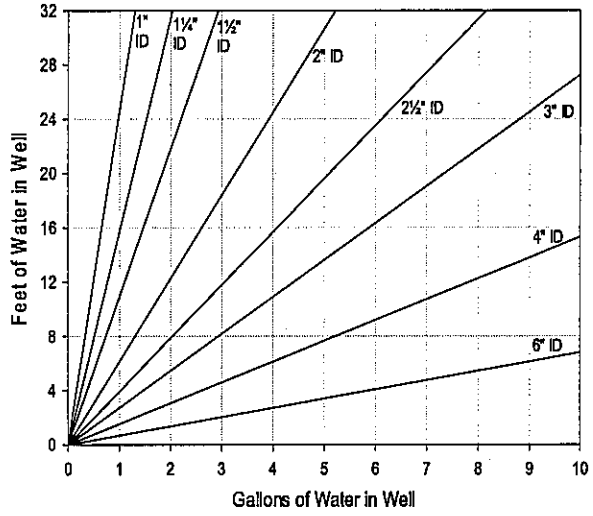
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE105S-091721-1	40mL VOA	3	HCL	VOCs 8260C	1000
	250 mL P	2	HNO3	Total & Diss. As	

Comments

Signature Floyd Burton Date 9/17/21

AECOM

Well ID: AE-105S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-106D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/13/21 Time: Start 1030 am/pm
Project No: 60552044 Finish ~~1220~~ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA ~~1355~~ 0 1420
Weather Conds: ~~0-70~~ 803 Sunny Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 39.5' c. Screen Length 5 (35' - 39') 2" PVC Casing
b. Water Table Depth 2.21 d. Pump Intake 37.5'
c. Water Column (a-b) 37.29 e. Calculated System Purge Volume 1.96 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10D101383
Geotech	Turbidity Meter	17111150

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1050	0.920	12.6	6.11	2604	1.38	168.7	11.5	184	0.01	vf particles/none
1055	1.84	12.2	6.12	2595	0.79	171.3	5.22	184	0.01	"
1060 ~~10~~	2.76	12.4	6.11	2586	0.48	171.9	1.88	184	0.01	"
1105	3.68	12.3	6.12	2591	0.34	171.8	1.72	184	0.01	"
1110	4.60	12.3	6.12	2579	0.32	172.8	1.22	184	0.01	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE106D-091321-1	40mL VOA	7	HCL	VOCs 8260C, CSIA 13C/12C	1150
	250 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	250 mL A	1	H3PO4	TOC	
	40mL V	3	belzal.chlor.	gases (Acet, Prop, Meth, Eth, Etha)	
	vial	1	none	diss. Hydrogen	

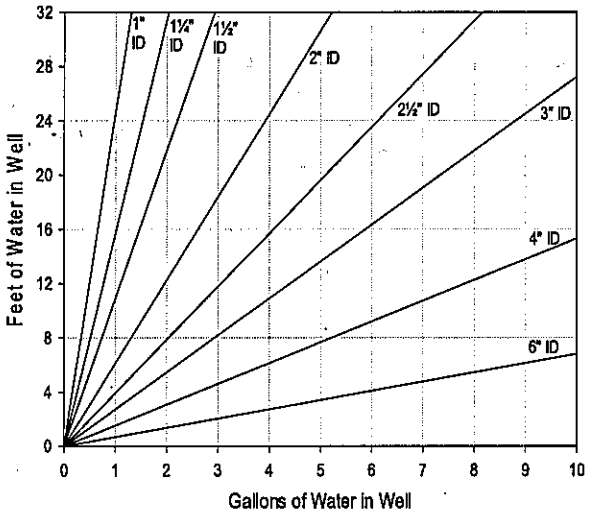
Comments

Signature Adam Grosser Date 9/13/21

1060
~~1702~~

AECOM

Well ID: AE-106D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[39 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.6533; 0.6533 L x 3 well vol. = 1.96 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-106M**

Low Flow Ground Water Sample Collection Record 14300

Client: Lockheed Martin Corp. Date: 9/13/21 Time: Start ~~1445~~ am/pm
Project No: 60478638 Finish ~~15300~~ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 80's Sunny Collector(s): A. Grossman 1530

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 27.5' c. Screen Length 5 (22.5 - 27.5') 2" PVC Casing
b. Water Table Depth 2.25 d. Pump Intake 25'
c. Water Column (a-b) 25.25 e. Calculated System Purge Volume _____ (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	pro plus	10D101383
Geotech	Turbidity meter	17111530

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1458	0.85	13.0	5.89	2878	1.20	148.9	*	170	0.06	Clr/none
1503	1.70	13.1	5.90	2912	0.55	146.8	*	"	0.07	"
1508	2.55	13.1	5.89	2926	0.39	147.8	*	"	0.07	"
1513	3.40	13.2	5.90	2922	0.32	149.1	*	"	0.07	"
1518	4.25	13.0	5.88	2935	0.27	150.7	3.69	"	0.07	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

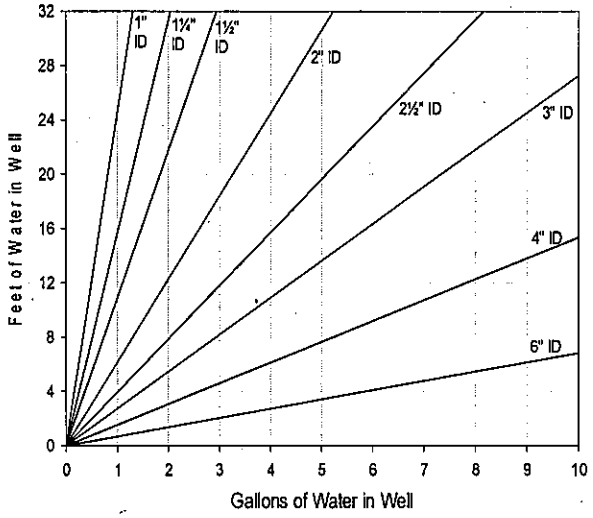
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE106M-041321-1	40mL VOA	3	HCL	VOCs 8260C	1535

Comments * Turbidity meter batteries die — mos to working unit after opposite parameters stabilized

Signature [signature] Date 9/13/21

AECOM

Well ID: AE-106M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **AE-106R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.13.21 Time: Start 1050 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner _____ e. Purge Pressure 53 psi f. Sample Pressure 37 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	DTW @1050 (Initial)	DTW @1125 (Before 2nd Purge)	DTW @1155 (Before 3rd Purge)
1	47-52	96	4.31	3.34	0.237	2.87	2.89	2.87
2	69.5-74.5	97	4.38	3.34	0.250	2.85	2.85	2.85
3	84-88	98	4.42	3.34	0.252	2.67	2.69	2.68
4	144.5-150.5	99	4.46	3.34	0.254	2.61	2.64	2.61
5	164-169	100	4.51	3.34	0.257	2.53	2.53	2.54

a. Field Testing Equipment used:

Make	Model	Serial Number	
YSI	ProDSS	19K100091	(9:01) min
geotech	turbidity meter	17061375	✓

b. 1st Purge Time/Duration 8/30 - purged
c. 2nd Purge Time/Duration 9/13 10:53:52 - 10:57:53
d. 3rd Purge Time/Duration 11:25:05 - 11:30:31 (9:26) mins
e. 4th Purge Time/Duration 11:59:40 - 12:05:19 (5:39) min

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1232	3:00	7.26	11.5	661	0.41	-23.8	0.02		Clear/org. decay
2	1236	3:00	7.40	11.9	511	0.48	-13.2	0.02		" "
3	1240	3:00	7.49	11.1	377.9	0.37	-19.6	0.02		" "
4	1244	3:00	7.57	11.4	310.5	0.40	-39.9	0.02		" "
5	1248	3:00	7.94	11.3	163.1	0.43	-37.2	0.02		" "

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE106R1-091321-1	VOCs	1490
21A-AE106R2-091321-1	VOCs	1495
21A-AE106R3-091321-1	VOCs, Total (As, Fe, Mn), Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S, TOC,	1450
	VPH, EPH, Diss. H, Gases (Acety., Prop., Meth., Etha.), CSIA	
21A-AE106R4-091321-1	VOCs	1455
21A-AE106R5-091321-1	VOCs, 1,4-dioxane, VPH, EPH	1500

Notes: _____

Hydrogen purge time and rate = _____

Signature _____ Date 9.13.21

AECOM

Well ID: **AE-106S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/13/21 Time: Start 1540 am/pm
Project No: 60552044 Finish 1650 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 80's Sunny Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 42' c. Screen Length 5 (12' - 17') 2" PVC Casing
b. Water Table Depth 2.43 d. Pump Intake 14.5'
c. Water Column (a-b) 39.57 e. Calculated System Purge Volume 1.32 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro Plus Serial Number 21D101383
Geotech Turbidity meter 17111150

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1548	0.93	12.6	6.02	2406	1.02	166.0	∞	186	0.18	Clr/none
1553	1.86	12.5	5.95	2754	0.42	165.2	∞	186	0.20	"
1558	2.79	12.1	5.93	2722	0.32	166.3	0.82	186	0.21	"
1603	3.72	12.7	5.91	2658	0.47	164.4	0.42	~~186~~ 186	0.19	"
1608	~~4.65~~ 0	12.5	5.96	2623	0.52	164.7	0.02	156	0.17	"
1613	~~5.58~~ 0	12.3	5.94	0 ~~29~~ 2544	0.34	165.3	0.02	156	0.~~18~~ 17	"
1618	~~6.51~~ 0	12.0	5.95	2542	0.35	166.5	0.02	156	0.18	"

4.50, 5.28, 6.06 } V. Removed (L)

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

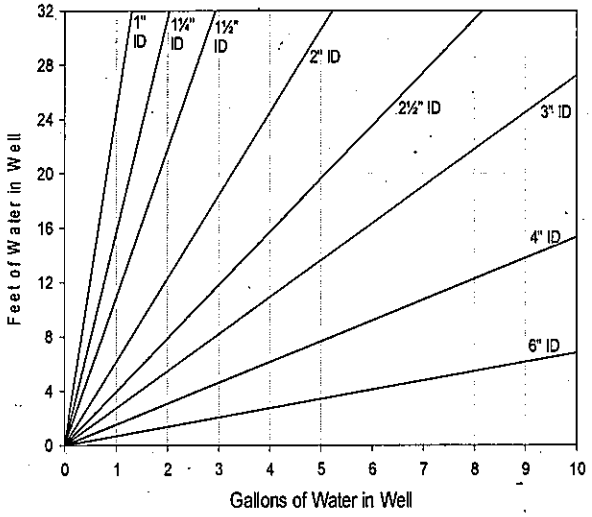
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE106S-091321-1	40mL VOA	3	HCL	VOCs 8260C	1630

Comments

Signature [signature] Date 9/13/21

AECOM

Well ID: AE-106S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[17 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.4399; 0.4399 L x 3 well vol. = 1.32 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1623	~~7.548~~ 6.94	12.0	5.95	2571	0.41	166.6	0.02	156	0.18	Clr/none

AECOM

Well ID: **AE-108R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/9/21 Time: Start 0830 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Rain Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 168' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.86 e. Purge Pressure 55 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 0858	Before 2nd Purge DTW @ 0935	Before 3rd Purge DTW @ 1010
1	36.5-43.5	99.7	4.31	3.07	0.237	1.08	1.86	2.02
~~2~~	~~68-73~~	~~100.7~~	~~4.38~~	~~3.06~~	~~0.250~~	~~4.05~~	~~2.05~~	~~2.09~~
3	84-89	101.7	4.42	3.05	0.252	3.87	1.94	2.01
4	145-150	102.7	4.46	3.05	0.254	1.90	1.65	1.89
5	163-168	103.7	4.51	3.05	0.257	Approx 2'	1.62	1.86

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K100853
GeoTech	PTM	17061391

b. 1st Purge Time/Duration 0858 / 8mins c. 2nd Purge Time/Duration 0903 / 7mins
d. 3rd Purge Time/Duration 0939 / 8mins e. 4th Purge Time/Duration 1012 / 8mins

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1054	5	9.65	15.2	171	0.09	-43.0	22.4	NA	clear/none
2	1100	5	6.73	14.7	234	0.06	-24.7	0		clear/none
3	1106	5	5.78	14.9	241	0.13	66.2	0		clear/none
4	1112	5	6.57	14.9	578	0.06	-12.4	0		clear/none
5	1118	5	6.68	14.6	635	0.06	-53.4	0		clear/none

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE108R1-090921-1	VOCs, Total (As, Fe, Mn), Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S, TOC,	1205
	Diss. H, Gases (Acety., Prop., Meth., Etha.), CSIA, Microbial	
21A-AE108R2-090921-1	VOCs	1200
21A-AE108R3-090921-1	VOCs	1155
21A-AE108R4-090921-1	VOCs	1150
21A-AE108R5-090921-1	VOCs	1145

Notes: Water tape wouldn't read on Port 5 on first gauging.

Hydrogen purge time and rate = 20min @ 200ml, Sampled @ 1350

Signature FW Burton III Date 9/9/21

AECOM

Well ID: **AE-109D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/7/2021 Time: Start 1220 am/pm
Project No: 60552044 Finish 1245 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 70s Collector(s): Dylan Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 23.5' c. Screen Length 5 (18' - 23') 2" PVC Casing
b. Water Table Depth 3.32 d. Pump Intake 20.5'
c. Water Column (a-b) 20.18 e. Calculated System Purge Volume 1.52 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	20K101853
Geotech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1225	1	18.5	6.35	1289	0.20	75.2	0.55	200	3.36	clear/none
1230	2	18.3	6.33	1274	0.15	79.9	1.94	200	3.36	clear/none
1235	3	18.4	6.33	1258	0.12	81.5	0.34	200	3.36	clear/none
1240	4	18.3	6.33	1250	0.14	82.7	0.43	200	3.36	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

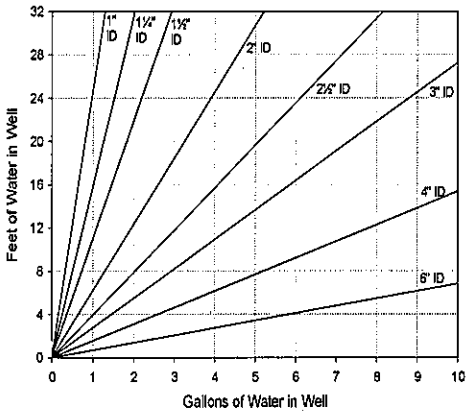
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE109D-090721-1	40mL VOA	3	HCL	VOCs 8260C	1245
	250 mL A	1	NaHSO4	1,4-dioxane	/
	250 mL plastic	1	HNO3	Total As	/
	250 mL plastic	1	HNO3	Dissolved As (field filter)	/

Comments

Signature [signature] Date 9/7/21

AECOM

Well ID: AE-109D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[24 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.508 L ; 0.508 L x 3 well vol. = 1.52 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: AE-109R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/2/21 Time: Start 0845 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 250' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner _____ e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	DTW @ Initial 0857	DTW @ Before 2nd Purge 0950	DTW @ Before 3rd Purge 1100
1	38-43	97.4	4.07	3.2	0.23	2.03	4.31	4.22
2	66-76	98.4	4.15	3.2	0.250	2.08	7.02	4.71
3	126-136	99.4	4.19	3.2	0.252	2.17	8.36	10.00
4	174-180.5	100.4	4.23	3.2	0.254	2.82	3.03	3.01
5	183-189	101.4	4.28	3.2	0.257	2.84	2.99	3.00
6	196-201	102.4	4.32	3.2	0.259	2.82	3.00	2.96
7	204-214	103.4	4.36	3.2	0.261	2.84	3.02	3.07
8	245-250	104.4	4.40	3.2	0.263	2.92	3.01	3.00

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	pro Quatro	20K101853
	GeoTech	PTM	1706391

b. 1st Purge Time/Duration ~~0913 / 7mins~~ 7mins ON 8/30/21 c. 2nd Purge Time/Duration 0913 / 7 mins
d. 3rd Purge Time/Duration 1003 / 7 MINS e. 4th Purge Time/Duration 1105 / 7MINS

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1240	5	7.70	16.9	1181	1.50	-28.9	1.31	NA	Clear/none
2	1250	5	7.66	14.8	1178	0.79	-74.7	0.82		clear/none
3	1300	5	7.62	14.7	518	0.60	-109.5	0.31		clear/none
4	1305	5	7.91	15.6	290	0.40	-153.8	0		clear/none
5	1310	5	8.04	14.9	239	0.33	-171.8	0		clear/none
6	1315	5	7.84	17.1	352	0.31	-160.0	0		clear/none
7	1320	5	7.89	14.7	258	0.29	-164.6	0		clear/none
8	1325	5	7.92	14.0	159	0.27	-165.4	0		clear/none

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time	
21A-AE109R1-09022I-1	VOCs	1345	
21A-AE109R2-09022I-1	VOCs, 1,4-Dioxane	1350	DUP1355
21A-AE109R3-09022I-1	VOCs	1400	
21A-AE109R4-09022I-1	VOCs	1405	
21A-AE109R5-09022I-1	VOCs, 1,4-dioxane, VPH, EPH, Total/Diss (As), PIANO	1425	
21A-AE109R6-09022I-1	VOCs	1410	
21A-AE109R7-09022I-1	VOCs, 1,4-dioxane	1415	
21A-AE109R8-09022I-1	VOCs	1420	

Notes: _____

Hydrogen purge time and rate = _____

Signature _____ Date 09/02/21

AECOM

Well ID: **AE-110R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/2/21 Time: Start 0900 am/pm
Project No: 60552044 Finish 1425 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Cloudy, 60s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 250' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.0 e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 0854	Before 2nd Purge DTW @1011	Before 3rd Purge DTW @1105
1	34-44	98	4.15	3.23	0.232	2.41	5.20	2.65
2	70-80	99	4.22	3.23	0.250	2.47	4.49	2.88
3	128-138	100	4.27	3.23	0.252	2.05	2.24	1.81
4	158-168	101	4.31	3.23	0.254	1.61	1.53	1.35
5	171-182	102	4.35	3.23	0.257	1.59	1.51	1.35
6	190-200	103	4.4	3.23	0.259	1.71	1.50	1.36
7	224-234	104	4.44	3.23	0.261	1.67	1.53	1.40

a. Field Testing Equipment used: Make YSI Model ProDSS Serial Number 19K100692

b. 1st Purge Time/Duration on 8/30 c. 2nd Purge Time/Duration 0901 - 0907
d. 3rd Purge Time/Duration 1011 - 1016 e. 4th Purge Time/Duration 1111 - 1116

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1250	6	9.10	13.8	1537	0.40	-205.5	38.5		dark gray / No odor
2	1316	5	7.70	13.8	734	0.55	-177.1	0.02		Clear / No
3	1320	5	7.80	13.8	648	0.47	-138.8	0.02		Clear / No
4	1327	7	7.46	14.1	537	0.49	-127.4	0.02		Clear / No
5	1334	6	7.02	14.3	821	0.39	-123.2	0.02		Clear / No
6	1342	5	6.91	13.8	1085	0.37	-105.1	0.03		" "
7	1348		6.77	13.6	1148	0.33	-99.4	0.02		" "

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
21A-AE110R1-090221-1	VOCs	1350
21A-AE110R2-090221-1	VOCs	1355
21A-AE110R3-090221-1	VOCs	1400
21A-AE110R4-090221-1	VOCs	1410
21A-AE110R5-090221-1	VOCs	1415
21A-AE110R6-090221-1	VOCs, 1,4-dioxane	1420
21A-AE110R7-090221-1	VOCs	1425

Notes:

Signature [signature] Date 9-2-21

AECOM

Well ID: **AE-111R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/7/21 Time: Start 0850 am/pm
Project No: 60552044 Finish 1240 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 200' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner e. Purge Pressure 59 psi f. Sample Pressure 42 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	DTW @ 850 (Initial)	DTW @950 (Before 2nd Purge)	DTW @1098 (Before 3rd Purge)
1	44-54	108	4.15	3.15	0.232	12.59	12.62	12.59
2	66-74	109	4.22	3.15	0.250	12.52	12.55	12.59
3	95-103	110	4.27	3.15	0.252	12.50	12.50	12.51
4	140-150	111	4.31	3.15	0.254	12.41	12.42	12.41
5	155-165	112	4.35	3.15	0.257	12.37	12.39	12.38
6	168-173	113	4.4	3.15	0.259	12.36	12.40	12.40
7	181-191	114	4.44	3.15	0.261	12.38	12.39	12.39

a. Field Testing Equipment used:

	Make	Model	Serial Number
✓	YSI	ProDSS	19K100091
	geotech	turbidimeter	17061375

b. 1st Purge Time/Duration purged 8/30 c. 2nd Purge Time/Duration 9/7 from 0907-09:14:37 (7:37 min)
d. 3rd Purge Time/Duration 9/7 10:11-10:18:42 (7:42) min, e. 4th Purge Time/Duration 9/7 1103-11:10:12 (7:12) min

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1210	3:00	8.43	14.0	1311	0.91	-70.0	5.17	X	Clear/org decay
2	1215	3:00	7.88	13.7	1327	0.45	-38.5	0.02	X	" "
3	1220	3:00	7.84	13.7	1051	0.37	-63.1	0.02	X	" "
4	1225	3:00	8.07	14.4	415.7	0.34	-156.0	0.02	X	" "
5	1230	3:00	8.05	14.4	397.2	0.22	-155.0	0.02	X	" "
6	1235	3:00	8.02	13.6	418.0	0.19	-126.6	0.02	X	" "
7	1240	3:00	8.00	14.8	359.7	0.25	-151.9	0.02	X	" "

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
Dup = 21A-AE111R1-090721-2	VOCs	1212
21A-AE111R1-090721-1	VOCs	1210
21A-AE111R1-090721-2	VOCs	1215
21A-AE111R2-090721-1	VOCs	1220
21A-AE111R3-090721-1	VOCs	1225
21A-AE111R4-090721-1	VOCs	1230
21A-AE111R5-090721-1	VOCs	1235
21A-AE111R6-090721-1	VOCs	1240
21A-AE111R7-090721-1	VOCs	

Notes:

Signature Date 9.7.21

AECOM

Well ID: **AE-112D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.10.21 Time: Start 1304 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): _____

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 30' c. Screen Length 5 (24.5' - 29.5') 2" PVC Casing
b. Water Table Depth 26.49 d. Pump Intake 27'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.52 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	19K100091
	Geotech	Turbidimeter	17061375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1310	1.00	16.1	5.57	1329	0.41	114.3	0.02	200	0.00	Clear/none
1315	2.00	15.8	5.43	1415	0.52	142.3	0.02	200	0.00	" "
1320	3.00	16.5	5.20	1546	1.47	163.9	0.02	200	0.00	" "
1325	4.00	6.5	5.13	1599	2.07	179.8	0.02	200	0.00	" "
1330	5.00	16.4	5.10	1633	2.15	191.9	0.02	200	0.00	" "
1335	6.00	16.5	5.09	1644	2.23	197.0	0.02	200	0.00	" "
1340	7.00	16.6	5.08	1647	2.26	198.9	0.02	200	0.00	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

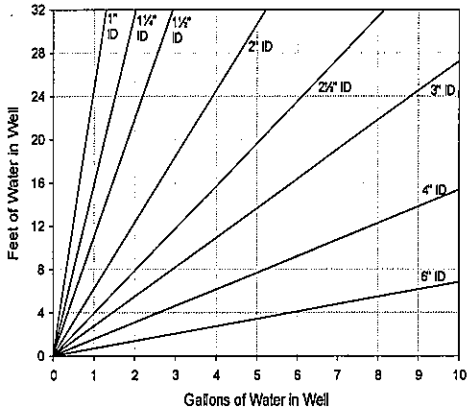
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-AE112D-050221-1	40mL VOA	3	HCL	VOCs 8260C	1345
	250 mL plastic	1	HNO3	Total As	↓
	250 mL plastic	1	HNO3	Dissolved As (field filter)	↓

Comments _____

Signature _____ Date 9.10.21

AECOM

Well ID: AE-112D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[24 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.508 L ; 0.508 L x 3 well vol. = 1.52 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO_2 (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: AE-112R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.16.21 Time: Start 0900 am/pm
Project No: 60552044 Finish 1530 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Cloudy 70's Collector(s): Sean Haggerty

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner _____ e. Purge Pressure 56 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	DTW @ 0900 (Initial)	DTW @0955 (Before 2nd Purge)	DTW @1106 (Before 3rd Purge)
1	41-50	100.9	4.15	3.21	0.232	5.84	5.84	5.84
2	62-72	101.9	4.22	3.21	0.250	5.78	5.79	5.78
3	91-101	102.9	4.27	3.21	0.252	5.75	5.80	5.76
4	113-123	103.9	4.31	3.21	0.254	5.92	5.94	5.92
5	136-146	104.9	4.35	3.21	0.257	5.81	5.82	5.82
6	153-163	105.9	4.4	3.21	0.259	5.75	5.75	5.75
7	168-175	106.9	4.44	3.21	0.261	5.76	5.79	5.76

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	19K100091
	Geotech	Turbidimeter	17061375

Tank ran out ↗ half way. Wrong time.

b. 1st Purge Time/Duration 8/30 purged c. 2nd Purge Time/Duration 9/16 900-9:03:51 (3:51) min
d. 3rd Purge Time/Duration 1000-10:05:12 (5:12)/min e. 4th Purge Time/Duration 11:00-11:05:31 (5:31) min

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1140	3:00	8.57	13.2	1110	1.35	-161.5	0.02		Clear/org decay
2	1145	3:00	7.91	13.0	908	0.71	-152.6	0.02		" "
3	1150	3:00	7.68	12.0	951	0.63	-140.0	0.02		" "
4	1155	3:00	7.27	13.2	940	0.36	-131.2	0.02		" "
5	1200	3:00	7.17	13.2	958	0.19	-111.2	0.02		" "
6	1205	3:00	7.11	13.0	919	2.06	-97.5	0.02		" "
7	1210	3:00	7.06	12.9	956	0.39	-110.2	0.02		" "

3. SAMPLE COLLECTION: all say 091621

Sample ID	Analysis	Time
21A-AE112R1-091621-1	VOCs , Total (As), Dissolved (As)	1250
21A-AE112R2-091621-1	VOCs	1255
21A-AE112R3-091621-1	VOCs	1300
21A-AE112R4-091621-1	VOCs	1305
21A-AE112R5-091621-1	VOCs	~~1310~~ 1309
21A-AE112R5-091621-2	VOCs	1310
21A-AE112R6-091621-1	VOCs, VPH, EPH Total/Diss (As, Fe, Mn), Cl, SO4, NO2, NO3, S	~~1320~~ 1315
	TOC, gases (M, Ethe, Etha, Ace, Pr), Diss H, CSIA	
21A-AE112R7-091621-1	VOCs	~~1325~~ 1320

Notes: Diss H: 1510-1530 @160 ml/min

Signature _____ Date 9.16.21

AECOM

Well ID: **EMW-10D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-8-21 Time: Start 1045 am/pm
Project No: 60552044 Finish 1115 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 70s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 29' c. Screen Length 10 (19' - 29') 2" PVC Casing
b. Water Table Depth 3.89 d. Pump Intake 24'
c. Water Column (a-b) e. Calculated System Purge Volume 1.61 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro DSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1050	0.9	17.0	7.05	2535	0.99	195.6	8.86	180	4.03	Clear/No
1055	1.8	17.5	5.65	2555	0.34	221.8	3.41	180	3.94	" "
1100	2.7	17.4	5.51	2552	0.31	228.9	5.66	180	3.89	" "
1105	3.6	17.1	5.21	2543	0.26	232.1	5.33	180	3.89	" "
1110	4.5	17.1	5.10	2534	0.25	228.9	5.88	180	3.91	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

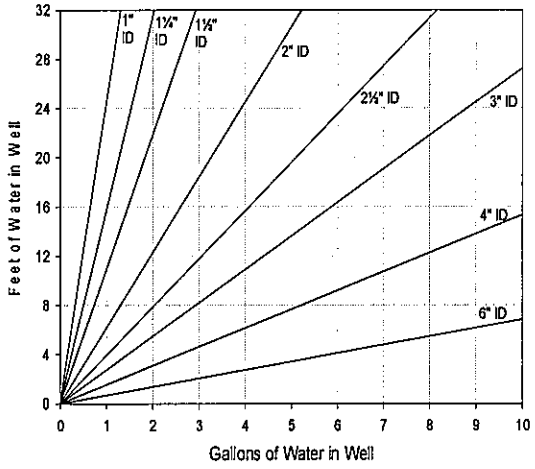
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-EMW10D-090821-1	40mL VOA	3	HCL	VOCs 8260C	1115

Comments

Signature Date 9-8-21

AECOM

Well ID: EMW-10D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[27 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.537 L ; 0.537 L x 3 well vol. = 1.61 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **EMW-10R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-8-21 Time: Start 0910 am/pm
Project No: 60552044 Finish 1042 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny, 70? Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 52' c. Screen Length 10 (42' - 52') 2" PVC Casing
b. Water Table Depth 3.87 d. Pump Intake 47'
c. Water Column (a-b) e. Calculated System Purge Volume 2.28 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro DSS Serial Number 19K100698

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0915	0.9	17.2	9.67	952	2.30	140.3	9.20	180	5.34	clear / No
0920	1.8	17.2	9.76	959	2.20	133.5	10.00	180	6.74	" "
0925	2.7	17.0	9.79	960	2.22	127.4	7.87	180	7.45	" "
0930	3.6	17.2	9.80	955	2.24	123.0	4.80	160	7.66	" "
0935	4.5	17.3	9.84	959	2.17	116.6	3.72	160	7.81	" "
0940	5.4	17.2	9.84	959	2.17	112.8	3.91	160	8.09	" "
0945	6.2	17.1	9.84	959	2.14	108.9	3.46	160	8.14	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

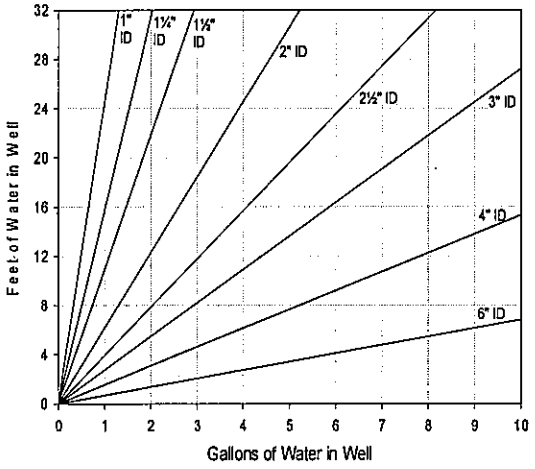
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-EMW10R-090821	40mL VOA	3	HCL	VOCs 8260C	0955
	250 mL plastic	1	HNO3	Total Fe, Mn	-
	250 mL plastic	1	HNO3	Dissolved Fe, Mn (field filter)	-
	500 ml plastic	1	None	Cl, SO4, NO2, NO3	-
	250 mL plastic	1	NaOH, Zn Ace	Sulfide	-
	250 mL Amber	1	H3PO4	Total Organic Carbon	-
	40 mL VOA	3	BZK Cl	(Meth, Ethe, Ace, Prop)	-
	40 mL VOA	4	HCl	CSIA 13C/ 12C	-
	vial	1	None	Diss. Hydrogen	1055

Comments Hydrogen Sample Time: 1015 - 1035 (20 mins) 180ml/min

Signature [signature] Date 9-8-21

AECOM

Well ID: EMW-10R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[50 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.76 L ; 0.76 L x 3 well vol. = 2.28 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
0950	7.0	16.9	9.84	959	2.11	106.5	3.11	160	8.15	Clear / No
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **EMW-11D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-8-21 Time: Start 1310 am/pm
Project No: 60552044 Finish 1355 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny, 80s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 32' c. Screen Length 10 (22' - 32') 2" PVC Casing
b. Water Table Depth 3.58 d. Pump Intake 27'
c. Water Column (a-b) e. Calculated System Purge Volume 1.70 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProDSS Serial Number 19K10069 2

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1315	0.9	19.0	7.20	561	0.62	84.5	161	180	3.68	Iron Flocks
1320	1.8	18.7	6.19	628	0.35	124.1	174	180	3.71	Iron Flocks
1325	2.7	19.0	6.09	928	0.33	-18.8	47.0	180	3.68	Iron Flocks
1330	3.6	19.2	6.03	1008	0.45	-25.4	376	180	3.70	Slight Iron Flocks
1335	4.5	18.8	6.06	1325	0.39	-41.9	3.67	180	3.69	Clear / No
1340	5.4	18.7	6.09	1523	0.40	-56.2	1.17	180	3.69	" "
1345	6.3	18.8	6.11	1529	0.37	-57.0	1.02	180	3.70	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

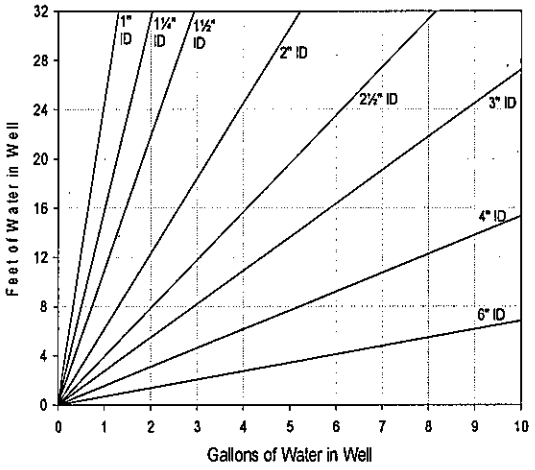
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-EMW11D-090821	40mL VOA	3	HCL	VOCs 8260C	1355

Comments

Signature Date 9-8-21

AECOM

Well ID: EMW-11D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[30 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.566 L ; 0.566 L x 3 well vol. = 1.70 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1350	7.2	18.7	6.12	1545	0.27	-60.1	0.91	180	3.69	N N
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **EMW-11R1**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.8.21 Time: Start 1110 am/pm
Project No: 60552044 Finish 1145 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 89 c. Screen Length 10 (79' - 89') 0.75" PVC Casing
b. Water Table Depth 3.83 d. Pump Intake 84'
c. Water Column (a-b) e. Calculated System Purge Volume 3.36 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	pro DSS	19K100091
	geotech	turbidimeter	17061375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L) ✓	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1115	1.00	16.9	7.30	753	0.32	-122.4	0.02	200	0.00	Clear / none
1120	2.00	16.9	7.24	755	0.25	-120.4	0.02	200	0.00	" "
1125	3.00	16.8	7.20	762	0.24	-118.4	0.02	200	0.00	" "
1130	4.00	16.8	7.19	776	0.20	-112.5	0.02	200	0.00	" "
1135	5.00	16.8	7.11	782	0.22	-108.2	0.02	200	0.00	" "
1140	6.00	16.8	7.11	781	0.21	-107.6	0.02	200	0.00	" "
				- Stable @ 1140						

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

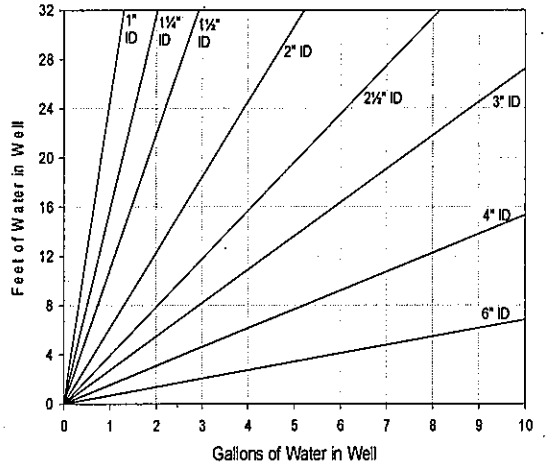
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-EMW11R1-090821-1	40mL VOA	3	HCL	VOCs 8260C	1145

Comments MS/MSD

Signature [signature] Date 9.8.21

AECOM

Well ID: EMW-11R1



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[87 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.12 L ; 1.12 L x 3 well vol. = 3.36 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **EMW-11R2**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.8.21 Time: Start 0855 am/pm
Project No: 60552044 Finish 0935 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Hayeredt

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 114 c. Screen Length 10 (104' - 114') 0.75" PVC Casing
b. Water Table Depth ~~3.88~~ 3.92 d. Pump Intake 109'
c. Water Column (a-b) e. Calculated System Purge Volume 4.08 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	PRO DSS	19K100091
	geotech	turbidimeter	17061375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0900	1.00	17.9	8.20	796	1.04	-111.5	0.02	200	0.00	clear / none
0905	2.00	18.2	7.67	845	0.35	-124.3	0.02	200	0.00	" "
0910	3.00	18.2	7.12	861	0.30	-113.7	0.02	200	0.00	" "
0915	4.00	18.2	7.09	865	0.25	-93.6	0.02	200	0.00	" "
0920	5.00	18.1	6.98	893	0.22	-87.3	0.02	200	0.00	" "
0925	6.00	18.1	7.02	885	0.19	-93.0	0.02	200	0.00	" "
0930	7.00	18.1	7.01	886	0.18	-91.0	0.02	200	0.00	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

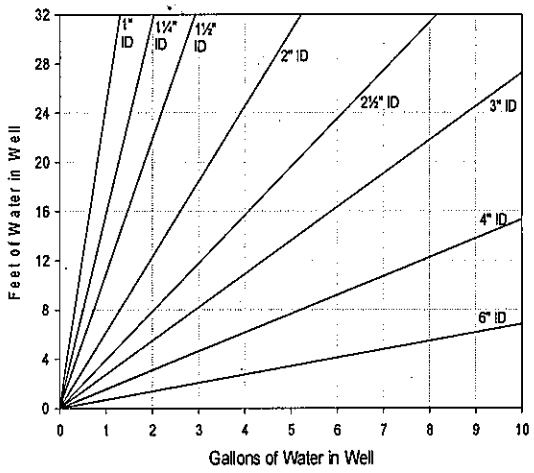
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-EMW11R2-090821	40mL VOA	5	HCL	VOCs 8260C, VPH	0935
	40mL V	7	HCL	CSIA, PIANO	
	1L A	3	HCL (2), None	EPH and PAH	
	250 mL P	2	HNO3	Tot & Diss. (Fe, Mn, As)	
	500 mL P	1	none	Cl, NO3, NO2, SO4	
	250mL P	1	zinc acet.	Sulfide	
	40mL V	3	BZK Cl	M, Etha, Ethe, Ac, Pr	
	vial	1	none	Diss. Hydrogen	
	250 mL A	1	H3PO4	TOC	

Comments Hydrogen Sample Info: pumped @ 160 ml/min
Time = 1006 - 1026
elapsed = 20 min

Signature [signature] Date 9.8.21

AECOM

Well ID: EMW-11R2



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[112 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.36 L ; 1.36 L x 3 well vol. = 4.08 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **EMW-11R3**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.8.21 Time: Start 1305 am/pm
Project No: 60552044 Finish 1340 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 168 c. Screen Length 10 (158' - 168') 0.75" PVC Casing
b. Water Table Depth 3.74 d. Pump Intake 163'
c. Water Column (a-b) e. Calculated System Purge Volume 5.66 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	pro DSS	19K100091
	geotech	turbidimeter	17061375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1310	1.00	17.0	7.56	726	0.47	-114.7	18.6	200	0.00	clear/none
1315	2.00	17.4	7.57	731	0.34	-128.7	21.8	200	0.00	" "
1320	3.00	17.1	7.59	720	6.31	-110.2	5.75	200	0.00	" "
1325	4.00	17.2	7.59	723	0.27	-120.1	0.02	200	0.00	" "
1330	5.00	17.2	7.59	726	0.24	-119.6	0.02	200	0.00	" "
1335	6.00	17.2	7.59	728	0.21	-116.7	0.02	200	0.00	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

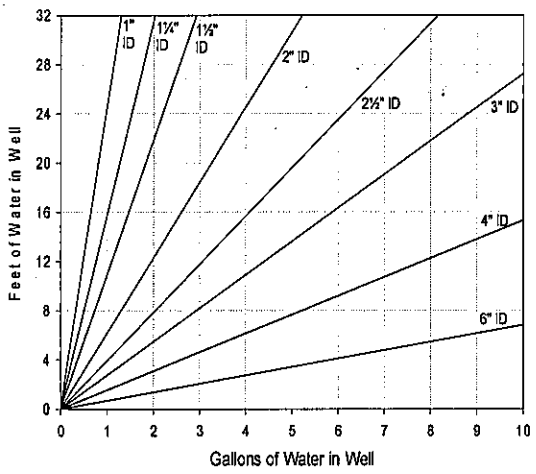
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-EMW11R3-090821-1	40mL VOA	3	HCL	VOCs 8260C	1340

Comments

Signature Date 9.8.21

AECOM

Well ID: EMW-11R3



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[166 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.89 L ; 1.89 L x 3 well vol. = 5.66 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: GZA-6

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.8.21 Time: Start 1405 am/pm
Project No: 60552044 Finish 1440 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 18' c. Screen Length 10 (8' - 18') 2" PVC
b. Water Table Depth 5.58 d. Pump Intake 13'
c. Water Column (a-b) e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	pro DSS	19K100091
Geotech	Turbidmeter	17061375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L) ✓	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1410	1.00	19.0	6.40	187.5	0.29	7.7	0.02	200	0.00	Clear/none
1415	2.00	18.8	6.19	186.2	0.20	16.6	0.02	200	0.00	" "
1420	3.00	18.8	6.13	186.7	0.18	19.0	0.16	200	0.00	" "
1425	4.00	18.8	6.10	185.6	0.16	19.5	0.02	200	0.00	" "
1430	5.00	18.8	6.10	185.4	0.16	19.7	0.02	200	0.00	" "
1435	6.00	18.8	6.69	185.6	0.15	19.1	0.02	200	0.00	" "
				- Stable @		1435				

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

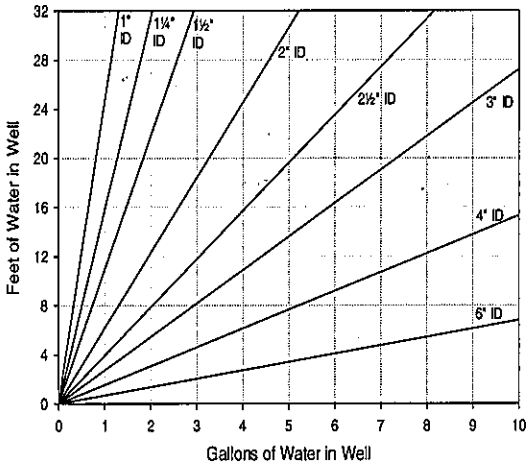
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-GZA6-090821	250mL P	1	HNO3	Total (As)	1440
	250mL P	1	HNO3	Diss.(As) FF	1440

Comments

Signature Date 9.8.21

AECOM

Well ID: GZA-6



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[11 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.382 L ; 0.382 L x 3 well vol. = 1.15 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **GZA-10**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-8-21 Time: Start 1415 am/pm
Project No: 60552044 Finish 1450 am/pm
Site Location: 50 Fordham Rd Site. Wilmington, MA
Weather Conds: Sunny, 80s Collector(s):

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 38' c. Screen Length 25' (13' - 38') 1.5" PVC
b. Water Table Depth 3.54 d. Pump Intake 25.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.65 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro DSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1420	0.9	17.3	6.35	1753	0.75	135.0	5.41	180	3.58	Clear / No
1425	1.8	16.7	5.44	1775	0.35	131.4	5.08	180	3.58	" "
1430	2.7	16.7	5.38	1747	0.28	131.8	4.18	180	3.59	" "
1435	3.6	16.7	5.31	1694	0.26	144.9	4.01	180	3.58	" "
1440	4.5	16.7	5.32	1667	0.24	145.1	4.39	180	3.59	" "
1445	5.4	16.8	5.37	1652	0.24	141.9	5.04	180	3.59	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

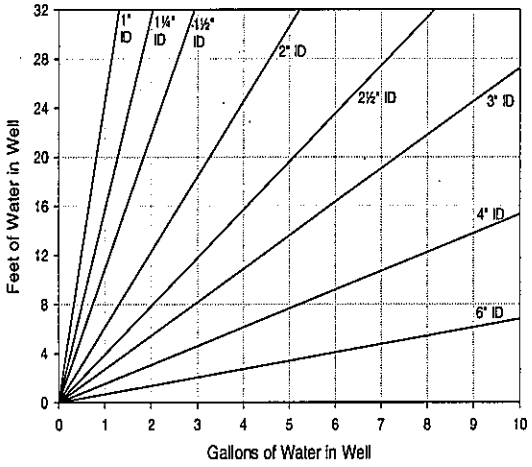
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-GZA10-090821-1	250mL P	1	HNO3	Total (Fe, As, Mn)	1450
	250mL P	1	HNO3	Diss.(Fe, As, Mn) FF	

Comments

Signature [signature] Date 9-8-21

AECOM

Well ID: GZA-10



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[28.5 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.551 L ; 0.551 L x 3 well vol. = 1.65 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: GZA-12

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/14/21 Time: Start 1410 am/pm
Project No: 60552044 Finish ____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: ≤ 70s Sunny Collector(s): A Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 24.5' c. Screen Length 15 (9.5' - 24.5') 2" PVC Casing
b. Water Table Depth 7.57 d. Pump Intake 17'
c. Water Column (a-b) 16.93 e. Calculated System Purge Volume 1.40 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	pro DSS	19K100091
Geotech	turbmeter	19062099

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1426	0.875	18.5	6.08	1763	2.29	137.0	6.13	175	0.10	Clr/none
1431	1.75	18.0	5.80	1808	1.95	170.8	4.08	175	0.11	"
1436	2.63	17.5	5.69	1884	1.66	184.4	9.03	"	0.11	"
1441	3.5	17.5	5.69	1939	1.47	191.8	2.47	"	"	"
1446	4.38	17.5	5.66	1993	1.32	197.0	0.64	"	"	"
1451	5.25	17.5	5.65	2031	1.18	199.5	1.06	"	"	"
1456	6.13	17.4	5.64	2065	1.11	201.2	465	"	"	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

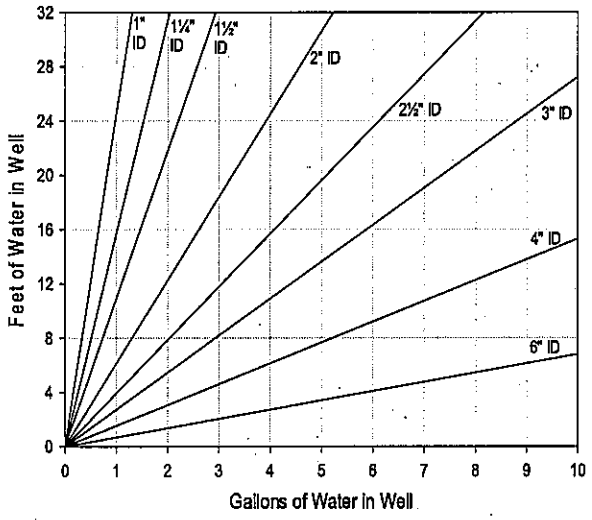
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-GZA12-09142-1	40mL VOA	3	HCL	VOCs 8260C	1525
	500 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	250 mL A	1	H3PO4	TOC	
	vial	1	none	diss. Hydrogen	
	250 mL Amber	1	NaHSO4	1,4 dioxane	
	40mL V	3	belzal.chlor.	gases (Acet, Prop, Meth, Eth, Etha)	

Comments

Signature [signature] Date 9/14/2021

AECOM

Well ID: GZA-12



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[20 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.469 L ; 0.469 L x 3 well vol. = 1.41 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1501	~~7.00~~	17.5	5.63	2086	~~1.04~~ 1.02	205.6	1.11	175	~~0.1~~ 0.11	Clear/None
1506	~~7.875~~	17.4	5.65	2109	0.95	207.6	1.52	175	0.11	"
1511	8.75	17.3	5.65	2115	0.92	209.2	0.85	175	0.11	"
1516	9.63	17.2	5.64	2132	0.86	211.6	0.77	"	"	"

7.88

Hydrogen Bubble Strip Sampling: 180 ml/min

AECOM

Well ID: GZA-14

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/21/21 Time: Start 1105 am/pm
Project No: 60552044 Finish 1205 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 77 60's partly cloudy Collector(s): A-Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 49 c. Screen Length 10 (39' - 49') 1.5" PVC Casing
b. Water Table Depth 5.22 06.22 d. Pump Intake 44'
c. Water Column (a-b) 42.78 e. Calculated System Purge Volume 2.19 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	19K100041
	Cropton	Turbidity meter	17111150

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1114	0.96	12.4	6.44	713	6.41	24.0	147	142	0.00	Ferrous/none T: 6.37 NTU
1119	1.92	12.4	6.63	714	6.66	32.7	2.67	142	0.00	" "
1124	2.92	12.6	6.09	1159	3.24	33.5	1.41	200	0.50	"
1129	3.87	12.5	5.81	1340	0.54	31.2	0.02	140	0.01	"
1134	4.82	12.5	5.81	1355	0.46	28.2	0.02	140	0.03	"
1139	5.77	12.5	5.40	1364	0.36	26.7	0.02	140	0.02	"
1144	6.72	12.5	5.74	TC 0	0.29	26.5	~~0.02~~	140	0.03	"

1375 0.02

d. Acceptance criteria pass/fail (continued on back)

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

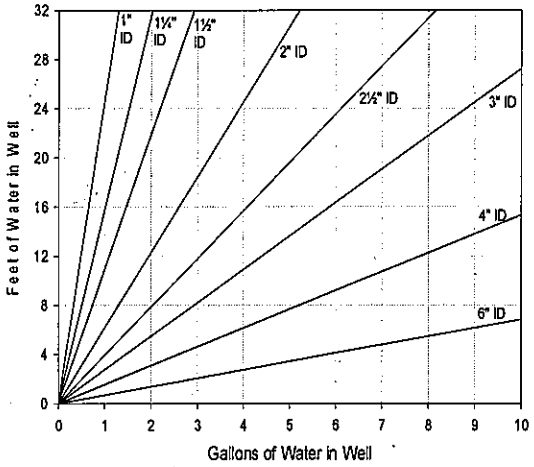
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-GZA14-092121-1	40mL VOA	3	HCL	VOCs 8260C	~~1155~~ 1150

Comments Need vice grips to open PVC Cover

Signature [signature] Date 9/21/21

AECOM

Well ID: GZA-14



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[47 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.731 L ; 0.731 L x 3 well vol. = 2.19 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **GZA-14A**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/21/21 Time: Start 910 am/pm
Project No: 60552044 Finish 1100 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60's, Partly Sunny Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 15 c. Screen Length 15 (0' - 15') 1.5" PVC Casing
b. Water Table Depth 5.98 d. Pump Intake 7.5'
c. Water Column (a-b) 9.02 e. Calculated System Purge Volume 1.15 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	-ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	14K10004
	Geofem	Turbidity meter	17111150

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
936	0-86	14.8	5.72	758	1.13	62.8	15.9	172	0.00	orange tint/ none
941	1-72	14.1	5.38	783	0.46	61.4	4.72	172	0.01	Lt particles/ "
946	2-58	13.8	5.44	752	0.33	50.7	0.02	172	0.01	" "
951	3-44	13.7	5.48	752	0.29	45.0	0.02	"	"	" "
956	4.30	13.6	5.48	647	0.24	45.2	0.02	"	"	" "
1001	5.16	13.6	5.50	675	0.21	44.3	0.02	"	0.01	" "
1006	6-02	13.7	5.50	656	0.14	44.2	0.02	"	0.01	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

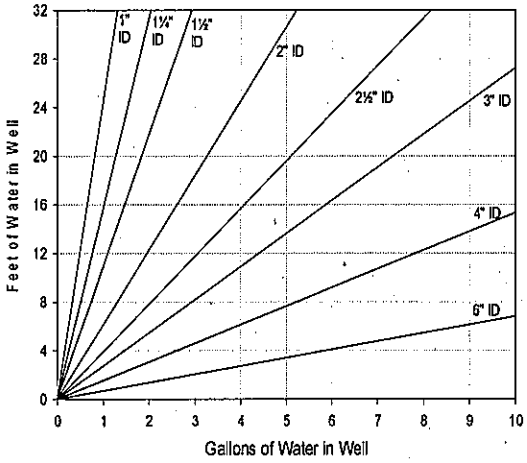
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-GZA14A-092121-1	40mL VOA	3	HCL	VOCs 8260C	1040
	250mL P	1	HNO3	Total (As)	
	250mL P	1	HNO3	Diss.(As) FF	
21A-GZA14A-092121-2	40mL VOA	3	HCL	VOCs 8260C	1045
	250mL P	1	HNO3	Total (As)	
	250mL P	1	HNO3	Diss.(As) FF	

Comments Used extension to grab turbidity

Signature Adam Grossman Date 9/21/21

AECOM

Well ID: GZA-14A



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[11 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.382 L ; 0.382 L x 3 well vol. = 1.15 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1011	6.88	13.7	5.52	646	0.16	42.6	0.02	172	~~0.01~~ 0.01	Clr/NDO
1016	7.74	13.7	5.53	633	0.15	42.7	"	"	"	"
1021	8.60	13.7	5.51	611	0.15	45.2	0.02	"	"	"
1026	9.46	13.7	5.52	620	0.15	43.6	0.02	"	"	"
1031	10.32	13.4	5.52	605	0.14	45.0	0.51	"	"	"
~~1230~~	~~11.18~~									
~~1241~~	~~13.04~~									

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **GZA-101R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/14/21 Time: Start 1340 am/pm
Project No: 60552044 Finish ____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 75°F Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 38' c. Screen Length 2 (36' - 38') 0.55" PVC Casing
b. Water Table Depth NG d. Pump Intake 37'
c. Water Column (a-b) ____ e. Calculated System Purge Volume 1.90 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20K101853
	GeoTech	PTM	1706-1341

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1345	0	17.9	6.85	3209	1.65	-48.8	3.1	100	NG	Clear/none
1350	1	15.7	6.75	3250	0.13	-116.0	1.7	100	↓	↓
1355	2	15.6	6.74	3244	0.11	-114.0	1.4	100		
1400	3	15.7	6.74	3245	0.11	-113.7	1.0	100	↓	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

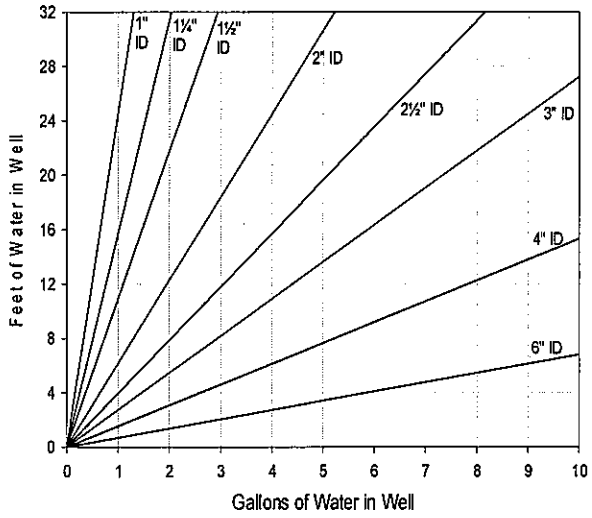
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-GZA101R-091421-1	40mL VOA	3	HCL	VOCs 8260C	1405
	250 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	vial	1	none	diss. Hydrogen	
	40mL V	3	belzal.chlor.	gases (Acet, Prop, Meth, Eth, Etha)	
	250 mL A	1	H3PO4	TOC	

Comments Hydrogen purge @ 110ml / start @ 1427 for 3 mins / Sampled @ 1457

Signature [signature] Date 9/14/21

AECOM

Well ID: GZA-101R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[37 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.634 L ; 0.634 L x 3 well vol. = 1.90 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **GZA-102S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.16.21 Time: Start 1040 am/pm
Project No: 60552044 Finish 1115 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Cloudy, 60s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 10.7' c. Screen Length 9' (1.7' - 10.7') 1.5" PVC Casing
b. Water Table Depth 5.06 d. Pump Intake 6.2'
c. Water Column (a-b) e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro DSS	19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1045	0.9	22.0	7.03	72.7	4.98	-5.6	2.25	180	5.12	Clear/No
1050	1.8	21.8	6.88	72.4	4.95	9.8	1.65	180	5.13	" "
1055	2.7	21.8	6.83	72.4	4.96	20.1	0.44	180	5.11	" "
1100	3.6	21.8	6.80	72.4	4.93	29.6	0.57	180	5.13	" "
1105	4.5	21.8	6.79	72.4	4.93	35.0	0.02	180	5.13	" "
1110	5.4	21.8	6.79	72.5	4.91	37.6	0.02	180	5.14	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

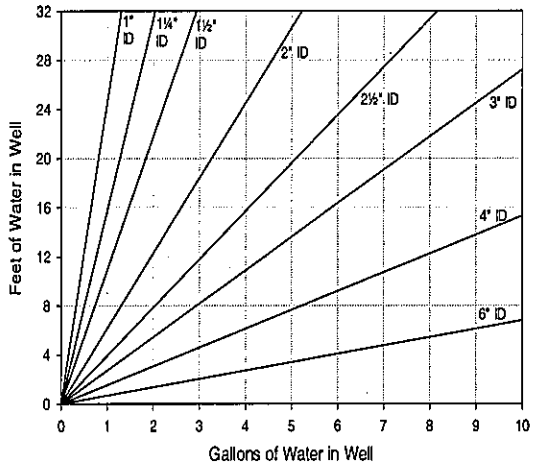
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-GZA102S-091621-1	40mL VOA	3	HCL	VOCs 8260C	1115
	1L A	3	HCl/None	EPH	
	40mL VOA	3	HCL	VPH	

Comments

Signature [signature] Date 9.16.21

AECOM

Well ID: GZA-102S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: GZA-105D

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.15.21 Time: Start 0850 am/pm
Project No: 60552044 Finish 1005 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 26' c. Screen Length 10 (16' - 26') 1.5" PVC Casing
b. Water Table Depth 9.50 d. Pump Intake 21'
c. Water Column (a-b) e. Calculated System Purge Volume 1.52 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	19K100692
	geotech	turbidmeter	17111530

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0930	1.00	20.2	6.02	2195	0.40	131.5	50.5	200	0.00	clear w/ iron suspended floc, no odor
0935	2.00	20.0	5.74	2194	0.28	90.2	11.8	200	0.00	" "
0940	3.00	20.0	5.74	2191	0.25	84.2	11.0	200	0.00	" "
0945	4.00	20.1	5.75	2183	0.23	77.2	10.3	200	0.00	" "
0950	5.00	20.2	5.77	2189	0.22	72.4	7.62	200	0.00	" "
0955	6.00	20.1	5.78	2184	0.21	70.9	6.11	200	0.00	" "
1000	7.00	20.1	5.79	2184	0.21	70.1	6.02	200	0.00	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

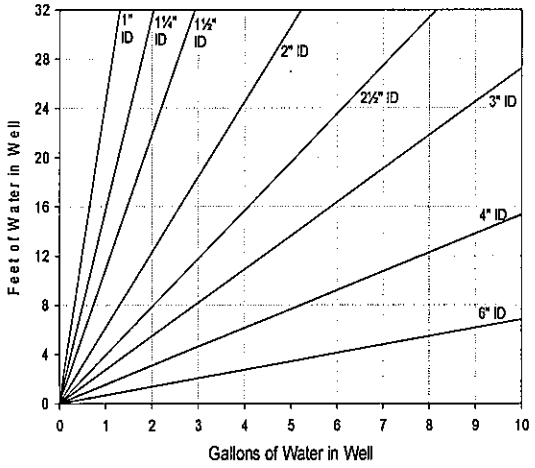
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-GZA105D-091521-1	40mL VOA	5	HCL	VOCs 8260C, VPH	1005
	250mL P	2	HNO3	Total & Diss (Fe, Mn)	
	500 mL P	1	None	Cl, SO4, NO2, NO3	
	1L A	3	HCL(2), None	EPH and PAH	
	250 mL A	1	NaHSO4	1,4-dioxane	
	250mL P	1	zinc acet.	Sulfide	
	40mL V	3	BZK Cl	M, Etha, Ethe, Ac, Pr	
	vial	1	none	Diss. Hydrogen ×p	
	250 mL A	1	H3PO4	TOC	
	40mL V	7	HCL	CSIA, PIANO ×p	
	filter	1	None	Microbial ×p	
21A-GZA105D-091521-2	SAME AS ABOVE				1010

Comments

Signature Date 9.15.21

AECOM

Well ID: GZA-105D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[24 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.508 L ; 0.508 L x 3 well vol. = 1.52 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **GZA-105R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/14/21 Time: Start 1045 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): Dylan Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 36.5' c. Screen Length 2 (34.5' - 36.5') 0.5" PVC Casing
b. Water Table Depth 4.11 d. Pump Intake 35.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.93 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProDSS	19K100629
	GeoTech	PTM	1706357

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1100	1.5	18.5	7.23	1081	0.69	-84.9	4.76	150	28.81	clear/none
1110	3	18.6	6.99	1110	0.40	-80.6	0.76	150	28.86	"
1115	4.5	18.3	6.94	1121	0.34	-66.5	0.52	150	28.68	"
1120	6	18.3	6.90	1128	0.33	-60.4	1.56	150	28.74	"
1125	7.5	18.3	6.88	1133	0.31	-54.7	0.02	150	28.74	"
1130	9	18.3	6.86	1135	0.29	-46.7	0.02	150	28.74	"
1135	10.5	18.2	6.87	1137	0.30	-47.1	0.02	150	28.74	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

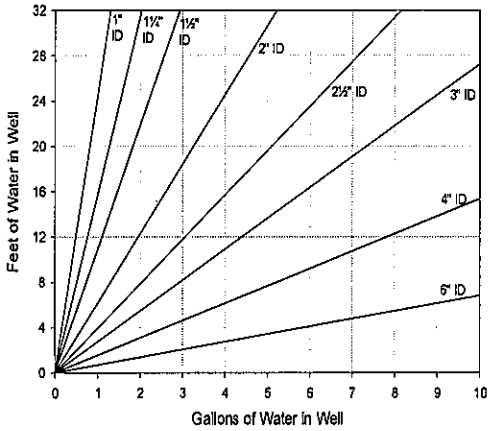
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-GZA105R-091421-1	40mL VOA	3	HCL	VOCs 8260C	1140
	250mL P	1	HNO3	Total (Fe, Mn)	↓
	250mL P	1	HNO3	Diss.(Fe, Mn) FF	↓
	250mL P	1	zinc acet.	Sulfide	↓
	40mL V	3	BZK Cl	M, Etha, Ethe, Ac, Pr	↓
	vial	1	none	Diss. Hydrogen	
	250 mL A	1	H3PO4	TOC	1140
	40mL V	7	HCL	CSIA, PIANO	↓
	500 mL P	1	None	Cl, SO4, NO2, NO3	↓

Comments Diss H = 1208-1233 (25 min) @ 140 mL/min

Signature [signature] Date 9/14/21

AECOM

Well ID: GZA-105R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[38 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.644 L ; 0.644 L x 3 well vol. = 1.93 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **GZA-105S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.15.21 Time: Start 1230 am/pm
Project No: 60552044 Finish 1340 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 14' c. Screen Length 10 (4' - 14') 1.5" PVC Casing
b. Water Table Depth 4.57 d. Pump Intake 9'
c. Water Column (a-b) e. Calculated System Purge Volume 1.17 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Serial Number

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1245	1.00	24.6	6.14	1862	0.81	26.2	18.3	200	0.00	Clear w/ Iron floc
1250	2.00	23.8	5.62	1706	0.25	-40.1	2.75	200	0.00	" "
1255	3.00	23.7	5.69	1760	0.23	-50.9	1.81	200	0.00	" "
1300	4.00	23.6	5.75	1807	0.23	-59.9	0.02	200	0.00	Clear
1305	5.00	23.5	5.77	1534	0.22	-65.3	0.02	200	0.00	" "
1310	6.00	23.7	5.81	1621	0.22	-73.8	0.02	200	0.00	" "
1315	7.00	23.8	5.92	1672	0.21	-89.1	0.02	200	0.00	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

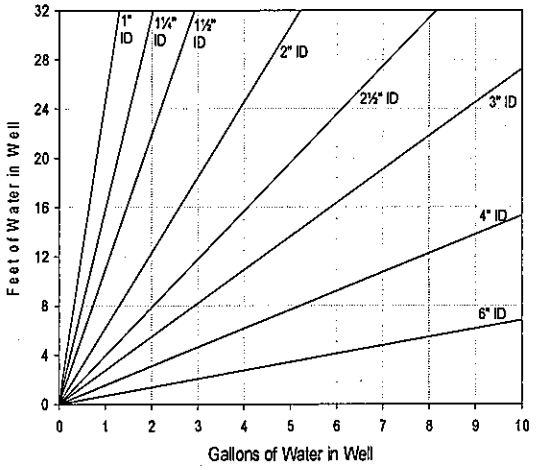
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-GZA105S-091521-1	40mL VOA	9	HCL	VOCs 8260C, VPH, PIANO	1340
	250mL P	1	HNO3	Total (As)	
	250mL P	1	HNO3	Diss.(As) FF	
	1L A	3	HCL(2), None	EPH and PAH	

Comments

Signature Date 9.15.21

AECOM

Well ID: GZA-105S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[12 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.391 L ; 0.391 L x 3 well vol. = 1.17 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1320	8.00	24.0	6.02	1699	0.20	-96.7	0.02	200	0.00	Clear/none
1325	9.00	24.2	6.11	1726	0.19	-102.9	0.02	200	0.00	" "
1330	10.00	24.3	6.15	1738	0.18	-107.1	0.02	200	0.00	" "
1335	11.00	24.3	6.16	1742	0.17	-109.2	0.02	200	0.00	" "
				- Stable @ 1335						
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **IP-1R2**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-17-21 Time: Start 1310 am/pm
Project No: 60552044 Finish 1400 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 70s Collector(s): BH

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 74' c. Screen Length 20 (54' - 74') 2" PVC Casing
b. Water Table Depth 4.30 d. Pump Intake 64'
c. Water Column (a-b) e. Calculated System Purge Volume 2.77 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro DSS Serial Number 19A100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1315	0.7	19.6	6.68	2193	0.84	-3.1	7.67	140	5.44	Clear, No
1320	1.4	19.9	6.86	2249	0.43	-56.8	12.5	140	5.91	" "
1325	2.1	19.1	7.16	2250	0.33	-105.9	20.0	140	6.45	" "
1330	2.8	19.1	7.30	2250	0.29	-121.4	19.1	140	6.74	" "
1335	3.4	19.8	7.39	2238	0.29	-133.9	17.1	120	6.81	" "
1340	4.0	19.4	7.50	2242	0.33	-141.0	21.1	120	6.94	" "
1345	4.6	19.2	7.55	2220	0.25	-149.1	22.1	120	6.95	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

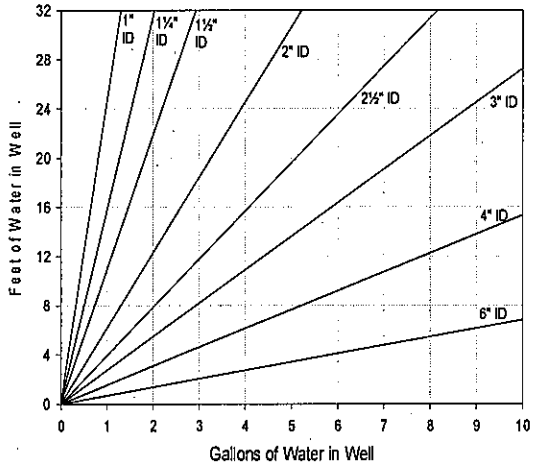
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-IP1R2-091321-1	40mL VOA	3	HCL	VOCs 8260C	1355
21A-IP1R2-091321-2	40mL VOA	3	HCL	VOCs 8260C	1400

Comments

Signature Date 9.21.21

AECOM

Well ID: IP-1R2



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[67 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.925 L ; 0.925 L x 3 well vol. = 2.77 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1350	5.2	18.8	7.62	2231	0.24	-141.6	20.9	170	6.98	Clear / No

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: MW-4

Low Flow Ground Water Sample Collection Record 1055

Client: Lockheed Martin Corp. Date: 9/20/21 Time: Start ~~1250~~ am/pm
Project No: 60552044 Finish 1145 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70 S mostly sunny Collector(s): A. Grossman / D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 28' c. Screen Length 10 (18' - 28') 1.5" PVC Casing
b. Water Table Depth 1.47 d. Pump Intake 23'
c. Water Column (a-b) 26.03 e. Calculated System Purge Volume 1.58 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro DSS	19K100041
Geotech	Turbidity	17111530

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1111	1.00	10.8	6.49	1004	0.89	-37.4	3.85	200	0.05	Cir/none
1116	2.00	11.0	6.49	1005	0.34	~~-58.5~~ -58.0	2.02	200	0.06	"
1121	3.00	~~10.9~~ 10.9	6.52	999	0.27	-65.5	4.56	200	0.06	FR Flow none
1126	4.00	10.9	6.54	996	0.20	-69.8	4.96	200	"	"
1131	5.00	10.7	6.55	994	0.17	-72.9	6.71	200	"	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

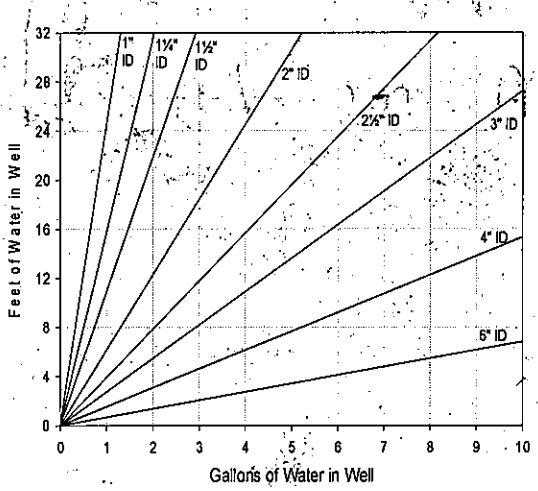
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-MW4-04202-1	40mL VOA	3	HCL	VOCs 8260C	1135
	250mL P	1	HNO3	Total (As)	
	250mL P	1	HNO3	Diss.(As) FF	
	250 mL A	1	NaHSO4	1,4-dioxane	

Comments

Signature Adam Gross Date 9/20/2021

AECOM

Well ID: MW-4



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[26 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.527 L ; 0.527 L x 3 well vol. = 1.58 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **MW-4A**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/20/21 Time: Start 950 am/pm
Project No: 60552044 Finish 1045 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 60's Collector(s): A Grossman + D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 48' c. Screen Length 10 (38' - 48') 1.5" PVC Casing
b. Water Table Depth 1.25 d. Pump Intake 43'
c. Water Column (a-b) 46.75 e. Calculated System Purge Volume 2.16 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro DSS	19K100091
Geotech	Turbidity meter	17111012111530

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1018	0.7	11.6	7.08	1249	1.33	-38.3	1.80	140	0.03	Clr/none
1023	1.40	11.4	6.46	1280	0.40	-59.7	0.02	140	0.03	" "
2.10 1028	~~0.84~~	11.3	6.34	1277	0.31	-64.4	0.02	140	"	"
1033	2.80	11.1	6.36	1266	0.24	-64.2	~~0.07~~ 0.42	140	"	"
1038	3.50	11.1	6.35	1259	0.18	~~-64.7~~ -71.0	2.65	140	"	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A, Explain below.
No min vol req'd

3. SAMPLE COLLECTION: Method: grab

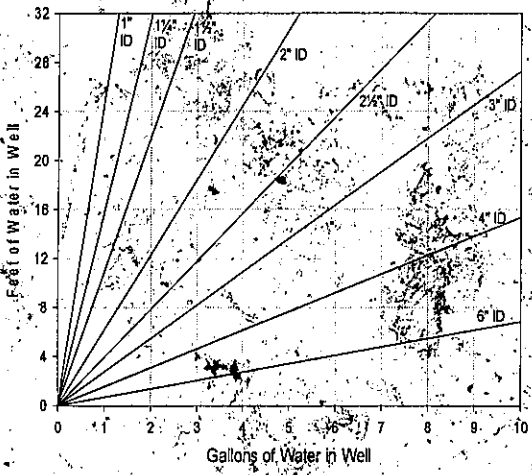
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-MW4A-092021-1	40mL VOA	3	HCL	VOCs 8260C	1040
	250mL P	1	HNO3	Total (As)	
	250mL P	1	HNO3	Diss.(As) FF	

Comments

Signature [signature] Date 9/20/21

AECOM

Well ID: MW-4A



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[46 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.721 L ; 0.721 L x 3 well vol. = 2.16 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **MW-5**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.21.21 Time: Start 1015 am/pm
Project No: 60552044 Finish 1050 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny, 60s Collector(s): B.K

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 38' c. Screen Length 10 (28' - 38') 1.5" PVC Casing
b. Water Table Depth 2.60 d. Pump Intake 33'
c. Water Column (a-b) e. Calculated System Purge Volume 1.87 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProDSS Serial Number 19H100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1020	0.6	11.9	5.88	1232	0.49	-48.6	5.21	120	2.61	Clear / No
1025	1.2	11.8	5.80	1225	0.41	-56.2	3.74	120	2.61	" "
1030	1.8	11.8	5.79	1200	0.35	-63.0	3.30	120	2.61	" "
1035	2.4	11.6	5.81	1151	0.31	-67.5	3.22	120	2.60	" "
1040	3.0	11.7	5.81	1143	0.28	-70.2	4.42	120	2.61	" "
1045	3.6	11.7	5.83	1131	0.28	-71.9	4.20	120	2.60	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

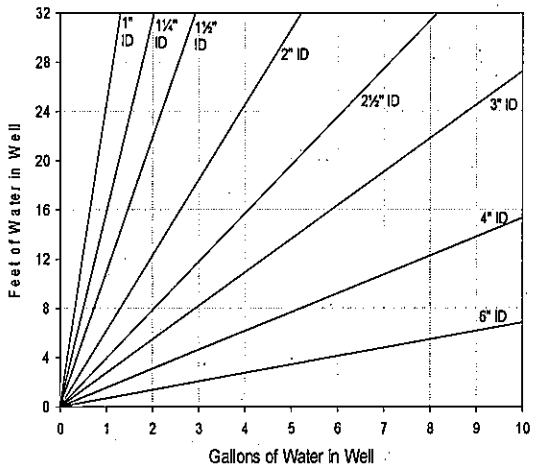
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-MW5-092121-1	40mL VOA	3	HCL	VOCs 8260C	1050

Comments

Signature [signature] Date 9.21.21

AECOM

Well ID: MW-5



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[36 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.624 L ; 0.624 L x 3 well vol. = 1.87 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

Well ID: **MW-7**

AECOM

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/21/21 Time: Start 1330 am/pm
Project No: 60552044 Finish ____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 603 Mostly Cloudy Collector(s): A Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 25 c. Screen Length 10 (15' - 25') 1.5" PVC Casing
b. Water Table Depth 3-47 d. Pump Intake 17'
c. Water Column (a-b) 21-13 e. Calculated System Purge Volume 1.49 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro DSS	19K 10091
Geotech	turbidity meter	17111150

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1352	0.835	15.1	5.66	2105	1.01	37.5	23.3	167	0.06	Clr/none
1357	1.67	15.0	5.64	2104	0.31	33.3	19.3	167	0.06	"
1402	2.62	14.9	5.65	2103	0.26	31.1	77.3	189	0.06	~~Fe~~ Fe Floc
1407	~~4.29~~	14.7	5.65	2102	0.21	29.9	86.0	189	0.06	Fe Floc/none
1412	~~0.45~~	14.8	5.66	~~2107~~ 2111	0.18	28.2	42.9	189	0.06	"
1417	5.45	14.6	5.66	2106	0.16	26.8	27.4	190	0.05	"
1427	6.40	14.6	5.66	2103	0.14	24.9	26.2	190	0.05	

3.56
4.50

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

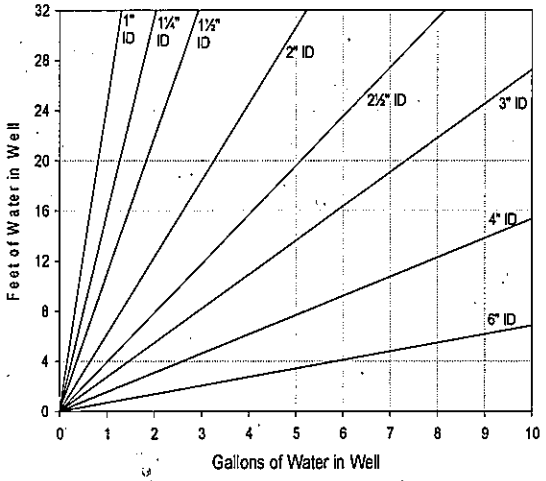
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-MW7-~~[illegible]~~-1	40mL VOA	3	HCL	VOCs 8260C	
92122-1					

Comments MS/MSD

Signature [signature] Date 9/21/21

AECOM

Well ID: MW-7



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[23 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.498 L ; 0.498 L x 3 well vol. = 1.49 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1427	7.35	14.6	5.66	2103	0.13	23.6	20.1	140	0.05	Clr/none
1432	8.32	14.5	5.66	2114	0.22	22.5	12.7	140	0.05	" "
1437	9.25	14.4	5.66	2117	0.15	21.4	9.92	140	0.05	" "
1442	10.20	14.3	5.66	2115	0.12	20.5	8.52	140	"	" "
1447	11.15	14.5	5.66	2118	0.12	19.5	1.65	140	"	" "

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **PS-1D**

9/17/21

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: ~~4/15/21~~ Time: Start 940 am/pm
Project No: 60552044 Finish 1340 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Cloudy, 66's Collector(s): A Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 52.5' c. Screen Length 5 (49.25' - 54.25') 0.62" steel
b. Water Table Depth 0.43 d. Pump Intake 52'
c. Water Column (a-b) 52.07 e. Calculated System Purge Volume 2.43 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro DSS	19K100692
Geotech	Turbmeter	17061375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1005	0.5	13.0	8.21	774	0.57	-152.6	5.42	100	15.49	Clr/none
1010	1	12.7	8.66	810	0.36	-150.8	6.22	100	15.00	"
1015	1.5	13.1	8.66	854	0.26	-193.1	8.30	100	25.89	"
1020	2	13.4	8.29	911	0.21	-292.2	11.7	100	28.00	"
1025	2.5	13.3	7.84	972	0.20	-255.7	12.4	100	27.60	"
1030	3	13.5	7.19	1022	0.24	-171.8	16.8	100	29.00	Lt part, rust none
1035	3.5	13.4	6.98	1024	0.26	-154.0	17.4	100	29.77	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☐	☑	☐

If no or N/A - Explain below. See Comments

3. SAMPLE COLLECTION: Method: grab

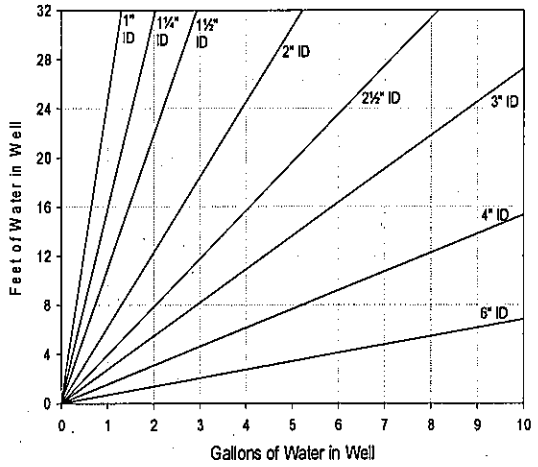
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS1D-091521	40mL VOA	3	HCL	VOCs 8260C	1325

Comments Well 0 DTW Below pump intake - Sample upon recharge

Signature Adam Grossman Date 9/17/21

AECOM

Well ID: PS-1D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[55 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.809 L ; 0.809 L x 3 well vol. = 2.43 L

(continued from front)

4.00

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1045	4.00	13.5	6.47	1021	0.28	-145.6	9.56	100	30.17	Clear/none
1050	4.50	13.7	6.77	1041	0.24	-130.4	10.3	105	24.52	" "
1055	~~5.00~~	~~13.7~~	6.71	1052	0.23	-127.4	~~10.4~~	~~[illegible]~~	31.00	
1100	~~5.50~~ 5.00	13.6	6.64	1062	0.30	-115.5	7.23	~~[illegible]~~	31.00	"

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **PS-1M**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: ~~9/15/21~~ 9/17/21 Time: Start 1110 am/pm
Project No: 60552044 Finish 1240 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60s. Cloudy Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 40.4' c. Screen Length 5 (34.25' - 39.25') 0.62" steel
2.24 b. Water Table Depth ~~0.43~~ d. Pump Intake 37'
c. Water Column (a-b) ~~0.43~~ 38.16 e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro DSS	19K100642
Geotech	Turb meter	17061735

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1120	0.50	12.9	10.46	1545	0.27	-148.6	24.0	100	9.73	Lt. L+ particles/none
1125	1.10	12.3	8.90	1678	0.17	-340.4	14.4	~~100~~ 120	11.75	Lt particles/none
1130	1.60	12.7	8.11	1773	0.20	-223.9	21.0	100	11.61	"
1135	2.10	12.6	7.65	1799	0.24	-163.7	21.3	100	11.46	"
1140	2.60	12.3	7.32	1797	0.26	-134.2	20.5	100	11.71	"
1145	3.10	12.2	7.07	1792	0.27	-115.1	4.87	100	11.98	Cir/none
1150	3.70	12.1	6.88	1786	0.27	-103.8	2.86	~~1070~~ 120	12.62	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

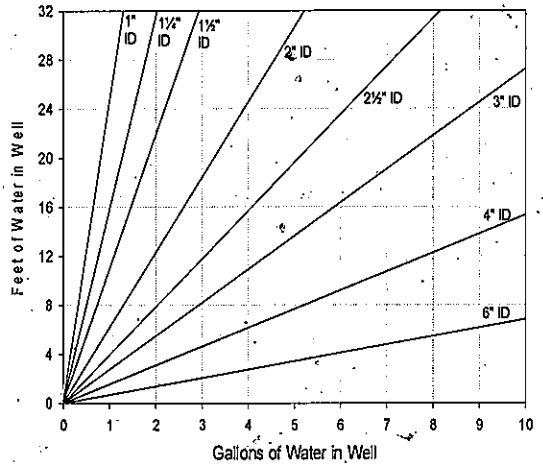
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS1M-091521-1	40mL VOA	3	HCL	VOCs 8260C	1235

Comments

Signature Adam Grossman Date 9/17/21

AECOM

Well ID: PS-1M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663 L ; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1155	4.20	12.2	6.24	1782	0.26	-43.4	1.13	100	11.56	Clr/none
1200	4.70	12.1	6.63	1784	0.24	-74.5	0.65	100	11.50	"
1205	5.30	12.1	6.50	1787	0.27	-70.7	0.72	125	11.44	
1210	5.40	12.1	6.34	1787	0.26	-67.2	0.67	100	11.76	
1215	6.30	12.2	6.31	1785	0.26	-64.5	0.02	100	11.51	
1220	6.80	12.3	6.23	1785	0.31	-63.4	2.10	100	11.19	
1225	7.30	12.3	6.19	1788	0.35	-61.7	0.21	100	10.62	
1230	7.90	12.2	6.14	1788	0.37	-59.9	3.30	100	10.95	

6.40

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

1235

AECOM

Well ID: **PS-1S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: ~~9/15/21~~ 9/17/21 Time: Start 1245 am/pm
Project No: 60552044 Finish 1320 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60's Cloudy Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 19.9' c. Screen Length 5 (12' - 17') 0.62" steel
b. Water Table Depth 3.27 d. Pump Intake 15'
c. Water Column (a-b) 16.63 e. Calculated System Purge Volume 1.35 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProDSS	19C10642
	Geotech	Turbidimeter	17D61375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1252	0-500	14.1	6.65	554	0.67	-137.1	4.46	100	1.40	LT Brn, Hydrocarbon
1257	1-00	14.3	6.56	523	0.32	-127.4	7.65	100	1.54	Clear
1302	1-50	14.3	6.51	520	0.24	-125.5	3.30	100	1.45	"
1307	2-00	14.3	6.50	519	0.26	-124.1	2.50	100	1.54	"
1312	2-50	14.0	6.47	519	0.35	-120.4	2.66	100	1.60	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

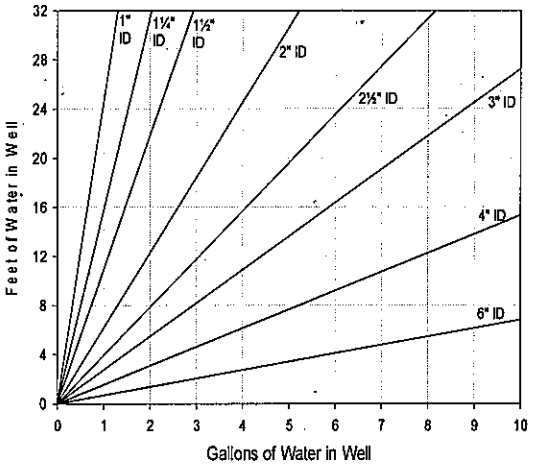
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS1S-091721-1	40mL VOA	3	HCL	VOCs 8260C	1315

Comments

Signature [signature] Date 9/17/21

AECOM

Well ID: PS-1S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[18 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.450 L ; 0.450 L x 3 well vol. = 1.35 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **PS-2D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.17.21 Time: Start 1130 am/pm
Project No: 60552044 Finish 1135 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: overcast 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 54.1 c. Screen Length 5 (49.1' - 54.1') 0.62" steel
b. Water Table Depth 1.29 d. Pump Intake 51.6'
c. Water Column (a-b) e. Calculated System Purge Volume 2.4 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProDSS	19K100091
	Geotech	turbidimeter	1706/375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1153	NA	18.8	6.98	913	~~1.09~~	-99.6	24.3	NA	NA	clear/none
					1.09					

(6)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☐	☑	☐
Have parameters stabilized	☐	☑	☐

If no or N/A - Explain below.

grab Sample

(continued on back)

3. SAMPLE COLLECTION: Method: grab

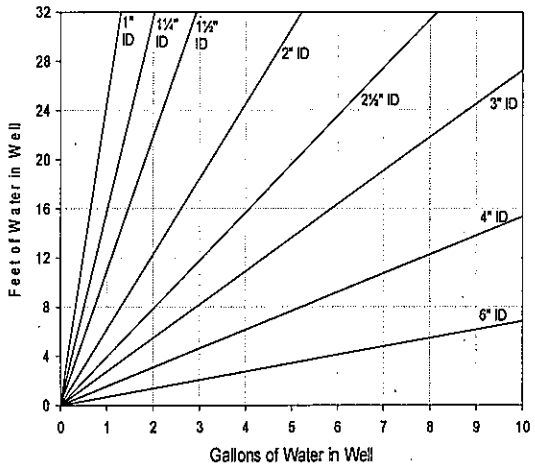
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS2D09172021-1	40mL VOA	3	HCL	VOCs 8260C	1135

Comments

Signature Date 9.17.21

AECOM

Well ID: PS-2D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.799 L ; 0.799 L x 3 well vol. = 2.4 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **PS-2M**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-17-21 Time: Start 1050 am/pm
Project No: 60552044 Finish 1120 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: overcast 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 39 c. Screen Length 5 (34' - 39') 0.62" steel
b. Water Table Depth 1.32 d. Pump Intake 36.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Serial Number

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1050	1.00	12.8	10.36	919	0.38	-199.3	52.0	200	NA	clear/none
1055	2.00	13.2	9.56	940	3.08	-92.3	26.21	200		" "
1100	3.00	14.2	8.92	971	4.38	-65.5	12.1	200		" "
1105	4.00	14.7	8.32	980	4.90	-56.7	7.61	200		" "
1110	5.00	14.8	8.29	983	4.93	-51.8	6.17	200		
1115	6.00	14.8	8.27	986	4.90	-50.9	3.28	200		
				Stable						

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

* ↑ count
@ WLM & tubing together

3. SAMPLE COLLECTION: Method: grab

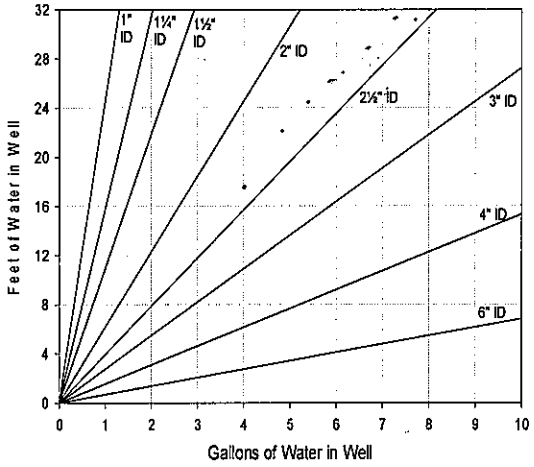
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS2M-091721-1	40mL VOA	3	HCL	VOCs 8260C	1120

Comments

Signature Date 9/17/21

AECOM

Well ID: PS-2M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663 L ; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: PS-2S

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.17.21 Time: Start 1035 am/pm
Project No: 60552044 Finish ____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 17.5' c. Screen Length 5 (12.5' - 17.5') 0.62" steel
b. Water Table Depth ~~11.15~~ 1.15 d. Pump Intake 15'
c. Water Column (a-b) ____ e. Calculated System Purge Volume 1.35 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProDSS	19K100091
	geotech	turbidity	17061375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1145	NA	11.5	6.69	583	1.03	-50.3	123	200	NA	grey/Black/none
1150	NA	11.6	6.55	578	1.98	-77.8	85.4	200	NA	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

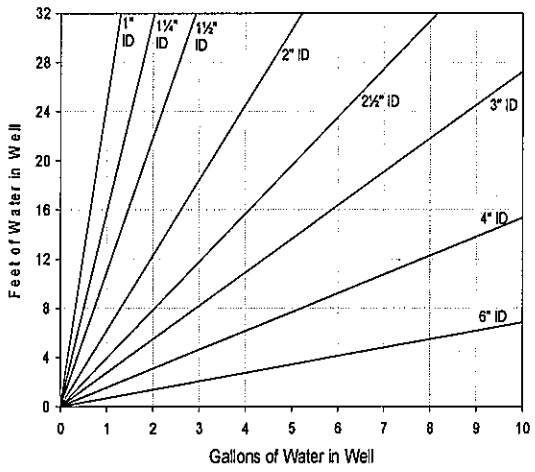
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS2S-091721-1	40mL VOA	3	HCL	VOCs 8260C	~~1135~~ 1140

Comments CNG - Tubing suggests well dry @

Signature _____ Date 9.17.21

AECOM

Well ID: PS-2S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[18 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.450 L ; 0.450 L x 3 well vol. = 1.35 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **PS-3**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9·20·21 Time: Start 1055 am/pm
Project No: 60552044 Finish 1130 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 70s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 10.14' c. Screen Length 5 (2.7' - 7.7') 0.62" steel
b. Water Table Depth 1.35 d. Pump Intake 5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.06 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro DSS Serial Number 19H100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1100	0.5	14.9	6.09	482	0.79	-66.0	61.2	100	6.12	Slight brown / No odo
1105	1.0	14.8	6.04	679	0.58	-45.7	14.9	100	5.32	Clear / No
1110	1.5	14.4	6.05	485	0.41	-47.2	128	100	5.63	Clear / No
1115	2.0	14.4	6.07	438.6	0.34	-42.3	5.30	100	5.69	" "
1120	2.5	14.3	6.07	416.5	0.41	-36.2	4.87	100	5.68	" "
1125	3.0	14.3	6.03	429.8	0.37	-35.2	3.12	100	5.71	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

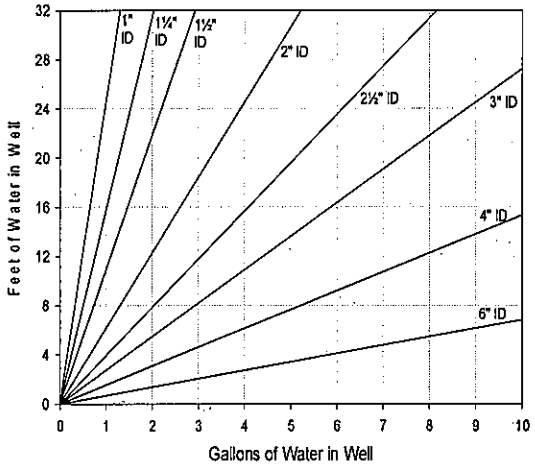
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS3-6920M-1	40mL VOA	3	HCL	VOCs 8260C	1130

Comments

Signature Date 9·20·21

AECOM

Well ID: PS-3



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[8 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.353 L ; 0.353 L x 3 well vol. = 1.06 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: PS-4

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.20.21 Time: Start 1020 am/pm
Project No: 60552044 Finish 1230 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 60s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 17.9' c. Screen Length 5 (12.9' - 17.9') 0.62" steel
b. Water Table Depth 4.98 d. Pump Intake 15.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.35 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProDSS Serial Number 19H100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1025	0.5	14.4	5.36	2150	0.35	1.0	20.1	100	[redacted]	dark brown / No odor
1030	1.0	14.5	5.49	1795	0.53	-18.1	67.9	100	[redacted]	light brown / No odor
	Well dry									

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

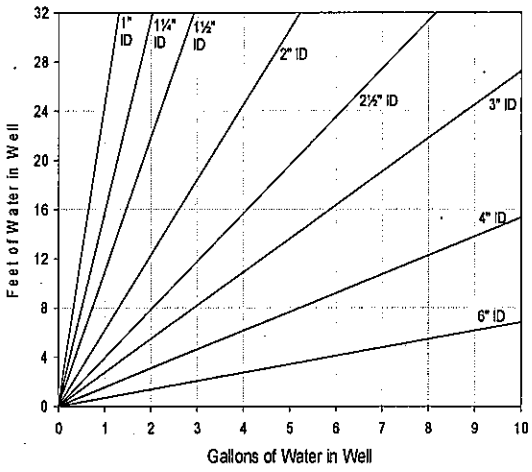
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS4-092021-1	40mL VOA	3	HCL	VOCs 8260C	1230

Comments Too thin [redacted] of piping to accurately measure drawdown during Low Flow

Signature [signature] Date 9-20-21

AECOM

Well ID: PS-4



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[18 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.450 L ; 0.450 L x 3 well vol. = 1.35 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **PS-5D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-21-21 Time: Start 0910 am/pm
Project No: 60552044 Finish ____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 60s Collector(s): BK, DP

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 29.1' c. Screen Length 5 (24.1' - 29.1') 0.62" steel
b. Water Table Depth 9.64 d. Pump Intake 26.5'
c. Water Column (a-b) ____ e. Calculated System Purge Volume 1.67 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Serial Number

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0910		14.6	7.31	249.0	3.02	-63.9	61.4			dark gray / No odor

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

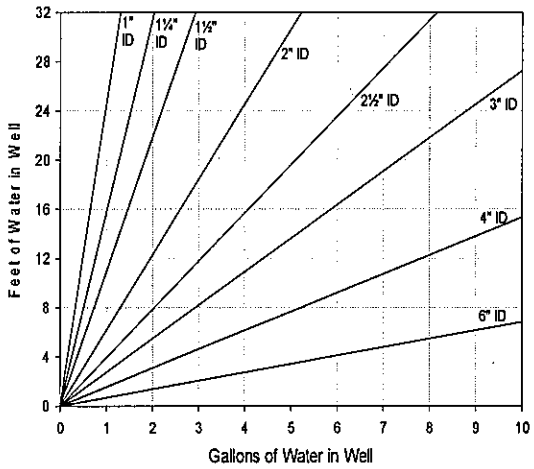
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS5D-[illegible]-1	40mL VOA	3	HCL	VOCs 8260C	0915

Comments ____

Signature [signature] Date 9-21-21

AECOM

Well ID: PS-5D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[29 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.556 L ; 0.556 L x 3 well vol. = 1.67 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **PS-5S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-20-21 Time: Start 1000 am/pm
Project No: 60552044 Finish 1205 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 60s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 18' c. Screen Length 5 (13' - 18') 0.62" steel
b. Water Table Depth 5.52 d. Pump Intake 15.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.35 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProDSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor *
1005	0-8	14.6	6.20	534	2.16	-49.2	54.2	160	10-86	light gray / No odor
	Went		Dry							

d. Acceptance criteria pass/fail.

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

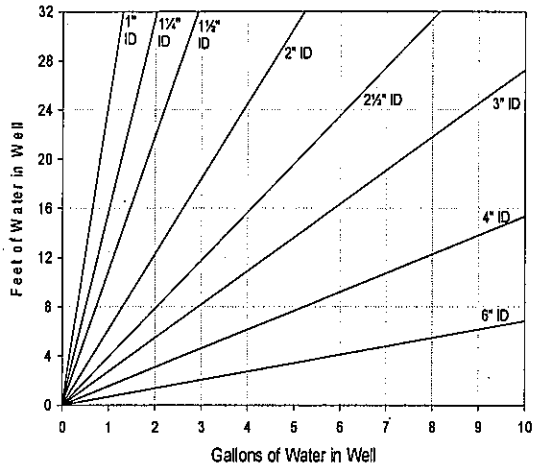
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS5S-092021-1	40mL VOA	3	HCL	VOCs 8260C	1205

Comments

Signature Date 9-20-21

AECOM

Well ID: PS-5S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[18 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.450 L ; 0.450 L x 3 well vol. = 1.35 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **PS-8D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/21/21 Time: Start 1050 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 56.8' c. Screen Length 5 (51.8' - 56.8') 0.62" steel
b. Water Table Depth 1.96 d. Pump Intake 57'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 2.48 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101853
GeoTech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1055	0	13.3	8.00	224	0.29	-145.2	9.3	100	NM	Clear/none
1100	1	12.4	7.05	318	0.20	-51.6	9.3	100		
1105	2	12.4	7.00	319	0.20	-50.5	9.0	100	√	√
1110	3	12.4	6.99	320	0.19	-47.7	9.0	100		

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

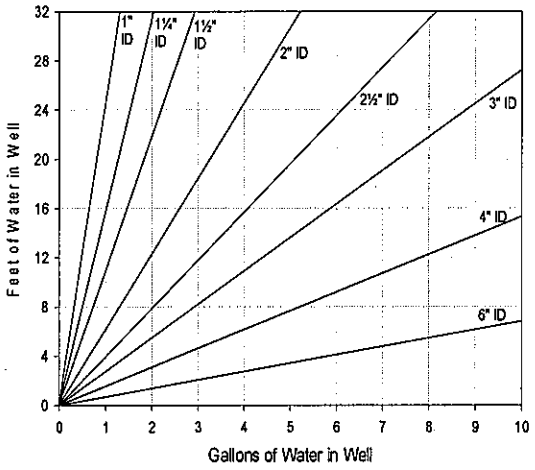
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS8D-092121-1	40mL VOA	3	HCL	VOCs 8260C	1115
	250mL P	1	HNO3	Total (As)	
	250mL P	1	HNO3	Diss.(As) FF	

Comments _____

Signature Floyd Burton Date 9/21/21

AECOM

Well ID: PS-8D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[57 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.828 L ; 0.828 L x 3 well vol. = 2.48 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **PS-8M**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/21/21 Time: Start 1015 am/pm
Project No: 60552044 Finish 1045 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60's Sunny Collector(s): Floyd Boston

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 39.3' c. Screen Length 5 (34.3' - 39.3') 0.62" steel
b. Water Table Depth 6.27 d. Pump Intake 36.8'
c. Water Column (a-b) e. Calculated System Purge Volume 2.4 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101853
GeoTech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1020	0	13.8	6.83	235	0.53	-37.4	9.2	100	NM	clear/none
1025	1	12.9	6.52	285	0.11	-31.0	4.2	100	↓	
1030	2	12.8	6.51	285	0.11	-30.3	3.7	100		
1035	3	12.8	6.51	286	0.11	-29.2	3.5	100	↓	

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

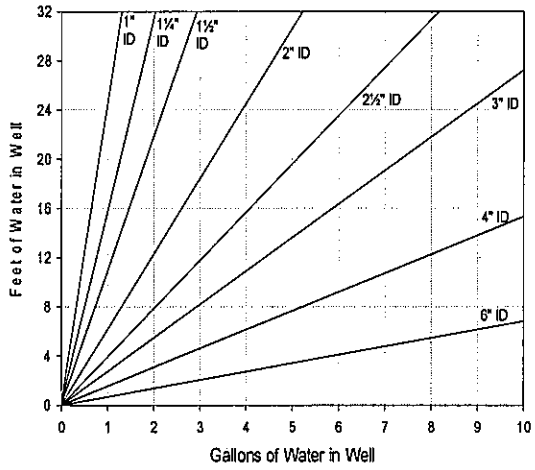
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS8M-092121-1	40mL VOA	3	HCL	VOCs 8260C	1040

Comments

Signature Floyd Boston Date 9/21/21

AECOM

Well ID: PS-8M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.799 L ; 0.799 L x 3 well vol. = 2.4 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **PS-8S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/21/21 Time: Start 0915 am/pm
Project No: 60552044 Finish 1010 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 18' c. Screen Length 5 (13' - 18') 0.62" steel
b. Water Table Depth 8.82 d. Pump Intake 15.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.35 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20K101853
	GeoTech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0945	0	14.9	6.43	519	0.68	-5.5	22.3	100	NM	Lt silt/none
0950	1	13.9	6.34	350	0.13	55.5	4.7	100		clear/none
0955	2	13.9	6.32	350	0.15	66.9	4.4	100		
1000	3	13.9	6.31	350	0.15	57.8	4.5	100	↓	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

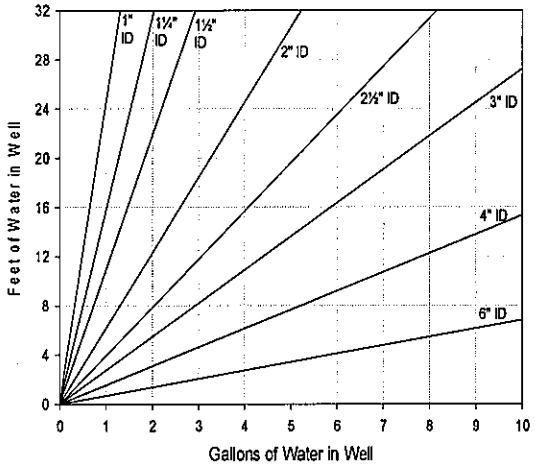
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PS8S-092121-1	40mL VOA	3	HCL	VOCs 8260C	1005

Comments Tubing clogged @ START

Signature FrBst III Date 9/21/21

AECOM

Well ID: PS-8S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[18 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.450 L ; 0.450 L x 3 well vol. = 1.35 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **PZ-2S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/21/21 Time: Start 0800 am/pm
Project No: 60552044 Finish 1200 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60's Sunny Collector(s): Floyd Buston

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 8.55' c. Screen Length 5' (3.55' - 8.55') 4" PVC Casing
b. Water Table Depth 5.09 d. Pump Intake 6'
c. Water Column (a-b) e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20K104853
	GeoTech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1140	—	22.9	6.59	1478	0.85	-32.2	36.4	200	NM	silty/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

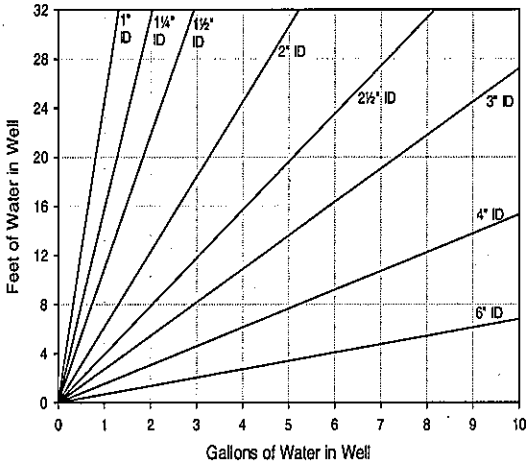
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-PZ2S-092121-1	40mL VOA	3	HCL	VOCs 8260C	1145
	1L A	3	HCL/None	EPH	
	40mL VOA	3	HCL	VPH	

Comments Purged dry, let recover + sample w/ 1 YSI reading.

Signature [signature] Date 9/21/21

AECOM

Well ID: PZ-2S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **STM-3D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/22/21 Time: Start 1150 am/pm
Project No: 60552044 Finish 1305 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Mostly Cloudy 70s Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 54.8' c. Screen Length 5 (49.8' - 54.8') 0.75" PVC
b. Water Table Depth 7.58 d. Pump Intake 50.8'
c. Water Column (a-b) 47.22 e. Calculated System Purge Volume 2.40 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	pro DSS	19K1000 91
Geotech	turbidity meter	17111150

	Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
	1154	0.500	20.6	6.17	701	1.66	-34.3	31.4	100	5.67	cl/d/none
1203	~~1159~~	1.00	19.4	6.37	671	1.16	-72.7	128	100	5.30	mod silt/organic decay
1208	~~1204~~	1.50	20.0	6.58	581	0.48	-93.5	97.4	100	5.08	"
1213	~~1209~~	2.00	19.3	6.65	553	0.33	-96.3	52.5	100	4.66	lt part/ "
1218	~~1214~~	1218 2.50	19.3	6.68	545	0.31	-97.5	37.1	100	5.15	"
1223	~~1228~~	1223 3.00	19.3	6.71	537	0.36	-99.7	32.3	100	5.17	cl/none
6	1228	3.50	19.3	6.73	532	0.29	-101.2	20.7	100	4.65	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☑	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.
turbidity >10 but stable

3. SAMPLE COLLECTION: Method: grab

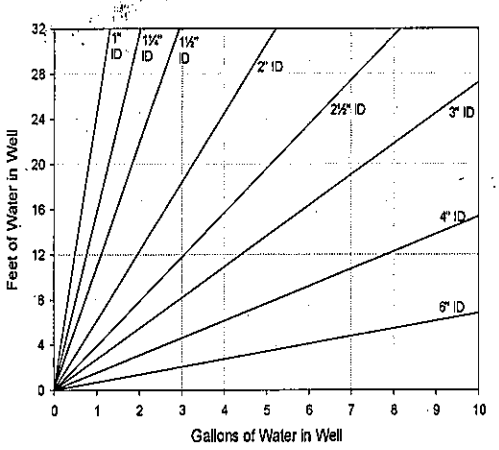
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-STM3D-092121-1	40mL VOA	3	HCL	VOCs 8260C	1250
21A-STM3D-092121-2	40 mL VOA	3	HCl	VOCs 8260	1255

Comments ~~MS/MSD~~
* Heavy silt purge for 5 min then plug in to YSI

Signature [signature] Date 9/22/21

AECOM

Well ID: STM-3D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[54 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.799 L ; 0.799 L x 3 well vol. = 2.40 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor Black Light particles / none
1233	4.00	19.4	6.74	533	0.31	-101.6	18.9	100	5.04	~~[illegible]~~
1238	4.50	19.5	6.75	530	0.25	-102.6	18.7	100	5.15	↓
1243	5.00	19.5	6.75	527	0.24	-101.7	18.8	100	4.72	↓
~~1248~~	~~7.50~~									

0

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

1250

AECOM

Well ID: STM-3R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/2/21 Time: Start 1310 am/pm
Project No: 60552044 Finish 1530 am/pm 1515
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's mostly cloudy Collector(s): A Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 71.9' c. Screen Length 5 (66.9' - 71.9') 0.75" PVC
b. Water Table Depth 4.90 d. Pump Intake 69.4'
c. Water Column (a-b) 62.00 e. Calculated System Purge Volume 2.95 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft.
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	pro DSS	19K100001
	Geotech	Turbidity meter	17111150

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1313	0.50	14.1	7.21	66.3	2.74	12.7	113	100	3.03	Cloudy/none
1318	1.00	14.8	6.71	93.1	0.94	38.2	51.4	100	3.34	" "
1323	1.50	18.5	6.62	103.2	0.67	22.5	26.0	100	3.40	Clr/none
1328	2.00	18.2	6.64	121.9	0.51	2.1	14.4	100	3.41	
1333	2.50	18.4	6.79	124.9	0.47	-13.0	8.70	100	~~3.42~~ 3.31	
1338	3.00	18.5	6.74	200.6	0.44	-14.0	5.08	100	~~2.28~~	3.00
1343	~~3.50~~	19.0	6.56	342.3	0.51	-8.1	3.71	110	2.24	

1.55 e

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

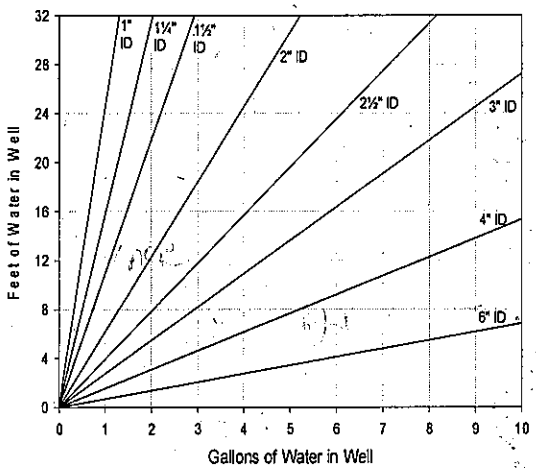
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-STM3R-09221	40mL VOA	3	HCL	VOCs 8260C	1450
~~21A-STM3R-2~~	~~40mL VOA~~	~~3~~	~~HCL~~	~~VOCs 8260C~~	

Comments

Signature Date

AECOM

Well ID: STM-3R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[73 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.983 L ; 0.983 L x 3 well vol. = 2.95 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1348	4.10	14.8	6.64	612	0.49	-23.6	3.54	110	2.90	Clear/ none
1353	4.65	14.2	6.73	643	0.54	-41.4	3.54	110	2.35	
1358	5.20	14.2	6.76	790	0.48	-52.9	3.84	110	3.05	
1403	5.70	18.9	6.81	848	0.50	-64.6	3.42	100	2.75	
1408	6.20	18.8	6.83	940	0.43	-71.1	3.46	100	3.00	
1413	6.70	19.0	6.87	944	0.46	-80.2	2.54	100	2.95	
1418	7.20	18.5	6.92	1047	0.36	-86.8	1.95	100	3.00	
1423	7.75	18.7	6.94	1029	0.44	-92.1	1.79	110	3.50	
1428	8.30	18.4	6.96	1044	0.36	-92.0	2.50	110	3.35	
1433	8.85	18.1	7.01	1085	0.38	-100.2	2.64	110	3.70	
1438	9.40	18.1	7.03	1049	0.34	-102.0	2.65	110	3.65	1029 Spec Cond
1443	9.95	18.6	7.05	1062	0.32	-106.4	2.76	110	3.40	
1448	10.50	18.2	7.07	1053	0.37	-118.2	2.36	110	3.10	

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

1450

AECOM

Well ID: **STM-3S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/22/21 Time: Start 930 am/pm
Project No: 60552044 Finish 1145 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's mostly cloudy Collector(s): A Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 15' c. Screen Length 10 (5' - 15') 0.75" PVC
b. Water Table Depth 9.50 d. Pump Intake 10'
c. Water Column (a-b) 5.50 e. Calculated System Purge Volume 1.20 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	19K100091
	Horiba	Turbidity meter	17111150

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
~~958~~	0.50	20.8	6.01	120.8	2.71	61.4	61.7	100	0.73	Cloudy/none
1003	1.00	21.3	5.44	154.1	1.07	47.4	48.9	100	0.66	Light brown/none
~~1008~~ 1008	1.50	20.9	5.43	~~43.8~~ 180.2	0.72	43.8	63.3	100	0.83	"
~~1013~~ 1013	2.00	21.7	6.00	203.3	0.42	41.5	27.7	100	0.66	"
1018	2.60	21.3	6.02	210.2	1.07	41.5	33.3	~~100~~ 125	1	"
1023	3.10	21.3	6.04	211.8	0.46	42.6	30.2	125	0.90	"
1028	3.60	21.2	6.01	214.2	0.87	46.3	32.4	100	0.66	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-STM3S-092221-1	40mL VOA	3	HCL	VOCs 8260C	1140

Comments

Signature [signature] Date 9/22/21

~~9.46~~ C

Corp / Road

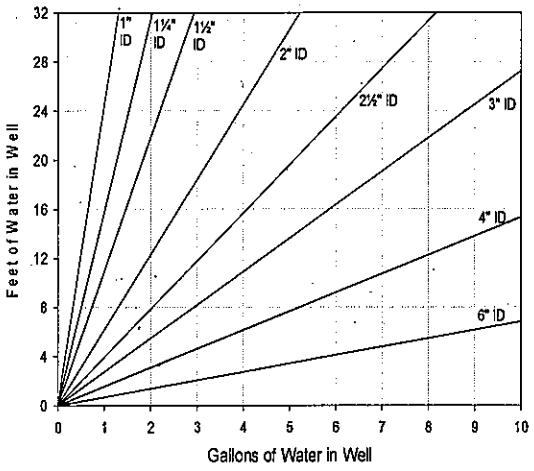
STM-3S 13.5 68.15 ES TM-3R

STM-3D → 48.55

AECOM

Well ID: STM-3S

(Page 2 of 2)



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[13 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.401 L ; 0.401 L x 3 well vol. = 1.20 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1033	4.10	21.4	6.01	223.7	0.84	47.8	38.4	100	1.00	Clr/ none
1038	4.60	21.0	6.01	231.1	1.02	50.5	37.8	100	1.04	"
1043	5.10	21.0	6.00	240.4	1.24	54.6	23.1	100	0.88	"
1048	5.60	21.1	5.98	257.4	1.33	58.7	28.5	100	0.88	"
1053	6.10	20.7	5.98	273.7	1.59	62.2	20.3	100	0.83	
1058	6.60	20.9	5.97	289.8	1.84	67.4	15.0	100	~~0.90~~ 0.93	"
1103	7.10	20.6	5.96	300.4	2.17	72.3	32.5	100	0.93	
1108	7.60	20.4	5.95	311.1	2.31	78.4	19.1	100	0.91	
1113	8.10	20.7	5.95	313.3	2.45	81.4	8.03	100	0.75	
1118	8.60	21.5	5.98	315.3	3.23	82.7	38.7	100	0.90	
1123	9.10	21.0	5.97	318.7	2.64	85.1	9.93	100	0.90	
1128	9.60	20.8	5.96	325.4	2.68	89.9	~~4.90~~	100	0.85	T-8.87
1133	10.10	21.4	5.96	329.7	2.86	94.5	9.92	100	0.90	
1138	10.60	21.4	5.97	334.4	2.91	96.4	6.84	100	0.90	

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **STM-8D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/8/21 Time: Start 1025 am/pm
Project No: 60552044 Finish 1145 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70s Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 39.7' c. Screen Length 5 (34.7' - 39.7') 1" PVC Casing
b. Water Table Depth 4.63 d. Pump Intake 37.2'
c. Water Column (a-b) 35.07 e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20K105853
	GeoTech	PTM	1706139

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1030	0	16.5	5.93	929	0.41	2.5		100	0	Clear/none
1035	1	16.2	5.94	929	0.11	32.3		100	0	↓
1040	2	16.1	5.94	930	0.11	32.3		100	0	
1045	3	16.1	5.94	929	0.11	32.4		100	0	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

(continued on back)

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

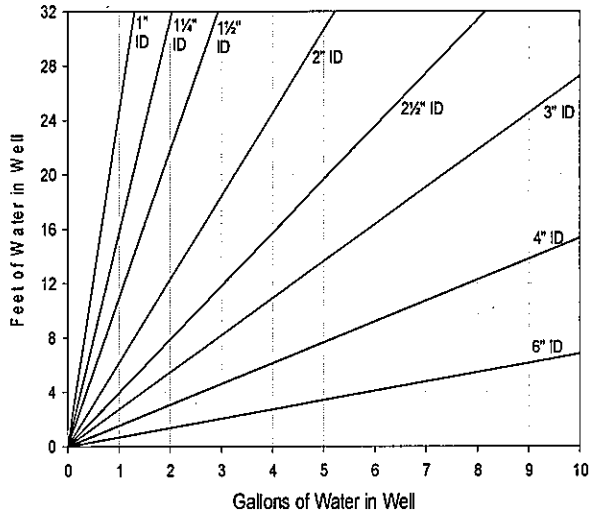
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-STM8D-090821-1	40mL VOA	7	HCL	VOCs 8260C, CSIA 13C/ 12C	1050
	250 mL Amber	2	NaHSO4	1,4 dioxane	
	250 mL P	2	HNO3	Total & Diss. Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	vial	1	none	diss. Hydrogen	1130
	40mL V	3	belzal.chlor.	gases (Acet, Prop, Meth, Eth, Etha)	

Comments Hydrogen purge = 30 min @ 100ml per min start @ 1058

Signature FBurton III Date 9/8/21

AECOM

Well ID: STM-8D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **STM-8M**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/8/21 Time: Start 0950 am/pm
Project No: 60478638 Finish 1020 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 24.5' c. Screen Length 5 (19.5' - 24.5') 1" PVC Casing
b. Water Table Depth 4.40 d. Pump Intake 22'
c. Water Column (a-b) 20.1 e. Calculated System Purge Volume 1.54 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: bladder pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProQuatro	20K101853
	GeoTech	PTM	17061391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0955	0	14.9	5.87	917	0.17	-13.3	4.6	100	0	clear/none
1000	1	14.3	5.93	916	0.09	-21.9	0	100	0	
1005	2	14.2	5.94	917	0.09	-23.6	0	100	0	
1010	3	14.2	5.95	915	0.09	-24.4	0	100	0	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

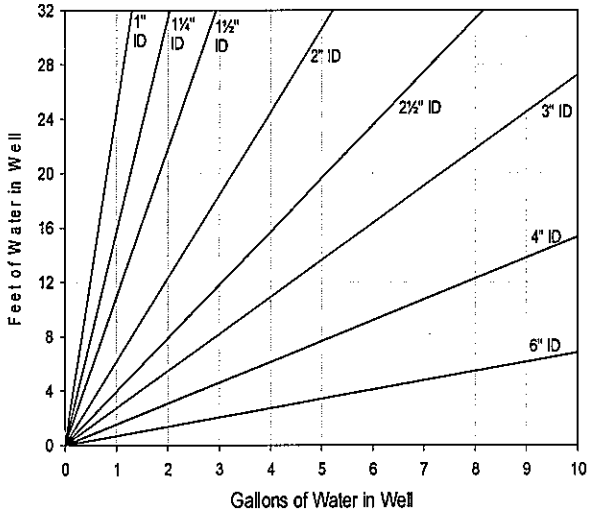
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-STM8M-09082[-1	40mL VOA	3	HCL	VOCs 8260C	1015

Comments

Signature [signature] Date 9/8/21

AECOM

Well ID: STM-8M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[24.5 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.5127; 0.5127 L x 3 well vol. = 1.54 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **STM-8R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/8/21 Time: Start 1300 am/pm
Project No: 60552044 Finish 1350 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 76's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 51.5' c. Screen Length 5 (46.6' - 51.5') 1" PVC Casing
b. Water Table Depth 4.53 d. Pump Intake 49'
c. Water Column (a-b) 46.97 e. Calculated System Purge Volume 2.32 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	±10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	20K101853
	GeoTech	PTM	1706 1391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1320	0	19.6	7.03	528	0.50	-73.7	2.9	200	0.04	Clear/none
1325	1	14.1	7.08	526	0.14	-118.6	0	200	0.09	"
1330	2	14.0	7.08	525	0.14	-117.7	0	200	0.14	"
1335	3	13.9	7.09	524	0.13	-117.6	0	200	0.20	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

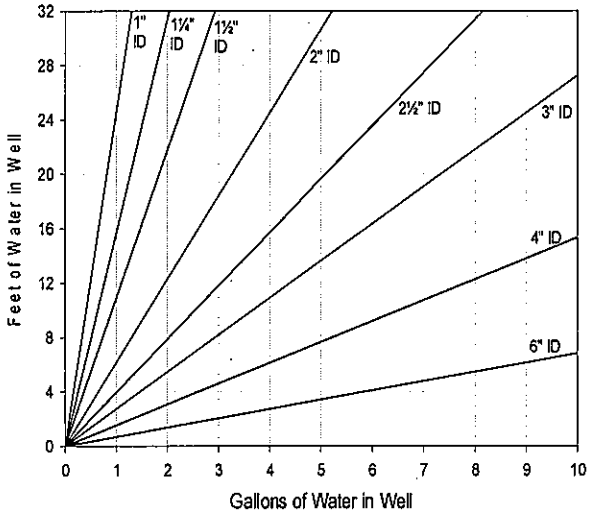
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-STM8R-090821-1	40mL VOA	3	HCL	VOCs 8260C	1340
	250 mL Amber	1	NaHSO4	1,4 dioxane	

Comments

Signature [signature] Date 9/8/21

AECOM

Well ID: STM-8R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[51.5 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.7746; 0.7746 L x 3 well vol. = 2.32 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **STM8-R1**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-16-21 Time: Start 1305 am/pm
Project No: 60552044 Finish 1445 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Cloudy, 60s Collector(s): BK / A Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 92' c. Screen Length 5 (85' - 90') 2" PVC Casing
b. Water Table Depth 8.74 d. Pump Intake 87.5'
c. Water Column (a-b) e. Calculated System Purge Volume 3.44 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump (purge well down to top of screen using submersible pump)

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProDSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1310	0.2	19.1	7.14	344.3	5.54	-6.3		220		Clear/No
1440		14.2	7.67	317.8	3.89	93.0	13.0			" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-STM8R1-091621-1	40mL VOA	7	HCL	VOCs 8260C, CSIA 13C/12C	1350
21A-STM8R1-091621-2	500mL P	1	none	Cl, NO2, NO3, SO4	1355
(duplicate)	250mL P	1	zinc acetate	Sulfide	
	40mL V	3	belzal.chlor.	gases (Acet, Prop, Meth, Eth, Etha)	
	250 mL Amber	1	NaHSO4	1,4 dioxane	
	40mL V	2	HCL	VPH	
	1L A	3	HCL/None	EPH	
	250mL P	2	HNO3	Total & Diss. (Fe, As, Mn)	
	250 mL A	1	H3PO4	TOC	
	vial	1	none	Diss. Hydrogen	

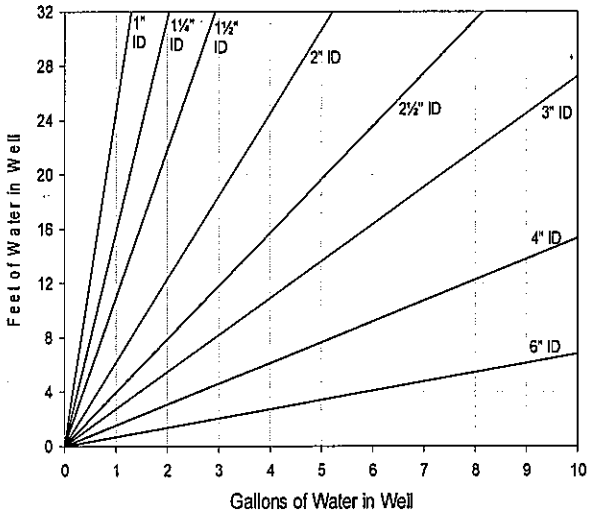
Comments Due to excessive drawdown, purge water level down to ~~85~~ 60.45 ft using pump and allow to recharge prior to collecting sample. - Whole pump length - 70 ft DTW before purging - 6.09 ft purged 4 gallons

Signature [signature] Date 9.16.21

Adam Gross
(purged before collecting sample)

AECOM

Well ID: STM-8R1



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[90 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.148; 1.148 L x 3 well vol. = 3.44 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **STM-8S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/8/21 Time: Start 0910 am/pm
Project No: 60478638 Finish 0945 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 11' c. Screen Length 10 (1' - 11') 1" PVC Casing
b. Water Table Depth 3.79 d. Pump Intake 6'
c. Water Column (a-b) 7.21 e. Calculated System Purge Volume 1.09 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: bladder pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	20K101853
GeoTech	PTM	1706139

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0920	0	20.7	6.30	296	0.53	60.6	7.3	100	0	clear/none
0925	1	20.6	5.91	279	0.53	40.7	2.7	100	0	
0930	2	20.6	5.91	279	0.50	39.3	2.1	100	0	
0935	3	20.6	5.92	279	0.50	39.4	2.0	100	0	√

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

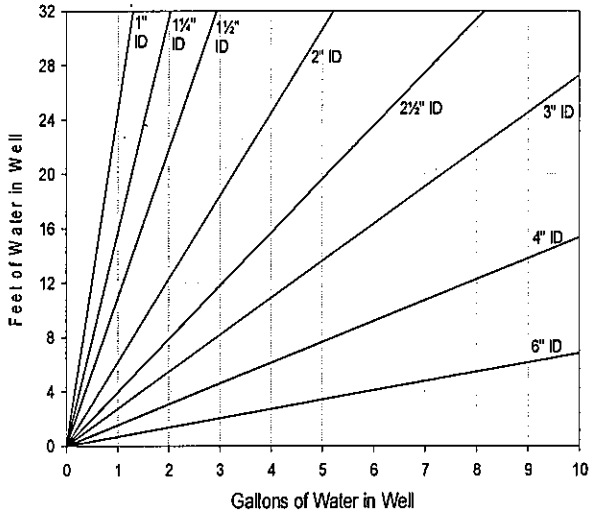
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-STM8S-090821-1	40mL VOA	3	HCL	VOCs 8260C	0940

Comments

Signature [signature] Date 9/8/21

AECOM

Well ID: STM-8S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[9 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.3623; 0.3623 L x 3 well vol. = 1.09 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **TRC-101**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/14/21 Time: Start 14:30 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 10.5' c. Screen Length 10 (1.5' - 10.5') 1.25" PVC
b. Water Table Depth 4.69 d. Pump Intake 6.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	±10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProDSS	19K100692
	GeoTech	PTM	17061357

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1435	1.2	23.2	6.59	2561	0.24	-76.5	63.1	240	5.49	~~clear~~/none cloudy
1440	2.4	23.0	6.45	2438	0.21	-74.3	14.4	240	5.54	clear/none
1445	3.6	23.0	6.42	2370	0.24	-77.7	5.67	240	5.54	clear/none
1450	4.8	22.9	6.39	2360	0.23	-79.2	4.63	240	5.54	"
1455	6	22.9	6.38	2351	0.22	-81.5	5.55	240	5.54	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

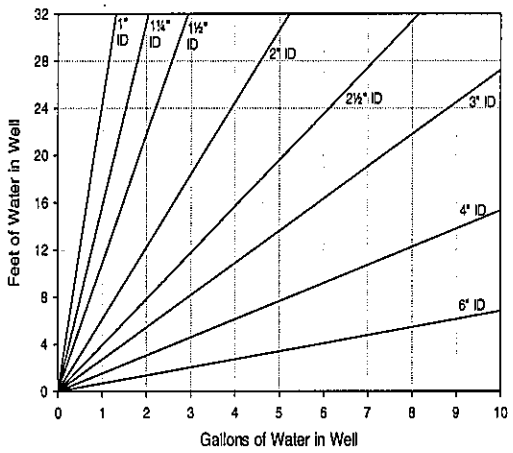
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-TRC101-~~0912~~-1	40mL VOA	3	HCL	VOCs 8260C	1500
	40mL V	2	HCL	VPH	↓
	1L A	3	HCL/None	EPH	↓
	250 mL P	2	HNO3	Total/ Diss (Fe, Mn) FF	↓
	500 mL P	1	None	Cl, SO4, NO2, NO3	↓
	250 mL P	1	Zn Acetate	Sulfide	↓
	40 mL VOA	3	BZK Cl	gases (m, ethe, etha, ace, pr)	↓
	vial	1	None	Diss H	1522-1537

Comments Diss H 1522-1537 (15min) @ 280mL/min

Signature _____ Date 9/14/21

AECOM

Well ID: TRC-101



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: TRC-102

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.7.21 Time: Start 1345 am/pm
Project No: 60552044 Finish 1425 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 12.25' c. Screen Length 10 (2.25' - 12.25') 1.25" PVC
b. Water Table Depth 3.82 d. Pump Intake 7.25'
c. Water Column (a-b) e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProDSS	19K100091
	Geotech	turbidmeter	1706375

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1355	1.00	22.8	6.27	1490	0.36	-69.1	77.0	200	0.00	Cloudy/none
1400	2.00	22.6	6.21	1489	0.28	-72.4	52.0	200	0.00	" "
1405	3.00	22.5	6.19	1510	0.22	-72.9	18.2	200	0.00	" "
1410	4.00	22.5	6.17	1511	0.19	-72.7	7.53	200	0.00	" "
1415	5.00	22.5	6.15	1512	0.15	-72.8	6.61	200	0.00	Clear/none
1420	6.00	22.5	6.14	1515	0.14	-72.9	5.11	200	0.00	" "
~~1425~~	~~7.00~~			- stable @ 1420				~~200~~	~~0.00~~	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

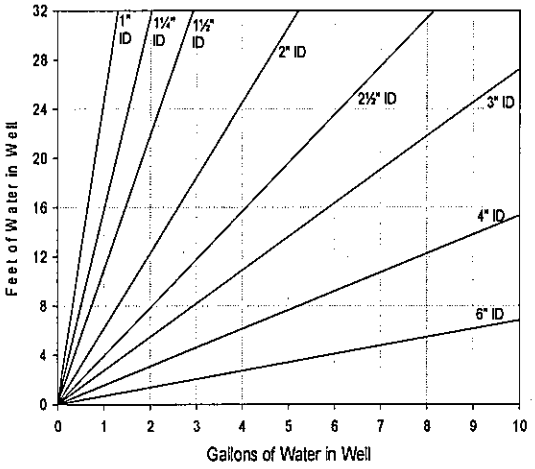
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-TRC102-090721-1	40mL VOA	3	HCL	VOCs 8260C	1425
	40mL V	2	HCL	VPH	↓
	1L A	3	HCL(2), None	EPH	
	250mL P	1	HNO3	Total (As)	
	250mL P	1	HNO3	Diss. (As) FF	↓

Comments

Signature Date 9.7.21

AECOM

Well ID: TRC-102



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **TRC-103**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.7.21 Time: Start 1415 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny 70s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 11.25' c. Screen Length 10 (1.25' - 11.25') 1.25" PVC
b. Water Table Depth 4.54 d. Pump Intake 6.25'
c. Water Column (a-b) 6.71 e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro DSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1420	1.6	24.7	6.26	1375	0.40	-75.0	455	160	5.22	Iron floc / No odor
1425	2.4	24.3	6.24	1447	0.29	-75.5	316	160	4.78	Iron floc / No odor
1430	3.2	23.9	6.33	1549	0.42	-58.9	283	160	4.79	" "
1435	4.0	23.9	6.17	1579	0.37	-65.9	320	160	4.79	Cloudy / No odor
1440	4.8	23.6	6.08	1621	0.25	-69.4	219	160	4.78	Cloudy / No odor
1445	5.6	23.3	6.05	1651	0.25	-75.8	208	160	4.79	" "
1450	6.4	23.3	6.03	1659		-79.3	183	160	4.79	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

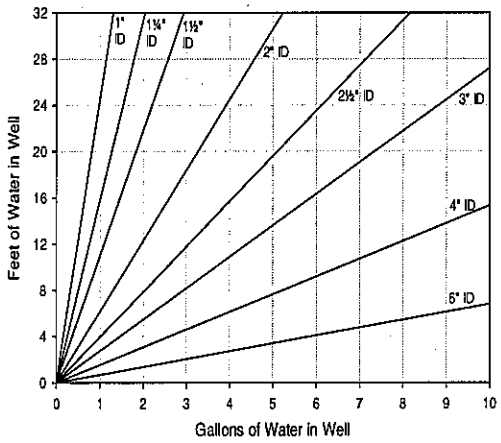
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-TRC103-090721-1	40mL VOA	3	HCL	VOCs 8260C	1510
	40mL V	2	HCL	VPH	
	1L A	2	HCL/None	EPH	

Comments _____

Signature _____ Date 9-7-21

AECOM

Well ID: TRC-103



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1455	[redacted]	23.2	6.05	1667	0.18	-82.4	[redacted]37	160	4.79	Cloudy / No
1500	[redacted]	23.2	6.06	1670	0.17	-88.3	138	160	4.79	Cloudy / No
1505	[redacted]	23.3	6.07	1676	0.16	-91.2	136	160	4.79	" / "

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **TRC-201R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-10-21 Time: Start 0910 am/pm
Project No: 60552044 Finish 1000 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 169.11 c. Screen Length open bedrock 4.75" open bedrock
b. Water Table Depth 5.61 d. Pump Intake 111.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 4.17 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: Bladder pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model _____ Serial Number _____

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0915	0.9	18.7	8.15	882	1.50	-93.6	8.47	180	5.61	Clear/No
0920	1.8	18.3	7.71	885	0.73	-111.9	8.74	180	5.61	" "
0925	2.7	18.2	7.67	892	0.62	-120.1	9.71	180	5.62	" "
0930	3.6	19.0	7.58	895	0.55	-114.6	11.1	180	5.63	" "
		Changed	out	W/	Foam	Tank				
0940	4.5	18.6	7.67	899	0.80	-117.1	10.1	180	5.61	" "
0945	5.4	17.3	7.00	891	0.47	-120.9	11.1	180	5.62	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below. _____

(continued on back)

3. SAMPLE COLLECTION: Method: grab

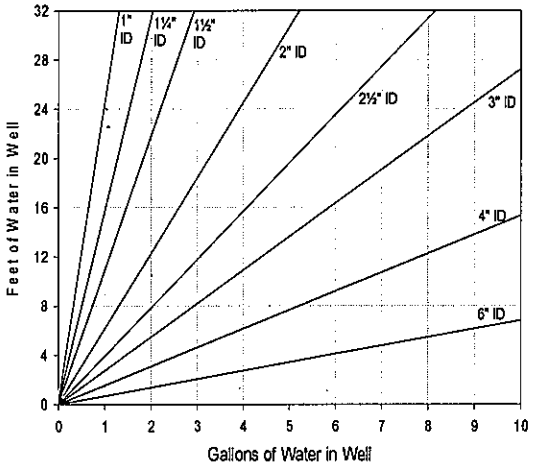
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-TRC201R-091021-1	40mL VOA	3	HCL	VOCs 8260C	0945

Comments _____

Signature _____ Date 9-10-21

AECOM

Well ID: TRC-201R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[115 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.39 L ; 1.39 L x 3 well vol. = 4.17 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
0950	6-3	17.1	7.52	891	0.38	-126.4	9.4	180	5.62	Clear / NO

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **TRC-301R1**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-13-21 Time: Start 1205 am/pm
Project No: 60478638 Finish 1245 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny c 70s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 103' c. Screen Length 4 (96.5' - 100.5') 0.5" CMT Channel
b. Water Table Depth 2.23 d. Pump Intake 98.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.29 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProDSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1210	0.9	12.5	6.74	602	1.62	86.2	257	180		Cloudy / No
1215	1.8	12.0	6.62	597	1.03	-29.0	51.1	180		slightly cloudy / No
1220	2.7	12.0	6.64	595	0.97	-52.8	35.7	180		" "
1225	3.6	11.9	6.62	590	0.57	-81.5	9.2	180		clear / No
1230	4.5	11.9	6.82	590	0.54	-94.6	9.3	180		" "
1235	5.4	11.9	6.71	588	0.54	-96.9	8.7	180		" "
1240	6.3	11.8	6.93	588	0.55	-101.9	4.06	180		" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

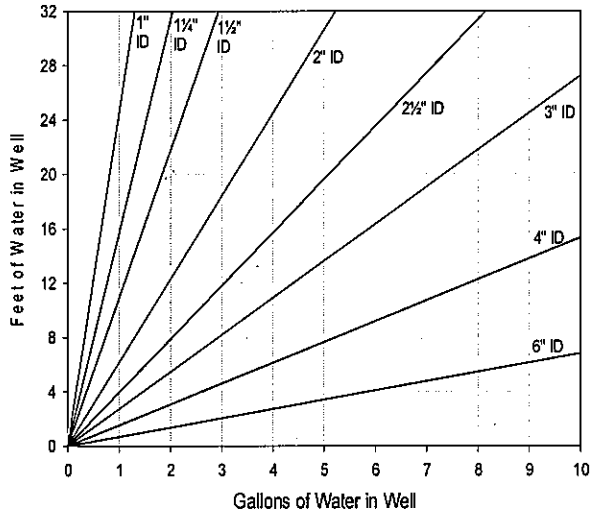
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-TRC301R1-091321	40mL VOA	3	HCL	VOCs 8260C	1245

Comments

Signature [signature] Date 9-13-21

AECOM

Well ID: TRC-301R1



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[105 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **TRC-301R2**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-13-21 Time: Start 1525 am/pm
Project No: 60552044 Finish 1680 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny, 70s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 85.5' c. Screen Length 4 (81.5' - 85.5') 0.5" CMT Channel
b. Water Table Depth 2.24 d. Pump Intake 83.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.29 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProDSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1530	0.9	12.9	6.87	612	1.74	-33.4	2.15	180		Clear/No
1535	1.8	13.0	6.86	565	1.41	-81.5	0.02	180		" "
1540	2.7	13.3	6.85	548	1.12	-88.9	0.02	180		" "
1545	3.6	13.9	6.89	547	0.93	-90.8	0.02	180		" "
1550	4.5	13.2	7.00	547	0.83	-111.2	0.02	180		" "
1555	5.4	13.2	7.05	546	0.80	-115.6	0.02	180		" "
1600	6.3	13.2	7.12	542	0.77	-121.6	0.02	180		" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

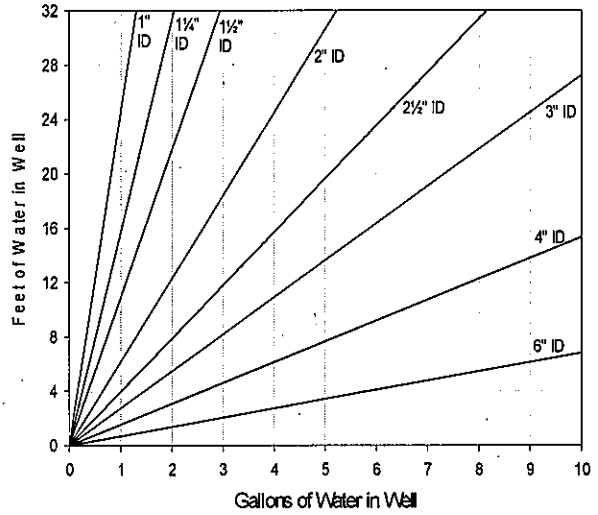
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-TRC301R2-091321-1	40mL VOA	3	HCL	VOCs 8260C	1680
	250mL P	2	HNO3	Total & Diss. (As)	

Comments

Signature Date 9-13-21

AECOM

Well ID: TRC-301R2



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[105 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1605	7.2	13.3	7.14	542	0.68	-122.7	0.00	180		Clear / No
1610	8.1	13.1	7.21	545	0.66	-127.2	0.07	180		" "
1615	9.0	13.0	7.23	547	0.64	-129.3	0.02	180		" "

AECOM

Well ID: TRC-301R3

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9.13.21 Time: Start 1015 am/pm
Project No: 60478638 Finish 1155 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 70s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 79.5' c. Screen Length 4 (75.5' - 79.5') 0.5" CMT Channel
b. Water Table Depth 2.24 d. Pump Intake 77.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.29 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProDSS Serial Number 19K100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1020	~~900.9~~	12.3	7.50	.654	2.01	-32.7	7.97	~~Steady~~		Clear / No
1025	1.8	11.8	6.79	823	1.17	-85.8	5.62	180		Clear / No
1030	2.7	11.8	6.91	737	0.93	-110.7	0.02	180		Clear / No
1035	3.6	11.6	6.97	695	0.82	-119.0	0.02	180		" "
1040	4.5	11.5	7.05	644	0.72	-127.0	0.02	180		" "
1045	5.4	11.4	7.12	609	0.64	-132.0	0.02	180		" "
1050	6.3	11.5	7.17	591	0.58	-136.8	0.02	180		" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

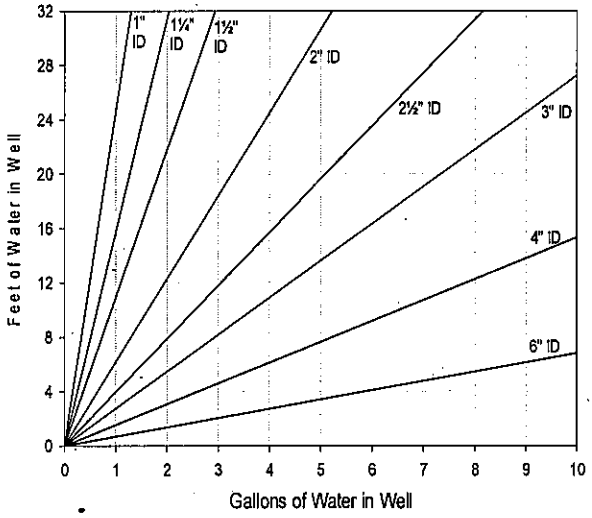
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-TRC301R3-[illegible]-1	40mL VOA	7	HCL	VOCs 8260C, CSIA	1105
	250 mL P	2	HNO3	Total/ Diss (Fe, Mn) FF	
	500 mL P	1	None	Cl, SO4, NO2, NO3	
	250 mL P	1	Zn acetate	Sulfide	
	250 mL A	1	H3PO4	TOC	
	40 mL VOA	3	BZK Cl	gases (M, ethe, etha, ace, pr)	
	vial	1	None	Diss H	
	filter	1	None	Microbial	

Comments Diss H purge rate and Time: 180 ml/min 1135 - 1155 (20 mins)

Signature [signature] Date 9.13.21

AECOM

Well ID: TRC-301R3



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[105 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1055	7.2	11.8	7.23	597	0.58	-110.1	0.02	180		Clear / NO
1100	8.1	11.7	7.21	593	0.58	-114.1	0.02	180		" "

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		____x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **TRC-301R4**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9-13-21 Time: Start 1435 am/pm
Project No: 60552044 Finish 1515 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 70s Collector(s): BK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 69.5' c. Screen Length 4 (65.5' - 69.5') 0.5" CMT Channel
b. Water Table Depth 2.22 d. Pump Intake 67.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.29 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro D5S Serial Number 19H100692

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1440	0.9	13.5	7.68	606	1.37	-190.1	0.59	180		clear / No
1445	1.8	13.0	7.81	590	0.64	-217.5	0.02	180		" "
1450	2.7	12.8	7.74	609	0.52	-198.7	0.02	180		" "
1455	3.6	12.7	7.49	624	0.49	-188.1	0.02	180		" "
1500	4.5	13.0	7.22	637	0.44	-178.1	0.02	180		" "
1505	5.4	12.8	7.04	646	0.42	-170.1	0.02	180		" "
1510	6.3	13.0	7.03	645	0.34	-174.3	0.02	180		" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

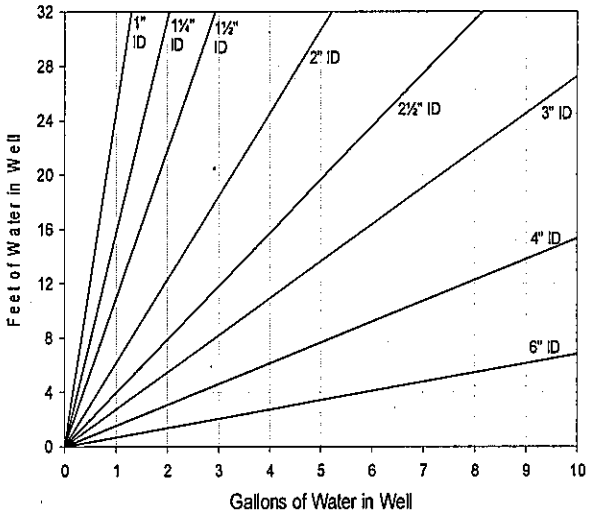
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-TRC301R4-091321-1	40mL VOA	3	HCL	VOCs 8260C	1515
	250 mL P	2	HNO3	Total & Diss. As	

Comments

Signature Date 9-13-21

AECOM

Well ID: TRC-301R4



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[105 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **TRC-401R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/16/21 Time: Start 1055 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Clouds Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 58' c. Screen Length 20 (38' - 58') 0.5" PVC
b. Water Table Depth 4.21 d. Pump Intake 48'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 2.31 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101853
GeoTech	PTM	1761391

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1105	0	20.0	7.84	843	0.71	-70.2	1.9	200	0	clear/none
1110	1	17.2	8.27	827	0.08	-135.5	0	200	0	clear/none
1115	2	17.2	8.28	826	0.08	-138.7	0	200	0	clear/none
1120	3	17.2	8.29	826	0.08	-138.9	0	200	0	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

(continued on back)

If no or N/A - Explain below.

_____

3. SAMPLE COLLECTION: Method: grab

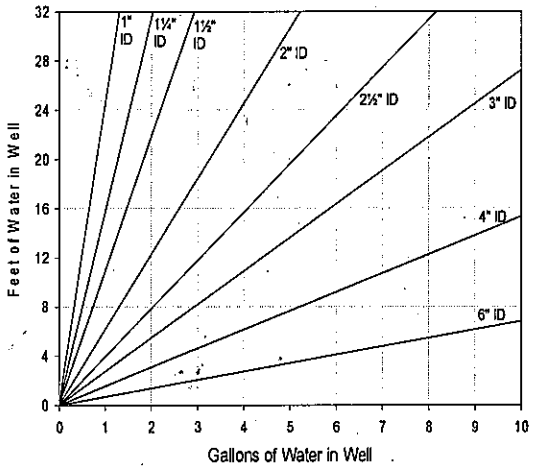
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
21A-TRC401R-09K21-1	40mL VOA	9	HCL	VOCs 8260C	1125

Comments MS/MSD

Signature _____ Date 9/16/21

AECOM

Well ID: TRC-401R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[51 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.770 L ; 0.770 L x 3 well vol. = 2.31 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

Location LMC Date 8/30/21

Project / Client Wilmington, MA

0725 - On site. Team: Dylan Potter, Brandon King
Task: Flute purge
Weather: 70s - 80s, humid.
Hold tailgate meeting
0755 - Mobilize to AE106R

Well ID	Purge Time	Condition
AE-106R	0905-0910	good
AE-105R	0928-0934	port 6 not working
AE-112R	1024-1030	Good
AE-111R	1048-1055	2 Bolt holes broken
AE-110R	1133-1140	Flooded
AE-109R	1152-1200	1 bolt hole broken
AE-104R	1332-1336	Dirty inside
AE-103R	1402-1408	1 bolt broken
AE-102RR	1409-1415	
AE105R	1419-1425	broken bolt hole
AE100R	1445-1450	

1500 - Clean up
1510 - Off site. BK to Pine Env to pick up nitrile gloves, DP to pick up drums

Location LMC Date 8/31/21

Project / Client W. Immington, MA

0650 - DPotter on site. Begin prep
0730 - Team on site. Team: Scott Olson, Katy Taske, Jillian Whiting, Michaela Fitzgerald, Naushin Fallahpour, Sean Haggett, Floyd Burton
Task: annual gauging
Weather: sunny, 80s, humid
0750 - Hold Safety meeting
0820 - Calibrate PIDs and WL meters
0840 - Mobilize. Groups: DP and Brandon King; FB and KT; MFs JW, and SO; NF and SH
1430 - NF off site
1730 - Gauging mostly complete. Post-cal PIDs and de-mob
1755 - Team off site. DP and FB gauge AE-102 S/M/D
1820 - DP and FB off site

Rite in the Rain

Location LMC Date 9/1/21

Project / Client Wilmington MA

0720- DPotter on site
0730- B. King on site. Calibrate
0800- F. Burton on site. Calibrate and hold tailgate meeting
0920- UPS trucks leave building 1. Mobilize to wells

Well ID	TOS
21A-AE26R1-090121-1	1150
21A-AE26R2-090121-1	1000
21A-AE26R3-090121-1	1345
21A-AE26R4-090121-1	1440
21A-AE26R5-090121-1	1535
21A-AE28R1-090121-1	1010
21A-AE28R2-090121-1	1415
21A-AE28R3-090121-1	1055
21A-AE28R4-090121-1	1211

1350- Phoenix courier on site
1400- Phoenix carrier off site with samples
1545- Post Cal and de-mob
1645- off site

Location LMC Date 9/2/21

Project / Client Wilmington MA

pg 1

0730- On site. Team: DPotter, FBurton, Shaggett, B. King
Task: Flute sampling
Weather: 60s, mostly cloudy
Calibrate and hold tailgate meeting
0830- Mobilize to wells

Well ID		TOS	
AE104	R1	1335	
	R2	1340	
	R3	1345	
	R4	1350	
	R5	1355	
	R6	1400	
AE109	R1	1345	
	R2	1350	DUP at 1355
	R3	1400	
	R4	1405	
	R5	1425	
	R6	1410	
	R7	1415	
	R8	1420	
AE110	R1	1350	
	R2	1355	
	R3	1400	

Rite in the Rain

Location LMC Date 9/2/21

Project / Client Wilmington, MA

pg 2

AE110R4		1410
	R5	1415
	R6	1420
	R7	1425

1450 – Phoenix carrier ~~of~~ on site

1800 – Phoenix carrier off site. Post cal and demob

1830 – All off site

Location LMC Date 9/3/21

Project / Client Wilmington MA

0730 – on site. Team: DPotter, BKing, SHaggett, FBurton

Task: Building 1 GW sampling

Calibrate and wait for trucks to leave UPS

0800 – Hold tailgate meeting

0915 – UPS clears building 1. Mobilize to wells

WELL ID	TOS	
AE-25S	1100	
AE-25D	1135	
AE-25R	1220	
AE-23S	1030	
AE23R	1150	Purged then sampled
AE24	1145	MS/MSD
AE26S	1235	
AE26D	1145	
AE27R	1040	

1455 – Phoenix and alpha couriers on site to pick up samples. Team de-mobs

1515 – all off site

Rite in the Rain

Location LMC Date 9/7/21

Project / Client Wilmington

0730- On site. Team: DP, BK, SH
Weather: Sunny, 70s
Task: Sample AE-101S/D, AE-102RR, and AE-111R

0830- Hold tailgate meeting after calibration. Mobilize to wells

WELL ID	TDS
AE-111R1	1210 (DP at 1212)
R2	1215
R3	1220
R4	1225
R5	1230
R6	1235
R7	1240
AE-102RR1	1250
R2	1255
R3	1300
R4	1305
R5	1310
R6	1320
AE1015	0950
AE-101D	1035
AE-109D	1245
~~AE~~ TRC-102	1425

Location LMC Date 9/7/21

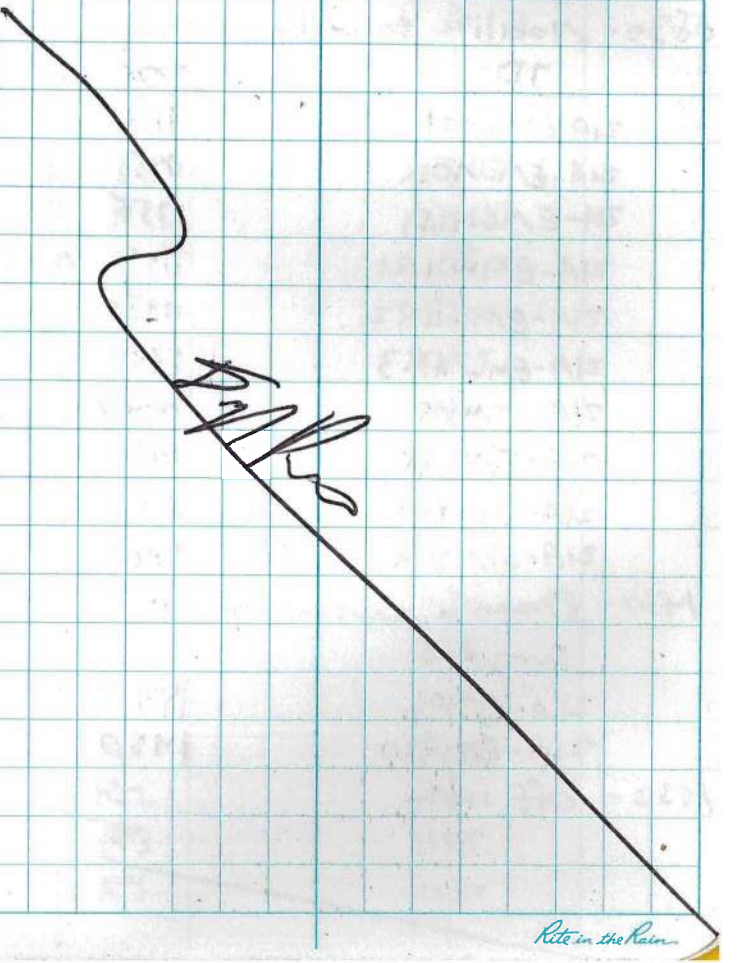
Project / Client Wilmington

TRC-103

1505- Phoenix courier picks up samples. Post cal

1530- DP to FedEx to ship Pace samples

1600- All off site



Rite in the Rain

Location LMC Date 9/8/21

Project / Client Wilmington

0735- On site. Team: DPotter, B King, S. Haggett, F. Burton
Task: bw-flow GW sampling
Weather: Sunny, 70s, humid
Calibrate and hold tailgate meeting

0830- Mobilize to wells

ID	TOS	
21A-EMW10D	1115	
21A-EMW10R	0955	
21A-EMW11D	1355	
21A-EMW11R1	1145	MS/MSD
21A-EMW11R2	0935	
21A-EMW11R3	1340	
21A-STM8S	0940	
21A-STM8D	1050	
21A-STM8M	1015	
21A-STM8R	1340	

1430- Phoenix courier on site to collect samples.

21A-GZA6	1440
21A-GZA10	1450

1530- off site

Location LMC Date 9/9/21

Project / Client Wilmington

0730- D. Potter on site. Task: GW sampling
Weather: period of rain showers

0740- S Haggett on site

0800- F Burton on site

0830- B King on site. Purge flute wells then calibrate equipment

Well ID	TOS
AE100R1	1125
R2	1340
R3	1345
R4	1350
R5	1130
R6	1355
AE103R1	1110
R2	1115
R3	1120
R4	1125
R5	1130
R6	1135
R7	1140
AE108R1	1205
R2	1200
R3	1155
R4	1150

Rite in the Rain

Location LMC Date 9/9/21

Project / Client Wilmington

AE108R5 1145

1230 – 1300 lunch then collect diss hydrogen samples from:

AE100R1	1415-1430
AE100R5	1435-1455
AE108R1	1330-1350
AE103R1	1505-1525
AE103R5	1540-1600

1455 – Phoenix courier on site

1530 – FB off site

1600 – SH and BK on site

1630 – DP off site

Location LMC Date 9/10/21

Project / Client Wilmington

0730 – DPotter on site. Team: DPotter, SHuggett, BKing, FBurton

Task: GW sampling

Weather: sunny, 70s

Calibrate and hold tailgate meeting

0845 – Mobilize to wells

Well ID	TOS
AE29R1	0910
R2	0930
R3	0945
R4	1018
R5	1045
AE101R1	0940
R2	1025
R3	1105
R4	1320
AE2I	1335
AE2R	1140
AE112D	1345

1357 – Phoenix courier on site. Post cal

1530 – All off site after de-mob

Rite in the Rain

Location _____ Date 9/13/21

Project / Client _____

0730- DPotter on site

Team: DPotter, AGrossman, BKing, S. Huggett, FBurton

Task: Wetland GW sampling.

0900- Hold tail gate meeting and mobilize to Stickney Access Rd

Well ID	IDS
AE-105R1	
R2	
R3	
R4	
R5	
TRC-301R1	
R2	
R3	
R4	
AE-106S	
AE-106M	
AE106D	
AE106R1	
R2	
R3	
R4	
R5	

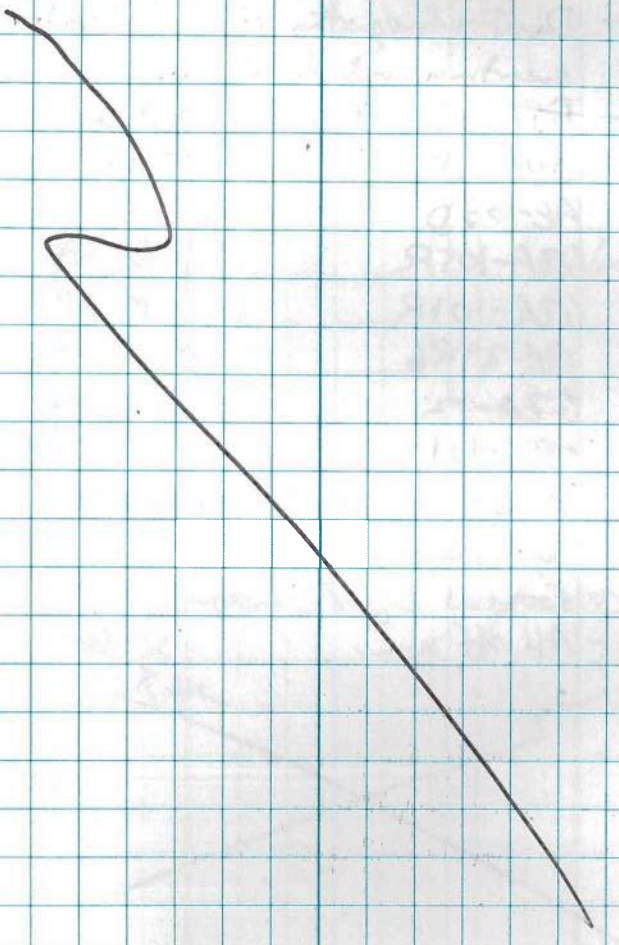
Location _____ Date 9/13/21

Project / Client _____

1425- Phoenix courier on site to pick up samples

1745- Ship samples to Microbial Insights and Pace Analytical

1815- All off site



Rite in the Rain

Location _____ Date 9/14/24

Project / Client _____

0730- On site. Team: DPotter, AGrossman, F. Burton
Task: Parking lot GW sampling
Weather: sunny, 70s
0900- Dan Folan on site. Hold Tailgate meeting and finish prep
1000- ~~DP~~ DF off site. Mobilize to wells

Well ID	TDS	
AE-103D		MS/MSD
GZA-105R		
GZA-101R		
AE-29R6		
GZA-12		
TRC-101		

1350- Phoenix courier on site to pick up samples
1630- Post cal and de-mob
1730- All off site

Location _____ Date 9/15/24

Project / Client _____

0730- On site. Team: DPotter, ~~FBurton~~, AGrossman, SHaygatt
Task: Parking lot GW sampling
0745- Calibrate
0830- Hold tailgate meeting and mobilize to wells

Well ID	TDS	
GZA-105D		(Duplicate)
GZA-105S		
AE-3		MS/MSD
AE-4		
AE-102M		
AE-102S		
AE-102D		

1430- Phoenix courier on site to pick up samples
1600- Post cal and DP brings samples to FedEx
1630- Off site.

Rite in the Rain

Location _____ Date 9/16/21

Project / Client _____

0730 – On site. Team: DPotter, FBurton, SHaggett, BKing

Task: Sample parking lot wells and AE-112R

0840 – Calibration complete. Hold tailgate meeting and mobilize to wells

Well ID	TDS	
AE-101R5		
AE-101R6		
AE-103S		
AE-103M		
~~AE-GZA-102S~~		
TRC-401R		MS/MSD
AE-112R1		
R2		
R3		
R4		
R5		Duplicate
R6		
EB01		
EB02		
STM8R1		Duplicate

1600 – Post cal and DP ships to Microbial Insights and Pace.

1630 – All off site

Location _____ Date 9/17/21

Project / Client _____

0640 – DPotter on site. Begin prep for wetlands

Team: DPotter, SHaggett, AGrossmen, FBurton

Task: wetland wells

0730–0800 Team on site. Begin calibration

0900 – Hold tailgate meeting and mobilize to wetlands

Well ID	TDS
AE-105S	
AE-105M	
AE-105D	
PS-1S	1315
PS-1M	1235
PS-1D	1325
PS-2S	
PS-2M	
PS-2D	

1250 – Phoenix courier on site to pick up samples

1530 – Sampling complete. Post-cal

1605 – DP ships cooler to Pace

1625 – All off site.

Rite in the Rain

Location _____ Date 9/20/21

Project / Client _____

0700- D.Potter on site
0730- A.Grossmen and BKing on site
Weather: Sunny, 60-70s °F
Task: Island wells sampling.
0740- Calibrate and tailgate
0900- Mobilize to Concord St to get to island.

Well ID	TOS
MW-4A	1040
MW-4	1135
PS-3	1130
PS-4	1230
PS-5S	1205

Purged PS-5D to be sampled tomorrow
1300- Mobilize off island
1330- Phoenix carrier on site to pick up sample
1330-1400 Lunch
1400- Post cal and de-mob
1515- off site. DP to Home Depot

The manufacturers of *Rite in the Rain* all-weather writing products are grateful to the numerous environmental experts who have contributed to the development of this book. Should you have any additions, improvements or corrections for future publications of this field book or have suggestions for other environmental field book formats, we welcome your input.

Although much effort has been taken to ensure the accuracy of the following reference pages, J L Darling LLC cannot guarantee the accuracy of the data.

To provide input or solicit pricing on these or custom printed field books, contact your *Rite in the Rain* dealer or J L Darling LLC, 253-922-5000 or fax 253-922-5300.

www.RiteintheRain.com / sales@riteintherain.com

Common Field Data Error Codes

Error codes are used to explain common mistakes and are written above or close to the mistake. Commonly used error codes include:

RE	Recording Error
CE	Calculation Error
TE	Transcription Error
SE	Spelling Error
CL	Changed for Clarity
DC	Original Sample Description Changed After Further Evaluation
WO	Write Over
NI	Not Initialed and Dated at Time of Entry
OB	Not Recorded at the Time of Initial Observation

Note: Error code should be circled, dated, and initialed when recorded.

Hazard Classifications

Class 1 Explosives
Class 2 Gas
Class 3 Flammable Liquid
Class 4 Flammable Solids (Potential spontaneous combustion, or emission of flammable gases when in contact with water)
Class 5 Oxidizing Substances and Organic Peroxides
Class 6 Toxic (poisonous) and infectious substances
Class 7 Radioactive material
Class 8 Corrosives
Class 9 Miscellaneous dangerous goods

Container type abbreviations (for sampling guidelines)

BR - Boston Round • ABR - Amber Boston Round • AJ - Amber Jug • AWM - Amber Wide Mouth • Poly - Polyethylene Bottles • BOD - Bottle • CWM - Clear Wide Mouth

Location CMC Wilmington Date 9/24/24

Project / Client 2021 GWS

0730- On site

Team: D. Potter, BKing, FBurton, AGrossman

Weather: sunny, 70s

Task: GW sampling

0745- Calibrate

0830- Tailgate meeting and mobilize to locations

Well ID	TOS	
PS-5D	0915	Grab
MW-5	1050	
MW-7	1455	MS/MSD
GZA-14	1150	
GZA-14A	1040/1045	DUP
PS-8S	1005	
PS-8D	1115	
PS-8M	1040	
IP-1R2	1355/1400	DUP
~~TRE-10R~~		DD
PZ-2S	1145	

1510 - Phoenix courier on site to pick up samples. Post-cal and de-mob

1600- Off site

Location LMC Wilmington Date 9/22/21

Project / Client 2021 GWS

0800 - DPotter on site. Team: FBurton, AGrossman, DPotter
Task: Finish GW sampling
Weather: cloudy, 70s

0845 - Hold Tailgate meeting after calibration. Mobilize to wells

Well ID	TOS
AE104S	0930
AE104M	1005
AE104D	1040
STM3S	1140
STM3D	1250/1255DUP
STM3R	1450

1930 - Finish re-sampling select 13 wells for dissolved gases and 2 wells for CSIA. Sample drums

1430 - Phoenix carries on site to pick up samples. FB post-cals and demobs

1600 - FB off site. AG post-cals. DP preps samples being shipped to Pace and Microbial Insights

1730 - DP, AG off site

Location LMC-Wilmington Date 10/15/21

Project / Client

740 Scott Olson onsite
800 Adam Grossman onsite

Scope
* Survey new TOC @ AE-03
* WLs @ AE108R & AE-111R
* Photos of well repairs

Weather: Hazy, MILD, 65-75F

830 TAILGATE: Via Power Apps (Did Not go through)
* High Vis Vest
* Traffic / Trucks
* Ergonomics / opening MW's bending & using hand tools/glan

Photos of Roadbox replacements at

AE-3	TRC-102	AE103R
AE-4	TRC-103	STM-3

SGO

Rite in the Rain

Location LMC Wilmington Date 10/15/21

Project / Client

TOC = Top of Casing
HoI = Height of Instrument

SURVEY AE-3 830-945

	TOC	HoI			TOC AE-3
PZ2S	82.81	4.57	87.38	-5.15 =	82.23*
TRC103	82.02	5.40	87.42	-5.15 =	82.27
AE-3		5.15			
GZA102S	82.82	4.55	87.37	-5.15 =	82.22*
				VAR. .01-.05	

SURVEY AE-3

					TOC AE-3
PZ-2S	82.81	6.11	88.92	-6.69 =	82.23*
TRC103	82.02	CAN'T SEE			
TRC101	82.18	6.75	88.93	-6.69 =	82.24*
GZA105D	81.82	7.15	88.97	-6.69 =	82.28
GZA105R	81.80	7.35	89.15	-6.69 =	82.46
~~AE100R GRD.~~	~~84.69~~				
~~AE100R1~~	~~83.59~~				
~~AE100R1~~	~~83.59~~				
AE100R GRD	84.69	4.24	88.93	-6.69 =	82.24*
GZA102S	82.82	6.10	88.92	-6.69 =	82.23*
AE-3		6.69			

NEW TOC @ AE-3 = 82.23

Survey level/transit TOPCON RX2805
Rental USENV RX2805 5000-1010

SGO

APPENDIX B
LNAPL MONITORING RECORD FIELD RECORDS

AECOM

Former GE Facility - Wilmington, MA

Building 3 - EPL LNAPL Gauging Record

Date: 12/2/2021

Weather: Cloudy, 50 F

Recorder: Dylan Potter

Gauging Information

Well	Time	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Depth to DNAPL (ft btoc)	Depth to Bottom (ft btoc)	Confirm Product w/ Bailer (Y/N/NA)	Product Removed (Y/N/NA)	Comments
AE-3	10:29	ND	5.33	ND	12.49	NA	NA	
AE-4	10:34	ND	4.96	ND	12.20	NA	NA	
CW-1	10:45	ND	4.06	ND	8.25	NA	NA	sheen
CW-2	10:52	ND	3.83	ND	6.70	NA	NA	sheen
GZA-102S	10:25	ND	5.79	ND	10.92	NA	NA	
PZ-2S	10:40	ND	5.53	ND	8.07	NA	NA	
TRC-101	10:37	ND	5.28	ND	9.95	NA	NA	

Gauging device (Mnfr./Model No.):

Note: If LNAPL is detected at thickness > 0.1 feet, insert absorbant sock and wire basket into well and secure tightly.

(Place spent socks, if used, in 5-gallon bucket within treatment building.)

Notes:

NA = Not Applicable

ND = Not Detected

NR = Not Recorded

ft btoc = feet below top of casing

Former GE Facility - Wilmington, MA

Building 3 - EPL LNAPL Gauging Record

Date: 2/23/2022

Weather: Sunny, 68 F

Recorder: Dylan Potter

Gauging Information

Well	Time	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Depth to DNAPL (ft btoc)	Depth to Bottom (ft btoc)	Confirm Product w/ Bailer (Y/N/NA)	Product Removed (Y/N/NA)	Comments
AE-3	12:38	ND	4.46	ND	12.50	NA	NA	
AE-4	12:41	ND	4.14	ND	12.21	NA	NA	
CW-1	12:55	ND	3.21	ND	8.20	NA	NA	sheen. Not detected on probe
CW-2	13:02	ND	2.99	ND	6.50	NA	NA	very slight sheen. Not detected on probe
GZA-102S	12:34	ND	4.33	ND	10.95	NA	NA	
PZ-2S	12:50	ND	4.65	ND	8.02	NA	NA	
TRC-101	12:46	ND	4.39	ND	10.00	NA	NA	

Gauging device (Mnfr./Model No.): Solinst Interface Probe/ Model 122

Note: If LNAPL is detected at thickness > 0.1 feet, insert absorbant sock and wire basket into well and secure tightly.

(Place spent socks, if used, in 5-gallon bucket within treatment building.)

Notes:

NA = Not Applicable

ND = Not Detected

NR = Not Recorded

ft btoc = feet below top of casing

APPENDIX C
WASTE MANIFESTS

TRUCK #62134

Please print or type. Generator acknowledges that no material change has occurred either in the characteristics or in the process generating the material. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	MAD985290873	1	(800) 483-3718	01550371 7 FLE

GENERATOR

5. Generator's Name and Mailing Address
Lockheed Martin Corporation
6801 Rockledge Drive MP CCT 246
Bethesda, MD 20817
Generator's Phone: (240) 676-5392 ATTN: Paul Calligan

Generator's Site Address (if different than mailing address)
50 Fordham Road
Wilmington, MA 01887

6. Transporter 1 Company Name
Clean Harbors Environmental Services, Inc.
U.S. EPA ID Number: MAD039322250

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

8. Designated Facility Name and Site Address
Clean Harbors of Braintree Inc
1 Hill Avenue
Braintree, MA 02184
Facility's Phone: (781) 380-7100
U.S. EPA ID Number: MAD053452637

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (TRICHLOROETHYLENE, TETRACHLOROETHYLENE), 9, PG III	005	DM	225	G	D039 D040
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. CH1563550 ERG#171
5 x 55

Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation efficiency, convenience or safety

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Brandon Hing as agent for Lockheed Martin
Signature:
Month: 11 Day: 23 Year: 21

INT'L

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

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Greg Lunn
Signature:
Month: 12 Day: 2 Year: 21

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

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141			

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

Printed/Typed Name: Hung Hoang
Signature:
Month: 12 Day: 9 Year: 21

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

RI 2105887691-001 PPW

CleanHarbors
ENVIRONMENTAL SERVICES®

Land Disposal Restriction Notification Form

Printed Date :Nov 18, 2021

MANIFEST INFORMATION

Generator : Lockheed Martin Corporation

Address: 50 Fordham Road
Wilmington,MA 01887

EPA ID #: M A D 9 8 5 2 9 0 8 7 3

Manifest Tracking Info.

015503717FLE

Sales Order No: 2105887691-001

LINE ITEM INFORMATION

Line Item:	Page No:	Profile No:	Treatability Group:	LDR Disposal Category
1.	1	CH1563550	NON-WASTEWATER	2 (This is subject to LDR.)

EPA Waste Code	EPA Waste SubCategory
D039D040	NONE

LDR Chemical Data

Chemical	Underlying Hazardous Constituents	Constituents of Concern	Contaminants Subject to Treatment
1,1,1-TRICHLOROETHANE	Y	N	N
1,1,2-TRICHLORETHANE	Y	N	N
1,1-DICHLOROETHANE	Y	N	N
1,1-DICHLOROETHYLENE	Y	N	N
1,4-DIOXANE	Y	N	N
ACETONE	Y	N	N
TOLUENE	Y	N	N
TRANS-1,2-DICHLOROETHYLENE	Y	N	N
VINYL CHLORIDE	Y	N	N

Certification	Applies to Manifest Line Items
Pursuant to 40 CFR 268.7(a), I hereby notify that this shipment contains waste restricted under 40 CFR Part 268.	1.

Waste analysis data, where available, is attached.

Signature : [signature] Print Name Brandon King as agent for Lockheed Martin

Title : Scientist Date : 11/23/21

Site Address:

SC MA PPW 8/1/2021

WORK ORDER NO. _____

DOCUMENT NO. 857469 **STRAIGHT BILL OF LADING**

TRANSPORTER 1 ~~Clean Harbors Environmental Services, Inc~~ VEHICLE ID # 621134

EPA ID # ~~MAD039322250~~ TRANS. 1 PHONE ~~(781) 792 5000~~

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER ATTN Paul Calligan
E.L Harvey & Sons Inc.	Lockheed Martin Corporation
FACILITY EPA ID #	SHIPPER EPA ID #
N/A	MAD985290873
ADDRESS	ADDRESS
68 Hopkinton Rd	90 Fordham Road
CITY STATE ZIP	CITY STATE ZIP
Westborough MA 01581	Wilmington MA 01887

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
003	DM		A. NON DOT Regulated Concrete	850	P
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 483-3718 GENERATOR: Lockheed Martin Corporation

3x55

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

as agent for Lockheed Martin

SHIPPER	PRINT Brandon King	SIGN	DATE 11/25/21
TRANSPORTER 1	PRINT Greg Lunn	SIGN	DATE 12-2-21
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

Generator acknowledges that no material change has occurred either in the characteristics or in the process generating the material.

4

CHI 107

APPENDIX D
INDOOR AIR SAMPLING FIELD RECORDS

Indoor Air Quality Building Survey

Date: 1/11/2022 (pre-visit) 1/18/2022 - sampling RTN: 3-0518

Address: 40 Fordham Rd, Wilmington, MA

Building Contact: Eric Darci (HilCo) Phone: Tel:
Cell: 617-308-3659
Work: _____

Current Occupants: UPS workers - Ken Rich is manager

INITIALS	AGE	SEX (M/F)

Building Construction Characteristics: (Circle or underline appropriate responses)

Single Family	Multiple Family	School	(Commercial)
Ranch	2-Family		
Raised Ranch	Duplex		
Cape	Apartment House		
Colonial	# of units ____		
Split Level	Condominium		
Colonial	# of units ____		
Mobile Home	Other _____		
Other _____			

Bld age 45-50 yrs

General Description of Building Construction Materials:

Wood (Brick) Stone (Metal) Other_____

How many occupied stories does the building have? 2

Has the building been weatherized with any of the following?

(Insulation) Storm Windows Energy-Efficient Windows Other _____

Exterior of 2nd floor was wrapped in 2018

Indoor Air Quality Building Survey, continued

What type of basement does the building have?

Full basement Crawlspace (Slab-on-Grade) Other _____

What are the characteristics of the basement? Finished Unfinished Other N.A.

Basement Floor:	Foundation Walls:	Moisture:
Concrete	Poured Concrete	Wet
Dirt	Block	Damp
	Stone	Dry

Is a basement sump present? (Y/N) N.A.

Does the basement have any of the following characteristics (i.e., preferential pathways into the building) that might permit soil vapor entry?

Cracks Pipes/Utility Conduits Foundation/slab drainage

Sump pumps Other N.A.

Heating and Ventilation System(s):

What type(s) of heating system are used in this building?

(Hot Air Circulation) Heat Pump Wood Stove

Hot Air Radiation Unvented Kerosene Heater Electric Baseboard

Forced Hot Water Steam Radiation Other _____

What type(s) of fuel are used in this building?

(Natural Gas) (Electric) Coal Other _____

Fuel Oil Wood Solar

What type(s) of mechanical ventilation system are present and/or currently operating in this building? 2 cambridge units on high bay roof for fresh air
4 smaller units for re-circulating indoor air

Central Air Conditioning Mechanical Fan Bathroom Ventilation Fan

Kitchen Range Hood Open Window Individual Air Conditioning Unit

Air-to-Air Heat Exchange Other _____

Indoor Air Quality Building Survey, continued

Sources of Chemical Contaminants: Refer to Photo Log

Potential VOC Source	Check if present in building prior to sampling	Location of Source	Removed 48 hours prior to sampling? (Yes/No/NA)
Paints or paint thinners			
Gas-powered equipment			
Gasoline storage cans			
Cleaning solvents			
Air fresheners			
Oven cleaners			
Carpet/upholstery cleaners			
Hairspray			
Nail polish/polish remover			
Bathroom cleaner			
Appliance cleaner			
Furniture/floor polish			
Moth balls			
Fuel tank			
Wood stove			
Fireplace			
Perfume/colognes			
Hobby supplies (e.g., solvents, paints, lacquers, glues, photographic darkroom chemicals)			
Scented trees, wreaths, potpourri, etc.			
Other			
Other			

☒ YES ☐ NO Do one or more smokers occupy this building on a regular basis?
Smoking occurs outside of eastern entrance

☐ YES ☒ NO Has anybody smoked in the building in the last 48 hours?

☒ YES ☐ NO Does the building have an attached garage?
High bay area houses UPS trucks

☒ YES ☐ NO If so, is the garage used for parking cars
Trucks loaded in morning, leave ~9 am and return ~5 pm

Indoor Air Quality Building Survey, continued

☐ YES ☐ NO — Do the occupants of the building frequently have their clothes dry-cleaned?
unknown

☒ YES ☐ NO — Was there any recent remodeling or painting done in the building?
new wall constructed in SW corner room in 2021

☐ YES ☑ NO — Are there any new pressed wood products in the building (e.g., hardwood plywood, wall paneling, particleboard, fiberboard)?

☐ YES ☑ NO — Are there any new upholstery, drapes or other textiles in the building?

☐ YES ☐ NO unk. — Has the building interior been treated with any insecticides/pesticides?

If yes, what chemicals are used and how often are they applied?

Outdoor Sources of Contamination/Conditions:

Do any of the occupants apply pesticides/herbicides in the yard or garden? If yes, what chemicals are used and how often are they applied?

Is there any stationary emission source in the vicinity of the building?
2 generators in Bld 1 and a 2nd-floor electrical substation

Are there any mobile emission sources (e.g., highway, bus stop, high-traffic area) in the vicinity of the building?
UPS trucks leaving and entering the high bay area

Type of ground cover (e.g., grass, pavement, etc.) outside the building: asphalt with areas of grass

Other Information:

Is there other information about the structural features of the building, habits of its occupants or potential sources of contaminants to the indoor air that may be of significance to the evaluation of the indoor air quality of the building?

Weather Conditions during Sampling:

Outside Temperature (°F): 27°F

Prevailing wind direction and approximate wind speed: WNW 19 mph

Describe the general weather conditions (e.g., sunny, cloudy, rain): mostly cloudy

Was there significant precipitation (≥ 0.1 inches) within 12 hours preceding the sampling? NO

Pressure:

	9AM	1PM	5PM
outside	749.0	752.0	756.1
inside	748.9	752.0	

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044

Date: 1/18/2022

Sampler: Dylan Potter

Weather: sunny, 20-30°F, light wind

Sample Location: 22A-AA1-1

Sample ID: 22A-AA1-1

SUMMA Canister No.: 2636

Summar Canister Vol. (L): 6

Regulator No.: 01249

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units inHg)
Sample Start:	0925	-30.57
Check:	1116	-24.12
Check:	1310	-17.83
Check:	1432	-13.38
Check:	1556	-9.21
Sample Finish :	1658	-6.61

PID Reading (ppm) at sample location: 0.0 Time (24 hr): 1116

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044

Date: 1/18/2022

Sampler: Dylan Potter

Weather: indoors

Sample Location: 22A-IA2

Sample ID: 22A-IA2-1

SUMMA Canister No.: 2266

Summar Canister Vol. (L): 6

Regulator No.: 01770

Sample Duration (Circle one): Instant 1hr 2hr 4hr 8hr Other: ____ hrs

	Time (24 hr)	Pressure (units in Hg)
Sample Start:	0931	-30.01
Check:	1120	-24.42
Check:	1306	-18.99
Check:	1424	-15.08
Check:	1553	-10.97
Sample Finish :	1654	-8.42

PID Reading (ppm) at sample location: 0.0 Time (24 hr): 1102

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044

Date: 1/18/2022

Sampler: Dylan Potter

Weather: indoors

Sample Location: IA-3

Sample ID: 22A-IA3-1

SUMMA Canister No.: 1815

Summar Canister Vol. (L): ~~1815~~ 6

Regulator No.: ~~1815~~ 01452

Sample Duration (Circle one): Instant 1hr 2hr 4hr 8hr Other: _____ hrs

	Time (24 hr)	Pressure (units inHg)
Sample Start:	0929	-30.10
Check:	1116	-24.28
Check:	1307	-18.40
Check:	1429	-14.30
Check:	1555	-9.70
Sample Finish :	1653	-7.38

PID Reading (ppm) at sample location: 0.0 Time (24 hr): 1049

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044

Date: 1/18/2022

Sampler: Dylan Potter

Weather: indoors

Sample Location: IA-4

Sample ID: 22A-IA4-1

SUMMA Canister No.: 1785

Summar Canister Vol. (L): 6

Regulator No.: 01809

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: ____ hrs

	Time (24 hr)	Pressure (units inHg)
Sample Start:	0928	-30.35
Check:	1117	-24.35
Check:	1308	-18.27
Check:	1430	-14.12
Check:	1556	-9.47
Sample Finish :	1652	-7.20

PID Reading (ppm) at sample location: 0.0 Time (24 hr): 1043

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044

Date: 1/18/2022

Sampler: Dylan Potter

Weather: indoors

Sample Location: IA-7

Sample ID: 22A-IA7-1

SUMMA Canister No.: 3599

Summar Canister Vol. (L): 6

Regulator No.: 0250

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: ____ hrs

	Time (24 hr)	Pressure (units inHg)
Sample Start:	0931	-30.62
Check:	1119	-25.06
Check:	1307	-19.43
Check:	1425	-15.49
Check:	1553	-11.04
Sample Finish :	1653	-8.65

PID Reading (ppm) at sample location: 0.0 Time (24 hr): 1100

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044

Date: 1/18/2022

Sampler: Dylan Potter

Weather: indoors

Sample Location: IA-8

Sample ID: 22A-IA8-1

SUMMA Canister No.: 904

Summar Canister Vol. (L): 6

Regulator No.: 0790

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units inHg)
Sample Start:	0930	-29.61
Check:	1123	-23.95
Check:	1303	-18.81
Check:	1427	-14.80
Check:	1554	-10.43
Sample Finish :	1656	-7.76

PID Reading (ppm) at sample location: 0.0 Time (24 hr): 1055

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044

Date: 1/18/2022

Sampler: Dylan Potter

Weather: indoors

Sample Location: IA-8

Sample ID: 22A-IA8-2

SUMMA Canister No.: 1668

Summar Canister Vol. (L): 6

Regulator No.: 0167

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units mHg)
Sample Start:	0930	-29.93
Check:	1123	-23.98
Check:	1303	-18.67
Check:	1427	-14.36
Check:	1554	-9.80
Sample Finish :	1656	-6.81

PID Reading (ppm) at sample location: 0.0 Time (24 hr): 1055

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044

Date: 1/18/2022

Sampler: Dylan Potter

Weather: Indoors

Sample Location: IA-9

Sample ID: 22A-IA9-1

SUMMA Canister No.: 3125

Summar Canister Vol. (L): 6

Regulator No.: 01513

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: ____ hrs

	Time (24 hr)	Pressure (units inHg)
Sample Start:	0927	-30.16
Check:	1114	-24.76
Check:	1311	-18.81
Check:	1432	-15.02
Check:	1557	-10.94
Sample Finish :	1700	-8.40

PID Reading (ppm) at sample location: 0.0 Time (24 hr): 1114

Comments:

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL
320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 1/20/22

ALPHA Job #: L2202814

Client Information

Client: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824
Phone: 978-905-2100
Fax: 978-905-2101
Email: lori.herberich@aecom.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Lockheed Martin
Project Location: Wilmington, MA
Project #: 60552044.30
Project Manager: Scott Olson
ALPHA Quote #: 2017-2022

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)
Lori Herberich
Scott Olson

Billing Information

☐ Same as Client info PO #: 141252

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
Mass DEP	CAM	

Other Project Specific Requirements/Comments: TO-15 SIM. RLs must meet thresholds in AECOM Project QAPP (2017)

Project-Specific Target Compound List: ☐ Call Lori Herberich with Questions 478-302-2174

ANALYSIS

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM + Freon 113	APH Subset Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
02814-01	22A-AA1-1	1/18/22	0925	1658	-30.57	-6.61	AA	DP	6L	2638	01249	X					
-02	22A-IA2-1	1/18/22	0931	1654	-30.01	-8.42	AA	DP	6L	2266	01770	X					
-03	22A-IA3-1	1/18/22	0929	1653	-30.10	-7.38	AA	DP	6L	1815	01452	X					
-04	22A-IA4-1	1/18/22	0928	1652	-30.35	-7.20	AA	DP	6L	1785	01809	X					
-05	22A-IA7-1	1/18/22	0931	1653	-30.62	-8.65	AA	DP	6L	3549	0250	X					
-06	22A-IA8-1	1/18/22	0930	1656	-29.61	-7.76	AA	DP	6L	904	0790	X					
-07	22A-IA8-2	1/18/22	0930	1656	-29.93	-6.81	AA	DP	6L	1666	0167	X					
-08	22A-IA9-1	1/18/22	0927	1700	-30.16	-8.40	AA	DP	6L	3125	01573	X					

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Relinquished By:	Date/Time	Received By:	Date/Time:
		AWLB	1/19/22 09:56
	1/19/22 13:20		1/19/22 13:20
	1/19/22 15:00		1/19/22 1500
	1/19/22 1552		1/19/22 1552

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Form No: 101-02 Rev: (25-Sep-15)

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560

91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700

5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555

1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200

Order No.: R-75281

Date: 1/17/2022

Technician: BP

Company: AECOM

Contact: DYLAN

Phone #: #N/A

Packing List

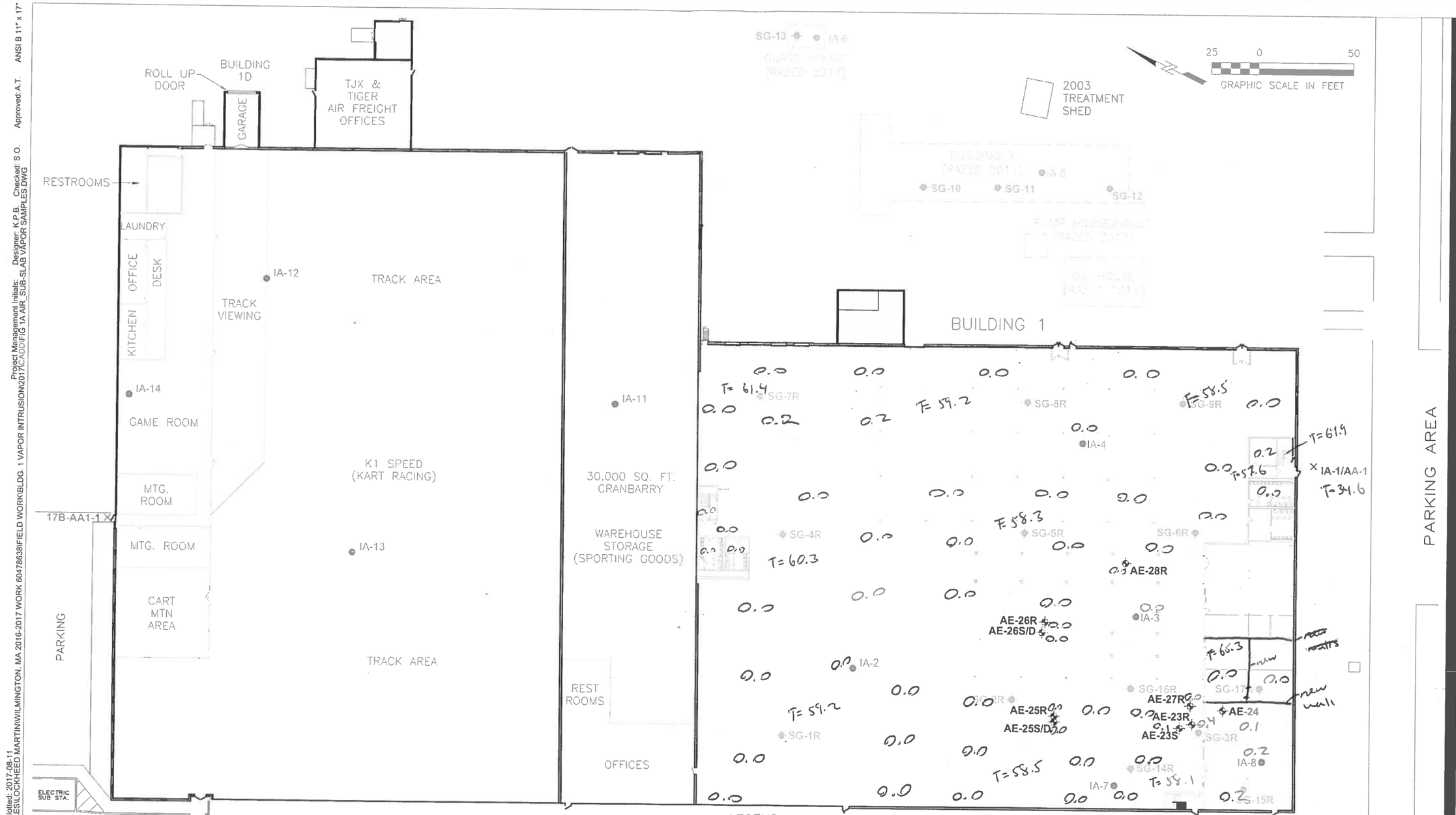
Item	Serial Number	Included	QC
Ion Science Tiger	**1000-1075**	✓	
Manual			
Charger		✓	
Probe Tip		✓	
Alkaline Battery Pack		✓	
External Filters			
Software			
Comm. Cable			
Regulator		✓	
Tedlar Bag		✓	
Calibration Gas		✓	
Tube Holder			
Zero Tubes			

Calibration Report

Item		Information	
Ion Science Tiger	**1000-1075**		
Calibration Gas:		***ISOBUTYLENE***	
Lot Number:		304-402123832-1	
Span Setting:		***100.00***	***ppm***
Correction Factor:		***1.00***	
Zero Reading:		***0.00***	***ppm***
Span Reading:		***100.00***	***ppm***
Post-Cal Bump Test:		***101.00***	***ppm***
Lamp		***10.6 eV***	

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verify that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.



LEGEND

- ● INDOOR AIR SAMPLE LOCATION
- × AMBIENT AIR SAMPLE; LOCATION VARIED 2009–2017; IA-1 (TRC 2009–2011) AA-1 (AECOM 2012–2017)
- MONITORING WELL LOCATION
- SUB-SLAB VAPOR POINT

NOTES:

1.) INDOOR AIR LOCATIONS CO-LOCATED WITH PRIOR INDOOR AIR LOCATIONS FROM 2009–2016.
2) SUB-SLAB VAPOR POINTS INSTALLED BY TRC IN 2009–2010. POINTS ABANDONED IN DECEMBER 2012 EXCEPT SG-13 REMOVED IN 2017. POINTS SG-10,11,12 REMOVED WHEN BUILDING 3 WAS RAZED IN JULY 2011.
3.) R – DENOTES VAPOR PIN LOCATIONS INSTALLED IN FEBRUARY 2013, AND ABANDONED IN FEBRUARY 2014. "R" LOCATIONS WERE WITHIN ~5 FT OF ORIGINAL POINTS.
4.) IA-6 NOT SAMPLED 2011 OR 2014–2017.
5.) ADDED LOCATIONS IA-11 AND IA-12 APRIL 2017.
6.) ADDED LOCATIONS IA-13 AND IA-14 JUNE 2017.

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

60478638 2017-08-07

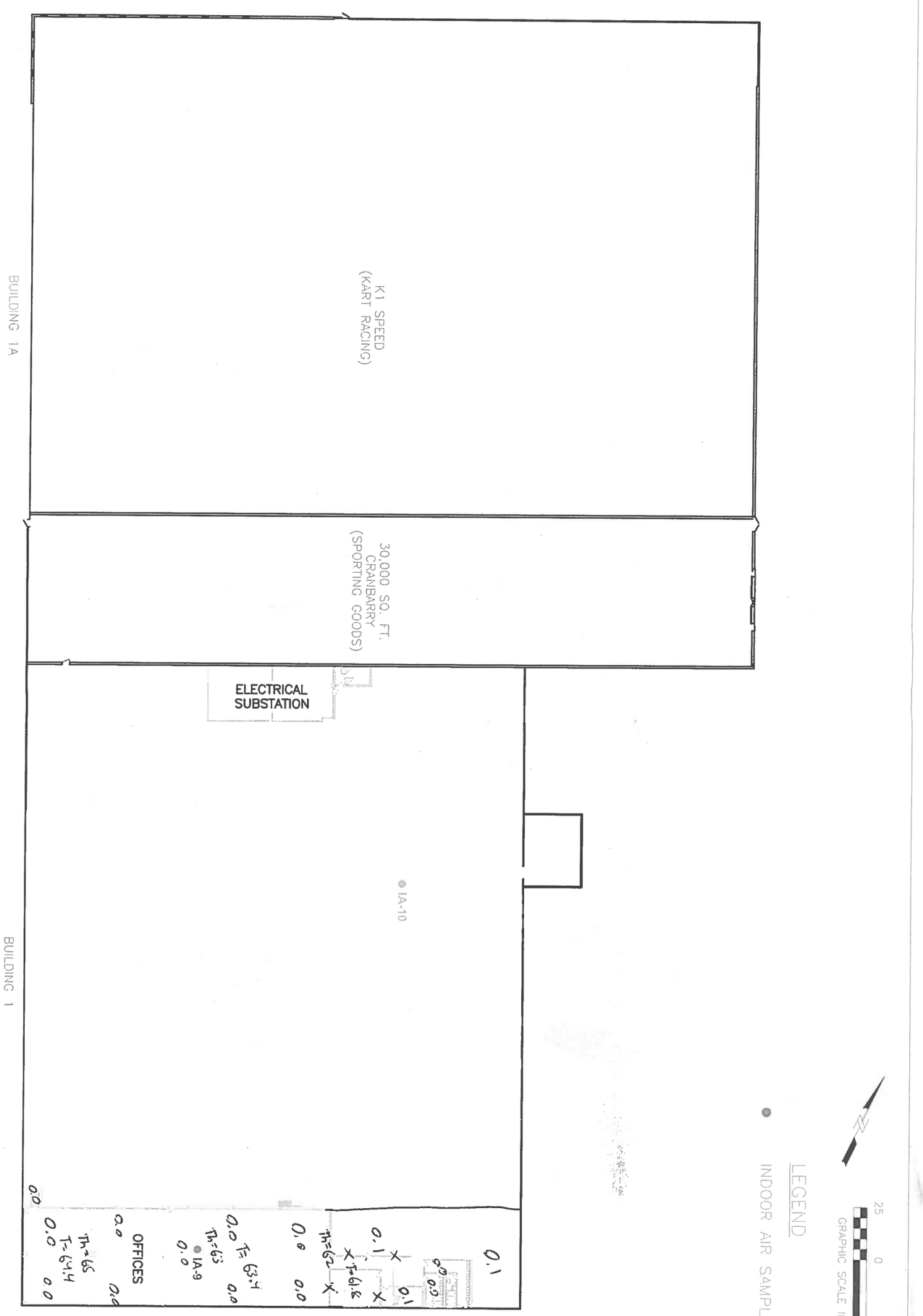
INDOOR AND AMBIENT AIR AND SUB-SLAB VAPOR SAMPLE LOCATIONS - BUILDINGS 1, 3, GUARD SHACK

AECOM

FIGURE: 1a

Last saved by: BARRYK(2017-08-11) Last Plotted: 2017-08-11
Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON, MA 2016-2017 WORK 60478638\FIELD WORK\BLDG. 1 VAPOR INTRUSION\2017\CADD\FIG 1A AIR_SUB-SLAB VAPOR SAMPLES.DWG
Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: A.T. ANSI B 11" x 17"

Last saved by: BARRYK(2017-08-16) Last Plotted: 2017-08-16
Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON, MA 2016-2017 WORK 60478638\FIELD WORK\BLDG. 1 VAPOR INTRUSION\2017\CADD\FIG 1B INDOOR AIR SAMPLES.DWG
Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: A.T. ANSI B 11" x 17"


BUILDING 1A
K1 SPEED
(KART RACING)
30,000 SQ. FT.
CRANBARRY
(SPORTING GOODS)
ELECTRICAL
SUBSTATION
BUILDING 1
IA-10
OFFICES
IA-9
0.0
0.1
0.0
0.0
0.0

12 Location CMC Wilmington Date 1/18/2022

Project / Client Annual Indoor Air Sampling

0730- D. Potter on site.
Task: Indoor Air Sampling
Weather: Partly sunny, 25-30°F, windy
Begin setting up sampling locations
0830- off site to get battery for regulator
0900- UPS trucks begin to leave
0920- Trucks off site
0925- Begin sampling. 3 trucks enter and leave building between 0930-1000
1040- Take PID readings
Make & Model: ion Tiger
S/N: 1000-1075
Fresh air reading: 0.0 ppm
Isobutylene (Lot # 4013570): 100 ppm
1115- check canister levels. See logs for pressure information and periodic checks
1200- Take temperature readings
1650- Trucks begin to arrive back. Stop sampling
1700- De-mob
1745- off site to office

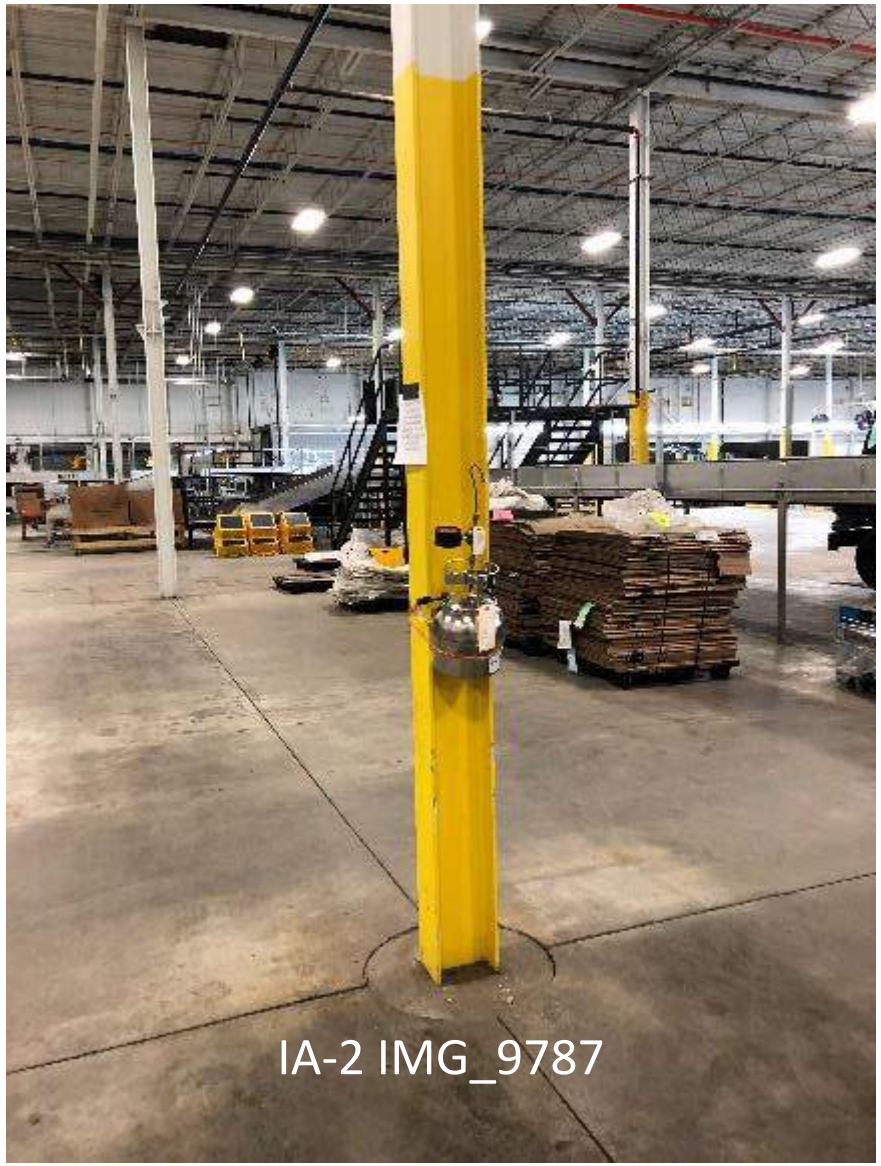
Photograph Log
Vapor Intrusion Monitoring

Former GE Facility
50 Fordham Rd – Wilmington, MA
Building 1 (UPS)

January 18, 2022

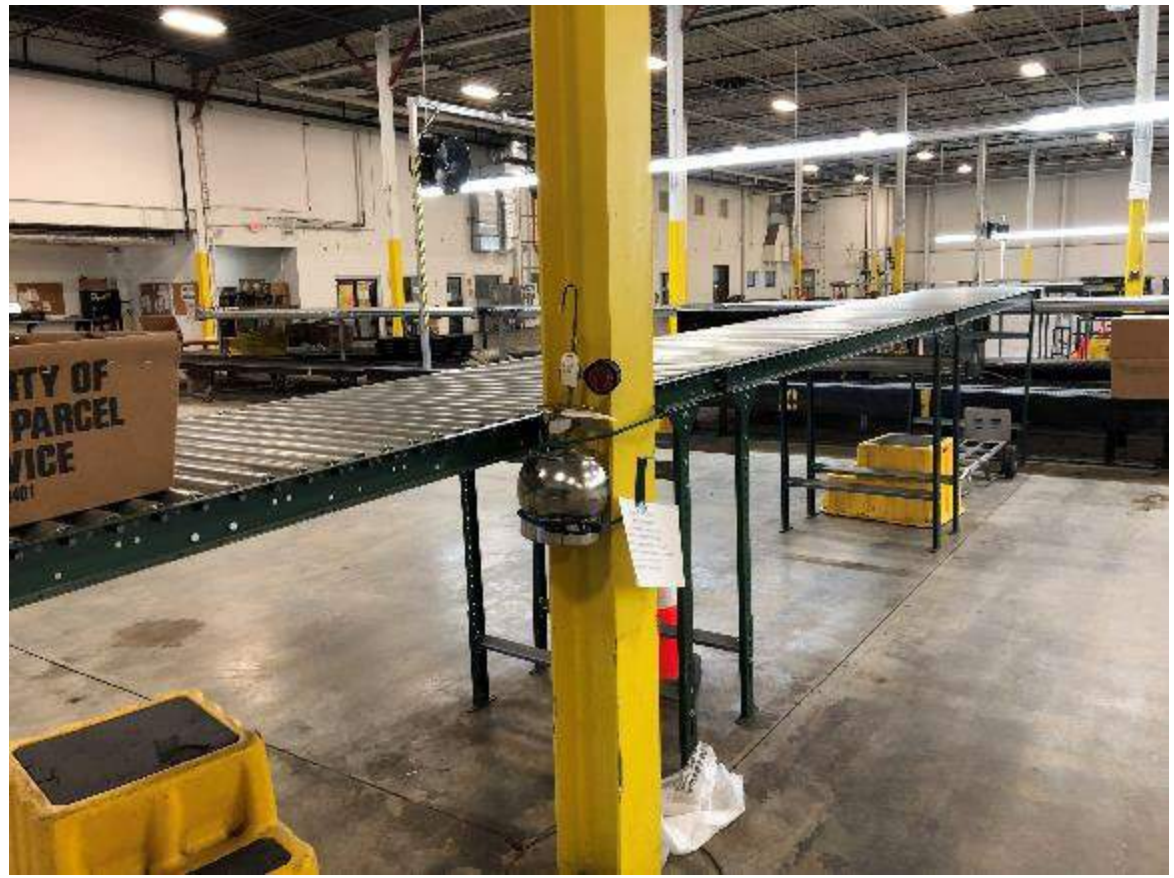
AECOM – Chelmsford, MA

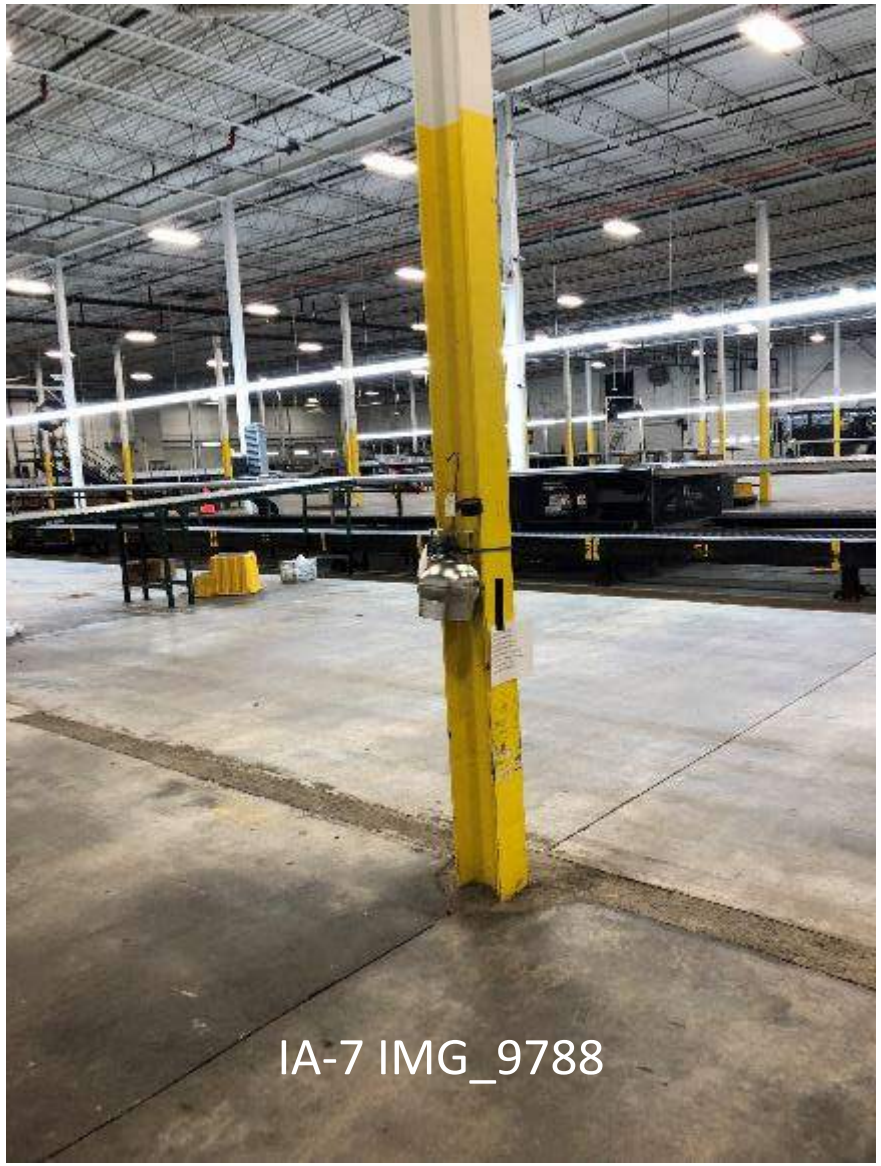




IA-2 IMG_9787




TY OF
PARCEL
VICE



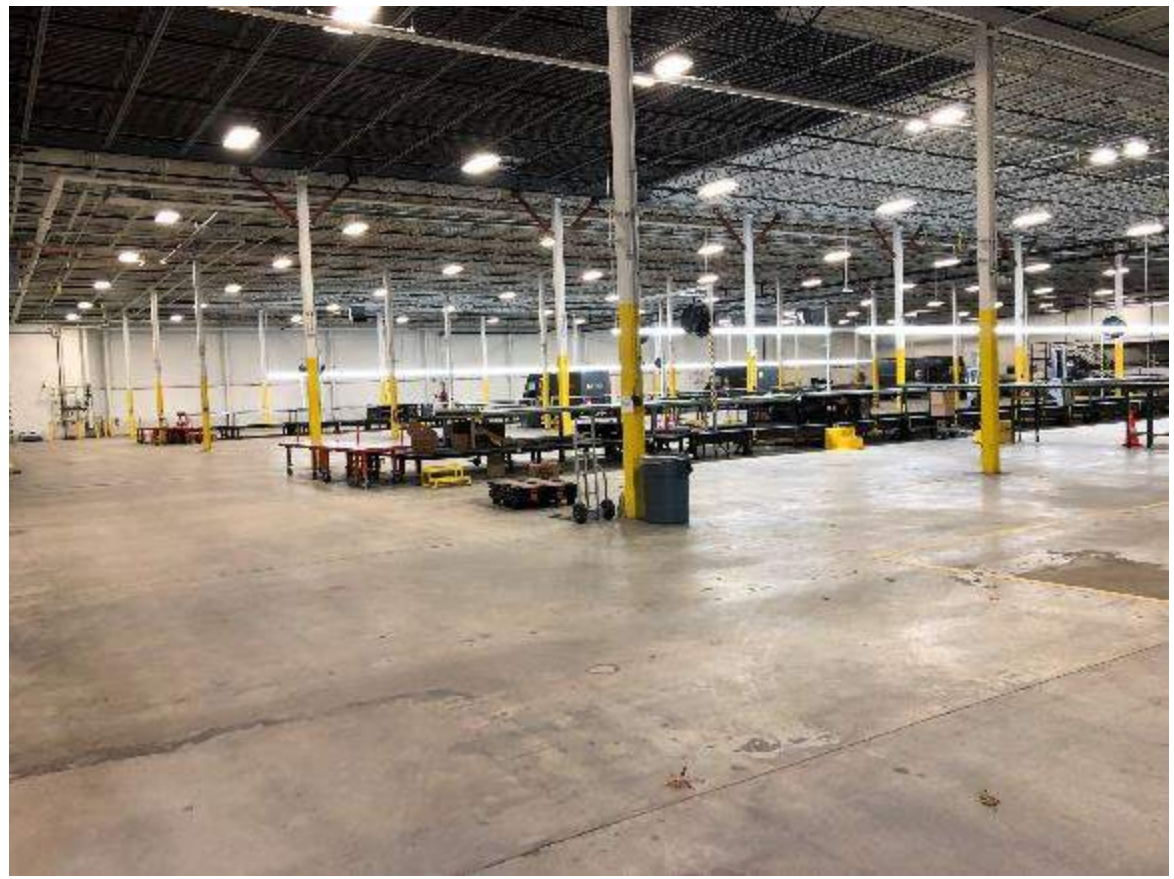
IA-7 IMG_9788








ups





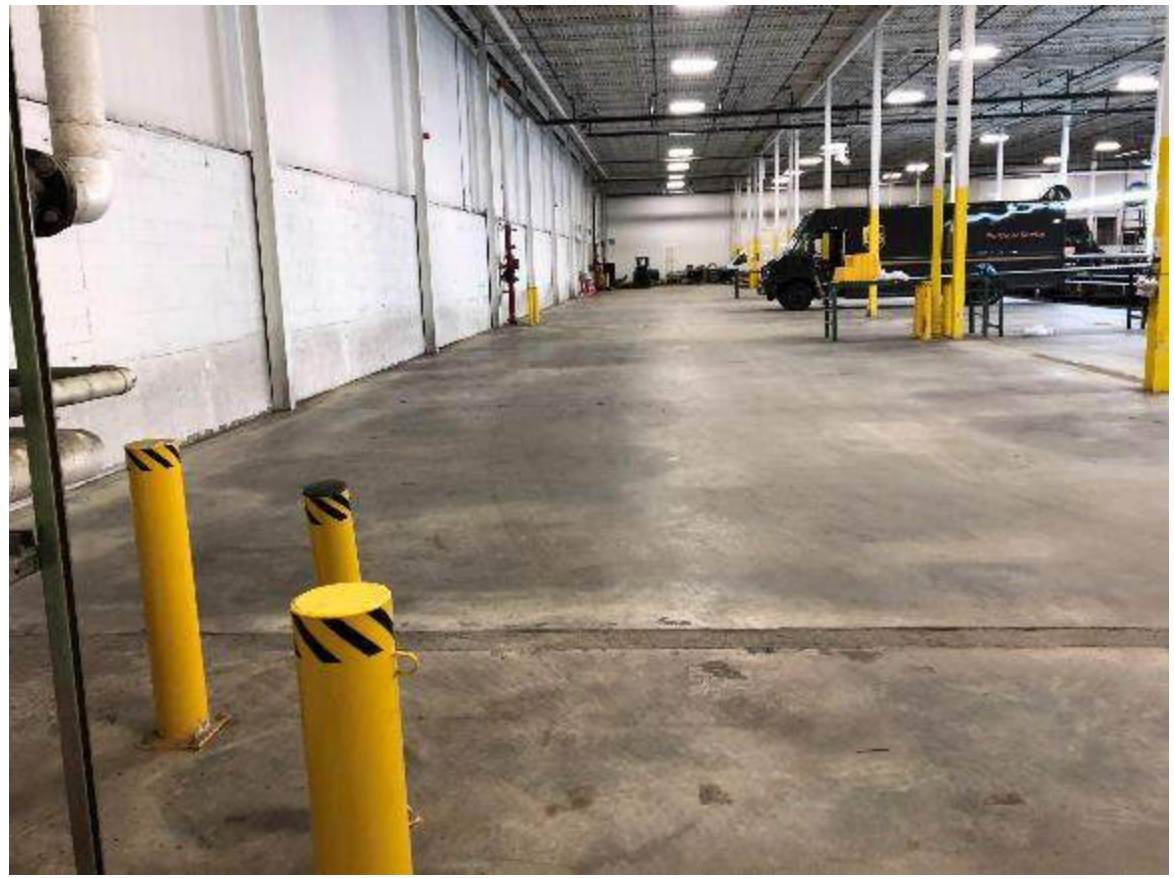



STOP













1st Floor High Bay IMG_9757



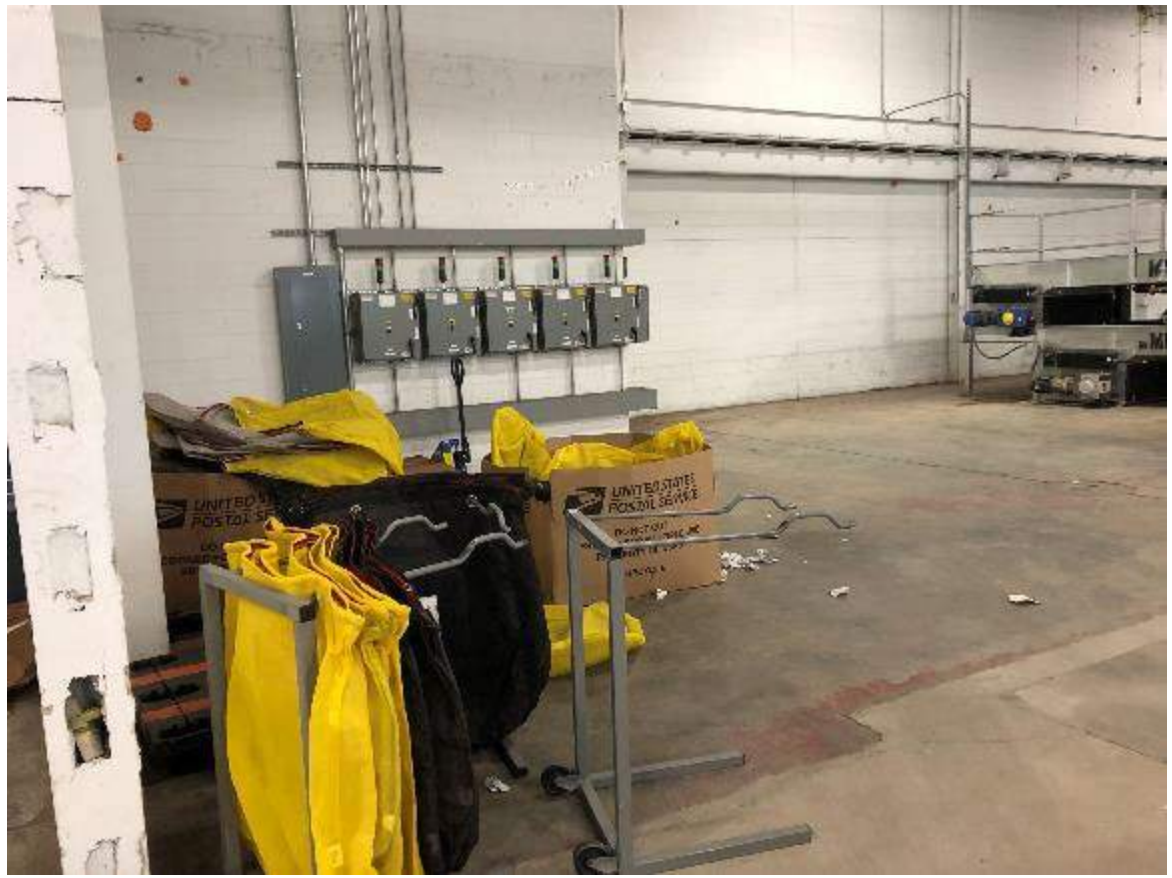
1st Floor High Bay IMG_9758







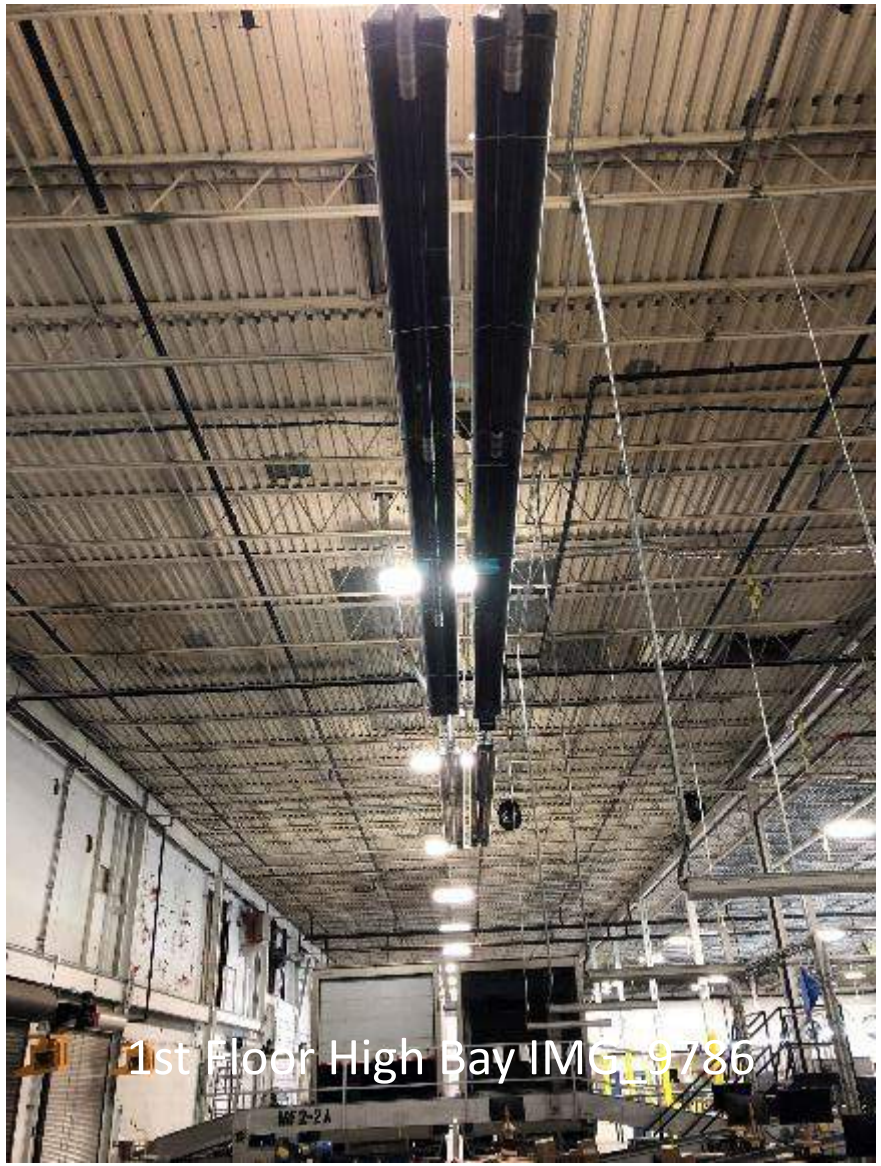



UNITED STATES
POSTAL SERVICE





1st Floor High Bay IMG_9784



1st Floor High Bay IMG_9786







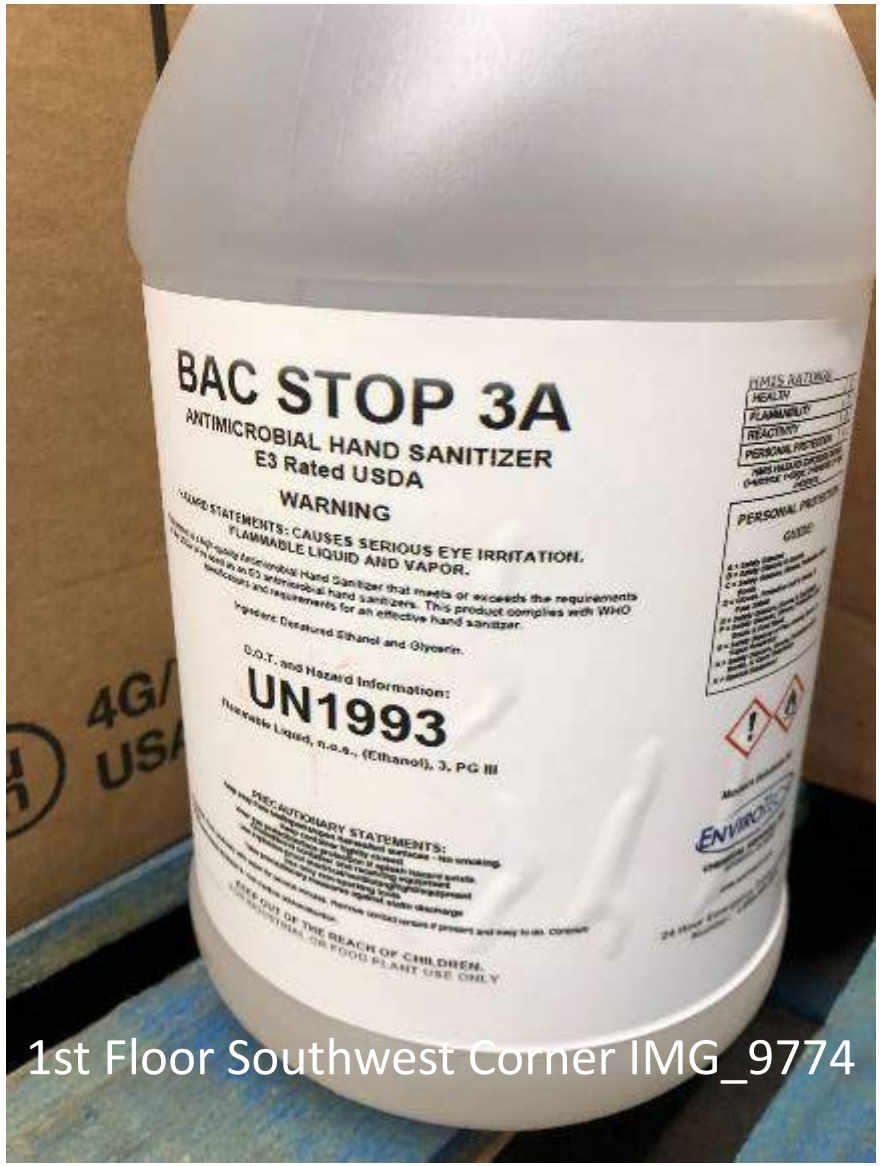




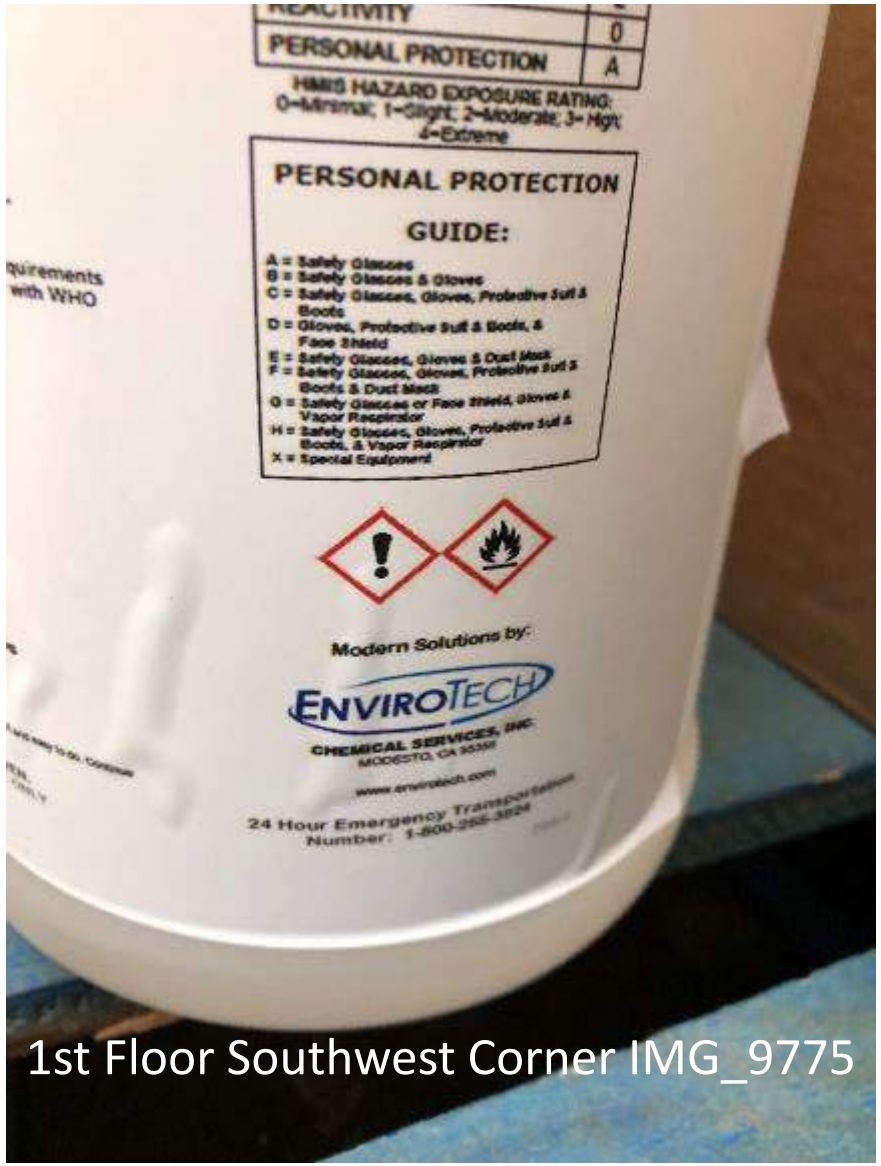

SANITIZER
/
CLEANER
UP



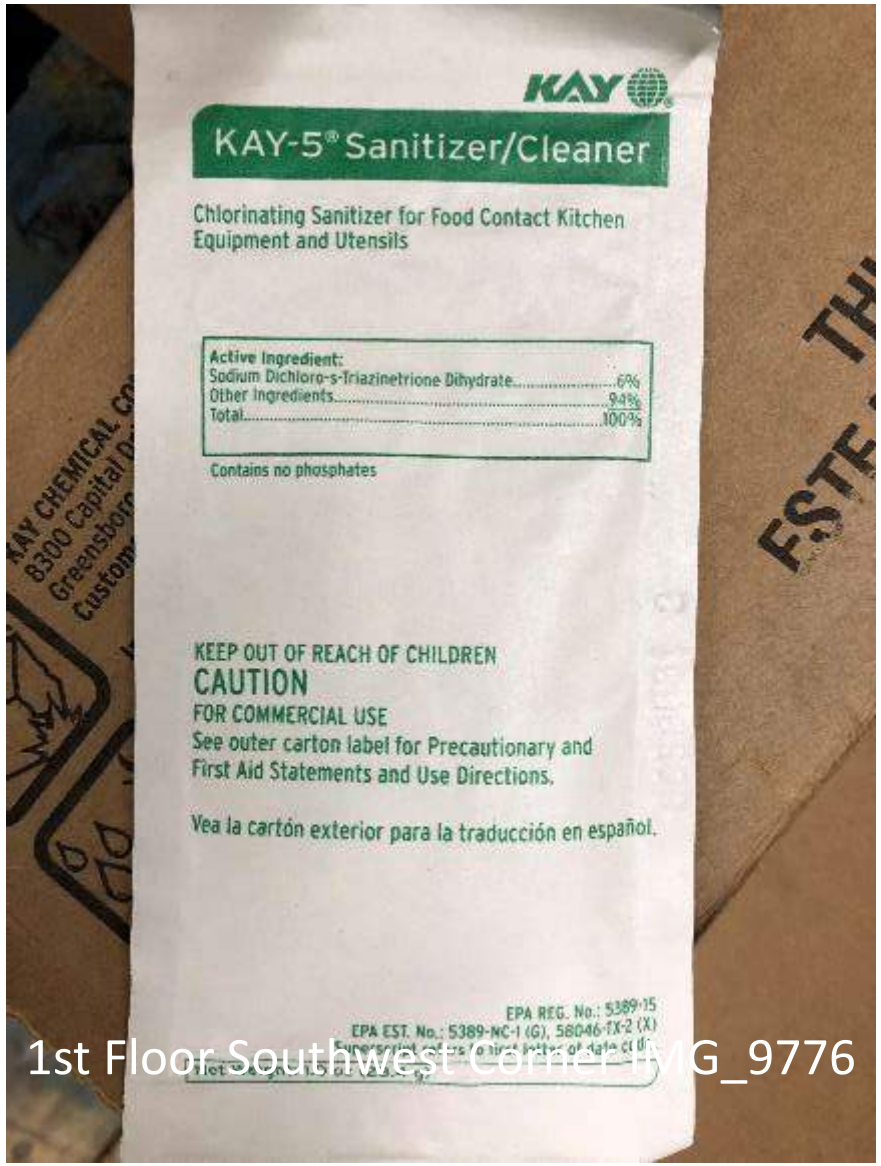
1st Floor Southwest Corner IMG_9773



1st Floor Southwest Corner IMG_9774

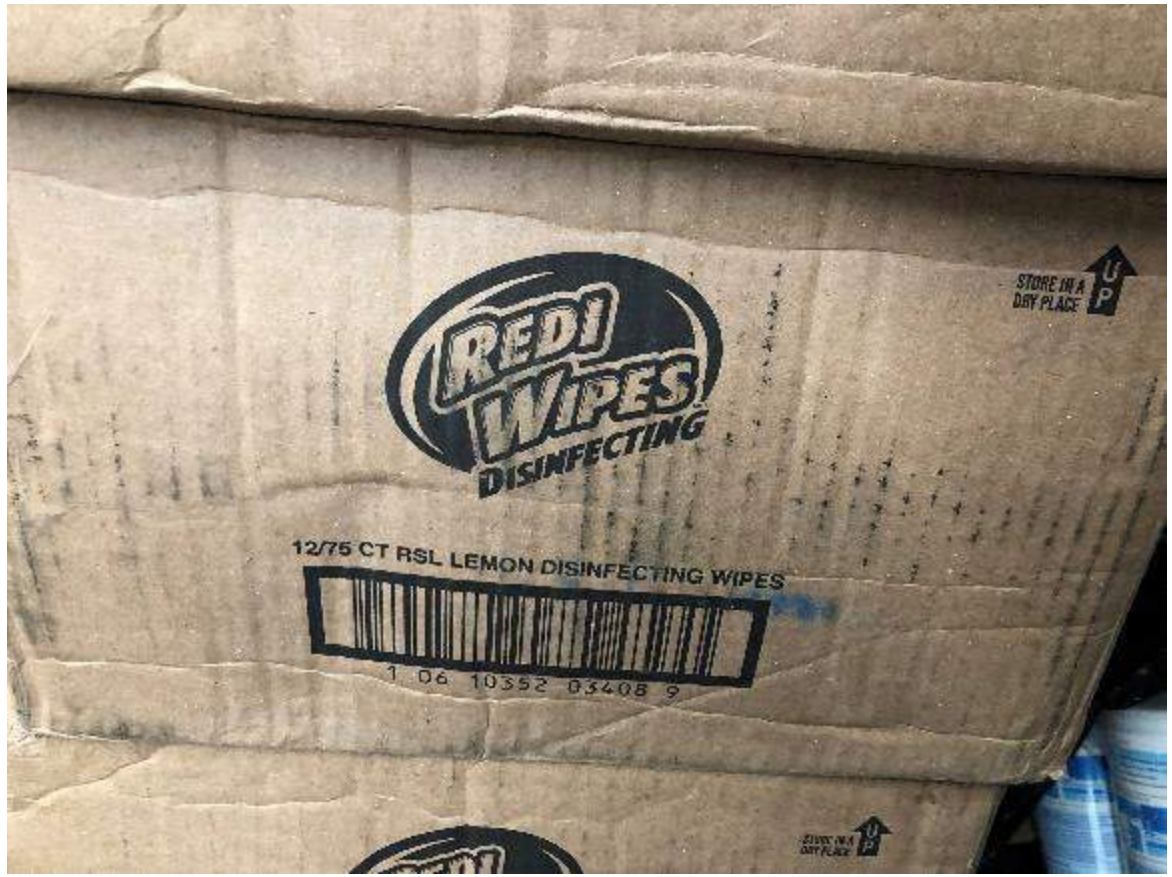


1st Floor Southwest Corner IMG_9775



1st Floor Southwest Corner_IMG_9776


SLOW


REDI WIPES
DISINFECTING
STORE IN A DRY PLACE
UP
12/75 CT RSL LEMON DISINFECTING WIPES
1 06 10352 03408 9



1st Floor Southwest Corner IMG_9779



1st Floor Southwest Corner IMG_9780


ICE





1st Floor Southeast Corner IMG_9723



1st Floor Southeast Corner IMG_9724







1st Floor Southeast Corner IMG_9727



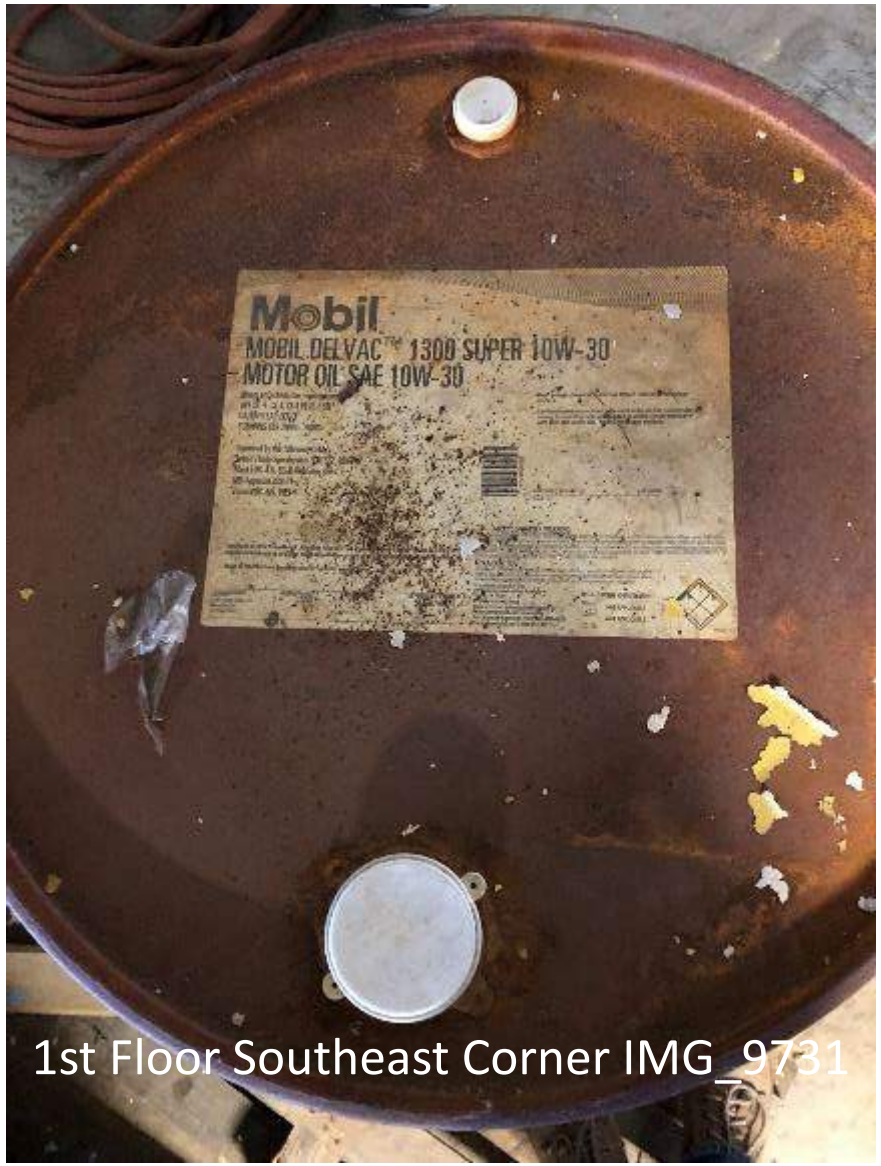
1st Floor Southeast Corner IMG_9728



1st Floor Southeast Corner IMG_9729



1st Floor Southeast Corner IMG_9730



1st Floor Southeast Corner IMG_9731





1st Floor Southeast Corner IMG_9733



1st Floor Southeast Corner IMG_9734



1st Floor Southeast Corner IMG_9735



1st Floor Southeast Corner IMG_9736



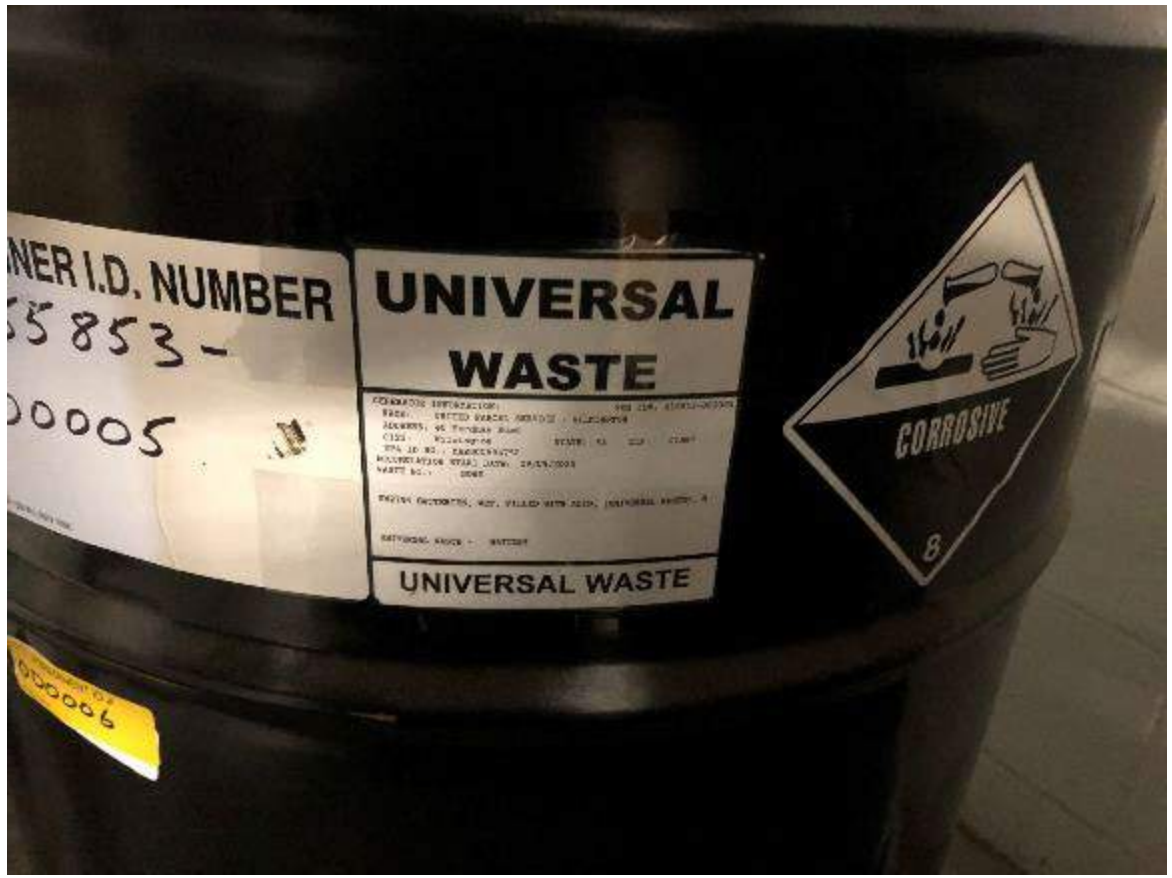
1st Floor Southeast Corner IMG_9737



1st Floor Southeast Corner IMG_9738



1st Floor Southeast Corner IMG_9739


NER I.D. NUMBER
55853-
00005
UNIVERSAL
WASTE
UNIVERSAL WASTE
CORROSIVE
8


Safe Step
PLUS
ICE MELTER
BLUE CRYSTALS
ECONOMICAL & EFFECTIVE
MELTS TO -7° F
NET WT 50LB (22.7kg)


Safe T Sorb
Industrial Oil Absorbent
• OIL
• GREASE
• WATER
• COOLANT
• AND SO MUCH MORE
100% FULLER'S EARTH
• Quickly and easily absorbs all messy spills
• Easy to use and transport
• Cleans up spills that can cause accidents
Safe T Sorb
Safe T Sorb



1st Floor South Bathrooms IMG_9675



1st Floor South Bathrooms IMG_9676



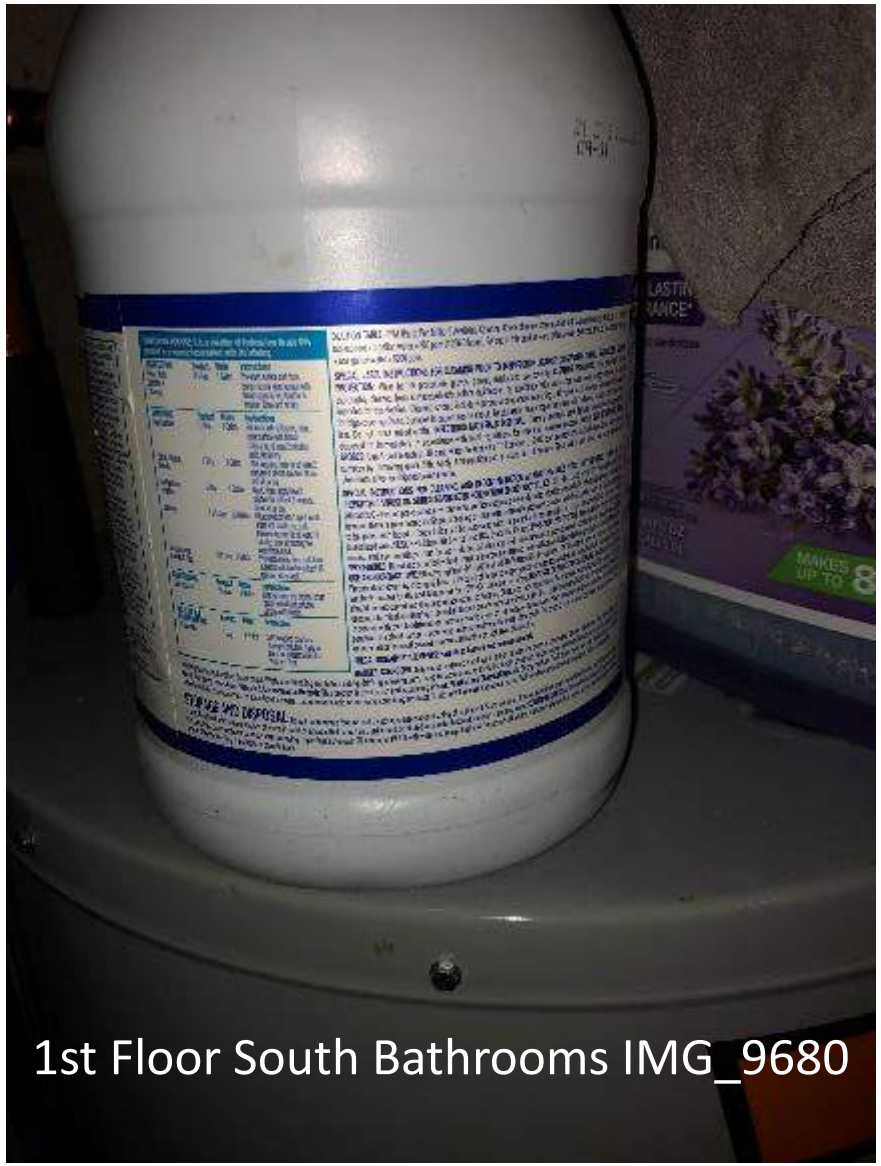
1st Floor South Bathrooms IMG_9677



1st Floor South Bathrooms IMG_9678



1st Floor South Bathrooms IMG_9679



1st Floor South Bathrooms IMG_9680



1st Floor South Bathrooms IMG_9681



1st Floor South Bathrooms IMG_9682



1st Floor South Bathrooms IMG_9683



1st Floor South Bathrooms IMG_9684







1st Floor South Bathrooms IMG_9687



1st Floor South Bathrooms IMG_9688



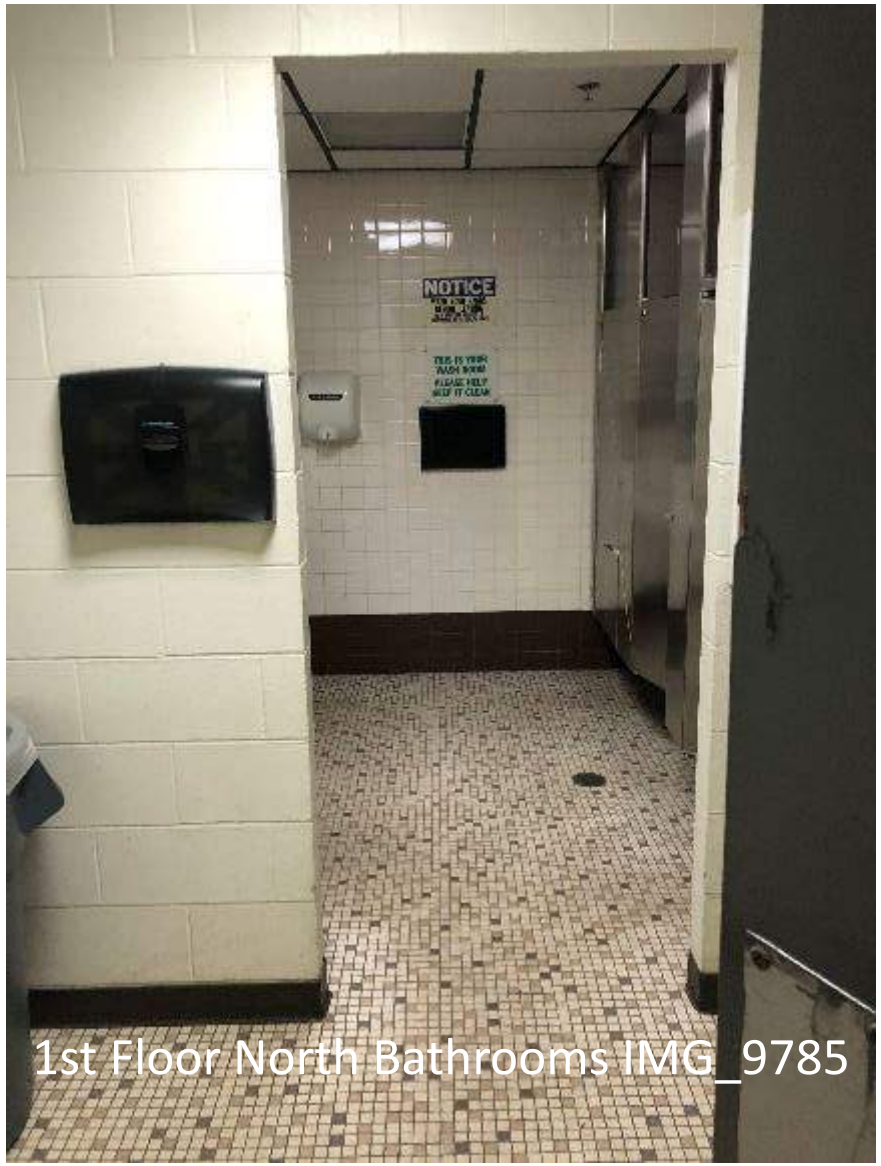
1st Floor South Bathrooms IMG_9689



1st Floor South Bathrooms IMG_9690

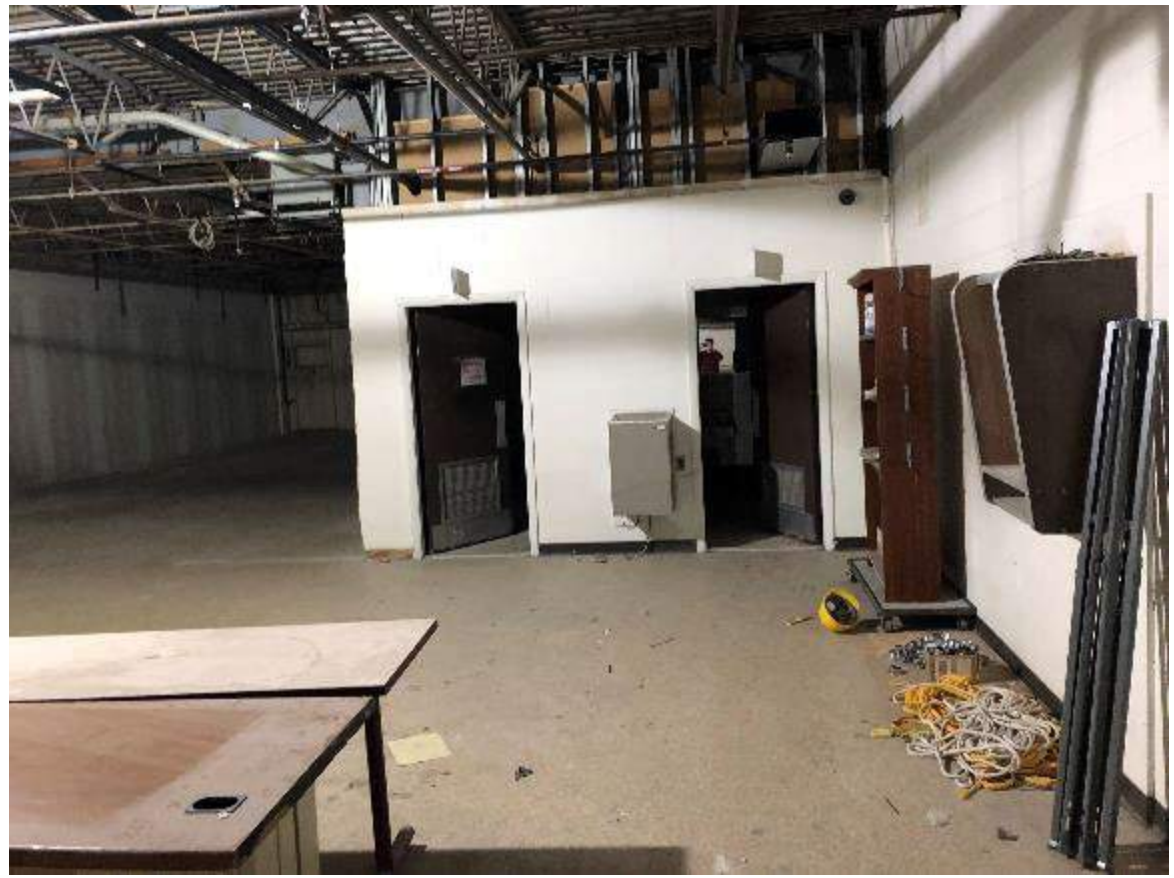


1st Floor North Bathrooms IMG_9770



1st Floor North Bathrooms IMG_9785











2nd Floor IMG_9700



2nd Floor IMG_9701



2nd Floor IMG_9702



2nd Floor IMG_9703



2nd Floor IMG_9704



2nd Floor IMG_9705



2nd Floor IMG_9706



2nd Floor IMG_9707



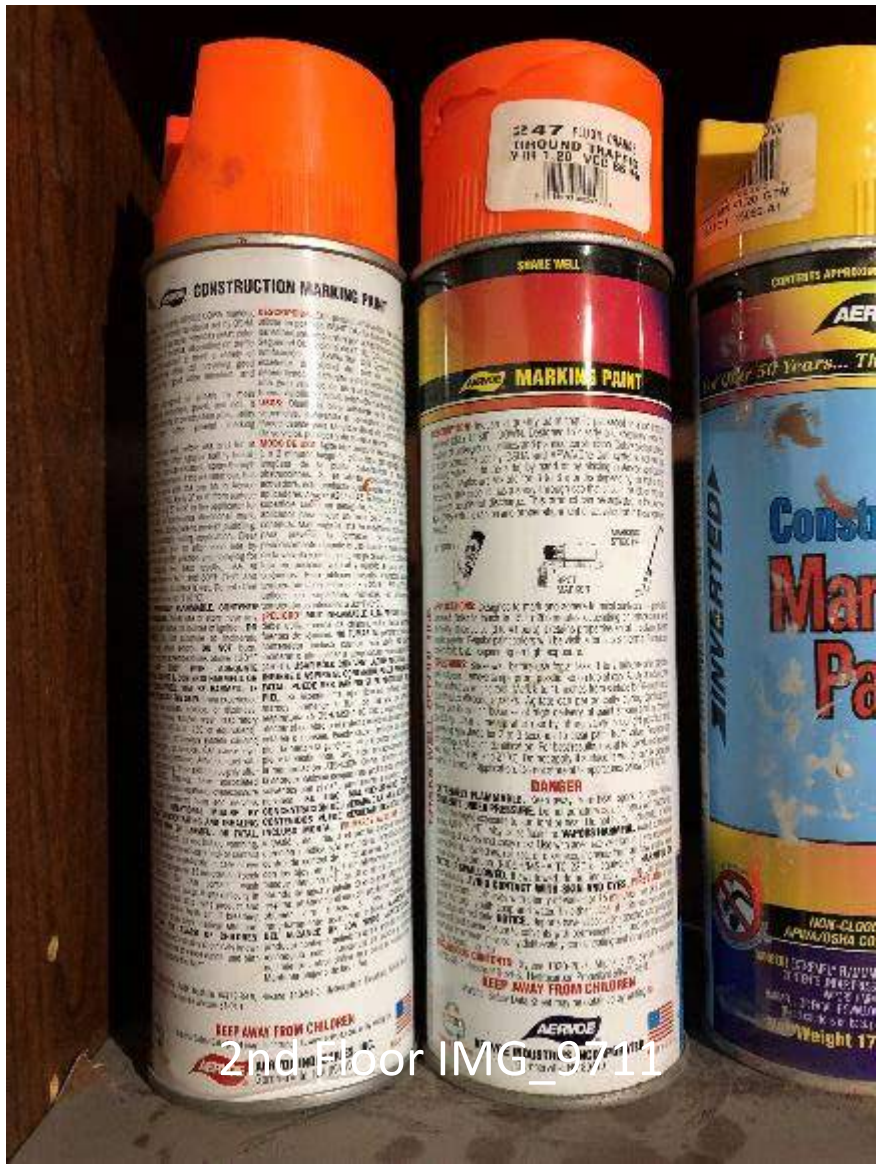
2nd Floor IMG_9708



2nd Floor IMG_9709



2nd Floor IMG_9710



2nd floor IMG_9711



2nd Floor IMG_9712



2nd Floor IMG_9713



2nd Floor IMG_9714



2nd Floor IMG_9715



2nd Floor IMG_9716



2nd Floor IMG_0717



2nd Floor IMG_9718



2nd Floor IMG_9719





APPENDIX E
ACTIVITY AND USE LIMITATION

NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c. 21E, §6 and 310 CMR 40.0000

Note: Pursuant to 310 CMR 40.1074(5), upon transfer of any interest in or a right to use the property or a portion thereof that is subject to this Notice of Activity and Use Limitation, the Notice of Activity and Use Limitation shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer. Within 30 days of so incorporating the Notice of Activity and Use Limitation in a deed that is recorded or registered, a copy of such deed shall be submitted to the Department of Environmental Protection.

Disposal Site Name: 50 Fordham Road
DEP Release Tracking No.: 3-0000518

This Notice of Activity and Use Limitation ("Notice") is made as of this ____ day of _____, 2015, by Rosemarie Stanieich, Victoria J. Miyara, and Annette Maria Given as Trustees of the Wilmington Realty Trust, established by Declaration of Trust dated September 7, 1973, registered in the Middlesex North Registry District of the Land Court as Document No. 63541 and noted on Certificate of Title No. 19837 and registered further in the Middlesex South Registry of the Land Court as Document No. 515729 and noted on Certificate of Title No. 142138, together with their successors and assigns (collectively "Owner").

W I T N E S S E T H:

WHEREAS, the Wilmington Realty Trust, of Wilmington, Middlesex County, Massachusetts is the owner in fee simple of those certain parcels of land located at 40 and 50 Fordham Road in Wilmington, Middlesex County, Massachusetts, with the buildings and improvements thereon;

WHEREAS, said parcels of land, which are more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property"), are subject to this Notice of Activity and Use Limitation. The Property is shown on plans registered in the Middlesex County North Registry District of the Land Court as Land Court Plan Nos. 31713-C, 34588-B, 34588-E, and 36899-B, and in the Middlesex County South Registry District of the Land Court as Land Court Plan No. 31713-D;

WHEREAS, a portion of the Property ("Portion of the Property") is more specifically subject to this Notice of Activity and Use Limitation. This Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown on a sketch plan attached hereto and filed herewith for registration;

WHEREAS, the Portion of the Property comprises part of a disposal site as the result of a release of oil and/or hazardous materials. Exhibit B is a sketch plan showing the relationship of the Portion of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Portion of the Disposal Site in accordance with M.G.L. c.21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or groundwater, and (b) the restriction of certain activities occurring in, on, through, over or under the Portion of the Property. A description of the basis for such restrictions, and the oil and/or hazardous material release event(s) or site history that resulted in the contaminated media subject to the Notice of Activity and Use Limitation is attached hereto as Exhibit C and made part hereof.

NOW, THEREFORE, Notice is hereby given that the activity and use limitations set forth in this Notice of Activity and Use Limitation are as follows:

1. Activities and Uses Consistent with Maintaining No Substantial Hazard Conditions. The following Activities and Uses are consistent with maintaining a condition of No Substantial Hazard and, as such, may occur on the Portion of the Property pursuant to 310 CMR 40.0000:

i. Industrial and commercial uses;

ii. Such other activities which, in the Opinion of a Licensed Site Professional, shall present no greater risk of harm to health, safety public welfare or the environment than the activities and uses set forth in this Paragraph; and

iii. Such other activities and uses not identified in Paragraph 2 as being Activities and Uses inconsistent with maintaining No Substantial Hazard Conditions.

2. Activities and Uses Inconsistent with Maintaining No Substantial Hazard. The following Activities and Uses are inconsistent with maintaining a condition of No Substantial Hazard pursuant to 310 CMR 40.0000, and, as such, may not occur on the Portion of the Property:

i. Residential, school, playground, park, or daycare use; and

ii. In the area as defined by the Activity and Use Limitation ("AUL") boundary presented in Figure 1 of the Activity and Use Limitation Opinion annexed hereto as Exhibit C, activities that would result in exposure to or the disturbance of potentially contaminated soils, bedrock, groundwater, and indoor air, unless appropriate precautions to prevent human exposure are taken as described in paragraph 3 below.

3. Obligations and Conditions. The following obligations or conditions are necessary and shall be undertaken and/or maintained at the Portion of the Property to maintain a condition of No Substantial Hazard:

i. The concrete floors within the footprint of the AUL boundary, if present, must be maintained in a condition that will prevent potential exposure to potentially contaminated soil, groundwater, and soil gas. Interior building floors will be inspected annually with repairs made to seal cracks larger than one-fourth (1/4) inch in width. The penetration of and the subsequent repairs made to the concrete floor of any buildings within the AUL boundary will be evaluated by a Licensed Site Professional to maintain the safety of construction and on-site workers.

ii. Excavated soil and bedrock removed from the AUL area must be managed in accordance with the Soil Management Procedures pursuant to 310 CMR 40.0030.

a. If the soils and bedrock are suspected or are pre-determined by a Licensed Site Professional to be Remediation Waste as defined under 310 CMR 40.0006, then the soils and bedrock will be managed under a Release Abatement Measure ("RAM") set forth by the MCP at 310 CMR 40.0440, as determined by a Licensed Site Professional.

b. If the excavated soils and bedrock from the AUL area are determined not to be Remediation Waste, then they will be managed under a RAM or in accordance with the Similar Soils Provisions Guidance, WSC#-13-500, as determined by a Licensed Site Professional.

iii. If groundwater dewatering activities are required within the AUL area, then the groundwater will be managed appropriately as described here:

a. If the groundwater is determined to be a Remediation Waste, then it will be managed under a Release Abatement Measure ("RAM") set forth by the MCP at 310 CMR 40.0440, as determined by a Licensed Site Professional.

b. If the groundwater removed from the AUL area is not determined to be a Remediation Waste, then other appropriate options may be used to manage the water as determined by a Licensed Site Professional.

iv. Activities that could result in exposure to or the disturbance of soils, bedrock or groundwater in the AUL area, must be conducted in accordance with the performance standards for RAMs set forth by the MCP at 310 CMR 40.0440, the Soil Management Procedures pursuant to 310 CMR 40.0030, the Similar Soils Provisions Guidance (WSC#-13-500), Construction of Buildings in Contaminated Areas (Policy WSC#-00-425) and applicable Health and Safety

procedures outlined in 310 CMR 40.0018, as determined by a Licensed Site Professional.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Portion of the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by a Licensed Site Professional who shall render an Opinion, in accordance with 310 CMR 40.1080 *et seq.*, as to whether the proposed changes are inconsistent with maintaining a condition of No Substantial Hazard. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of the AUL. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by a Licensed Site Professional in accordance with 310 CMR 40.1080, and without additional response actions, if necessary, to maintain a condition of No Substantial Hazard.

If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by a Licensed Site Professional in accordance with 310 CMR 40.1080, the owner or operator of the Portion of the Property subject to this Notice at the time the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed in accordance with 310 CMR 40.1074(5).

Owner herby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned Licensed Site Professional, and recorded and/or registered with the appropriate Registry(ies) of Deeds and/or Land Registration Office(s).

[Remainder of Page Intentionally Left Blank]

WITNESS the execution hereof under seal this 13th day of July, 2015.

Owner
Rosemarie Stanieich, as
Trustee of the Wilmington Realty Trust

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss July 13, 2015

On this 13th day of July, 2015, before me, the undersigned notary public, personally appeared Rosemarie Stanieich (name of document signer), proved to me through satisfactory evidence of identification, which were a Driver's License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as trustee for Wilmington Realty Trust.

Notary Public:
My Commission Expires: 12-26-2019

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

WITNESS the execution hereof under seal this 14th day of July, 2015

Owner
Victoria J. Miyara, as
Trustee of the Wilmington Realty Trust

~~COMMONWEALTH OF MASSACHUSETTS~~
State of New Hampshire

Merrimack, ss July 14, 2015

On this 14th day of July, 2015 before me, the undersigned notary public, personally appeared Victoria J. Miyara (name of document signer), proved to me through satisfactory evidence of identification, which were Florida Drivers Lic to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as trustee for Wilmington Realty Trust

Notary Public:
My Commission Expires: 8-22-17

RHONDA L. ROLLINS
STATE OF
MY
COMMISSION
EXPIRES
AUGUST 22,
2017
NEW HAMPSHIRE
NOTARY PUBLIC

WITNESS the execution hereof under seal this 13th day of July, 2015

Owner
Annette Maria Given, as
Trustee of the Wilmington Realty Trust

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss July 13, 2015

On this 13th day of July, 2015 before me, the undersigned notary public, personally appeared Annette Maria Given (name of document signer), proved to me through satisfactory evidence of identification, which were Drivers License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as trustee for Wilmington Realty Trust

Notary Public:
My Commission Expires: 12-26-19

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

The undersigned Licensed Site Professional hereby certifies that in his Opinion this Notice of Activity and Use Limitation is consistent with maintaining a condition of No Substantial Hazard.

Date: _____

_____
Daniel W. Folan, PhD, PG, LSP, LEP
Licensed Site Professional Seal

COMMONWEALTH OF MASSACHUSETTS

_____,ss _____, 2015

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

_____
Notary Public:
My Commission Expires:

Upon recording, return to:

Ronald Dardeno, Esq.
Law Offices of Frank N. Dardeno LLP
424 Broadway
Somerville, MA 02145-2619

and

Beth M. Kramer, Esq.
Associate General Counsel -- Energy,
Environment, Safety & Health
Lockheed Martin Corporation
6801 Rockledge Drive
Bethesda, MD 20817

EXHIBIT A

DESCRIPTION OF PROPERTY SUBJECT TO THE AUL

LEGAL DESCRIPTION

LOT 4 and LOT 6

Two (2) certain parcels of land located in the Town of Wilmington, County of Middlesex, Massachusetts; said two (2) parcels of land located easterly of Fordham Road, in Wilmington, Massachusetts; and said two (2) parcels of land shown as Lot 4 and Lot 6 on "Plan of land in Wilmington, Mass." dated February 28, 1978, Dana F. Perkins & Assoc., Inc., Civil Engineers and Surveyors, Reading-Lowell, Massachusetts; which plan is filed in Middlesex North Registry District of the Land Court, as Plan No. 36899-B.

The said two (2) parcels of land are bounded and described as follows:

LOT 4 as shown on said plan.

NORTHWESTERLY:	by land now or formerly of Carl Realty, Inc., seven hundred thirty-one and 40/100 (731.40) feet;
NORTHEASTERLY:	by Lot 6 as shown on said plan, two hundred seventy-five and 02/100 (275.02) feet;
EASTERLY:	by Lot 3 as shown on said plan, ninety-two and 44/100 (92.44) feet; and
SOUTHEASTERLY:	by land now or formerly of George E. Dunn, along the Town Line dividing Wilmington and North Reading, seven hundred fifty-five and 87/100 (755.87) feet; and
SOUTHWESTERLY:	by land now or formerly of South Mass. Land Developers, Inc., two hundred thirty and 27/100 (230.27) feet.

LOT 6 as shown on said plan.

NORTHWESTERLY:	by land now or formerly of Carl Realty, Inc., two hundred ninety-seven and 00/100 (297) feet;
SOUTHEASTERLY:	by Lot 5 as shown on said plan, four hundred thirty-five and 67/100 (435.67) feet; and
NORTHEASTERLY:	by Lot 4 as shown on said plan, two hundred seventy-five and 02/100 (275.02) feet.

For title of Trustees of THE WILMINGTON REALTY TRUST to said Lot 4 and Lot 6, see Middlesex North Registry District of the Land Court, Certificate of Title No. 19842, recorded in Registration Book 102, Page 83.

LOT 7

A certain parcel of land, located in the Town of Wilmington, County of Middlesex, Commonwealth of Massachusetts, said parcel shown as Lot 7 upon a plan entitled "Plan of Land in NORTH READING & WILMINGTON, MASS.", dated September 21, 1983, DANA F. PERKINS and Assoc., Inc., Civil Engineers and Surveyors, and filed with the Engineering Division of the Land Court of Massachusetts as Plan 31713^{C} and Plan 31713^{D} bounded and described as follows:

NORTHWESTERLY	by the Northeasterly line of Fordham Road, eighty-four and 60/100 (84.60) feet;
NORTHWESTERLY	by a radius 1081.41 along the Northeasterly line of Fordham Road, six hundred fifty-nine and 84/100 (659.84) feet;
NORTHERLY	by the Northeasterly line of Fordham Road, two hundred (200) feet;
NORTHEASTERLY	by lands shown on said Plan as "Lot 30", six hundred twenty-one and 74/100 (621.74) feet;
NORTHERLY	by lands shown on said Plan as "Lot 30", ninety-two and 55/100 (92.55) feet;
NORTHEASTERLY	by lands shown on said Plan as "Lot 30", two hundred thirty and 29/100 (230.29) feet;
SOUTHWESTERLY	by the Town Line between Wilmington and North Reading, as shown on said plan, nine hundred seven and 9/100 (907.9) feet;
WESTERLY	by Lot 8, as shown on said Plan, eighty-eight and 69/100 (88.69) feet;
SOUTHEASTERLY	by Lot 8, as shown on said Plan, eighty (80) feet; and
SOUTHWESTERLY	by Lot 8 as shown on said Plan, two hundred fifty-five (255) feet.

Said Lot 7, all within the Town of Wilmington, comprises 12.63 acres, more or less, (549,973 square feet of land, more or less), as shown on said plan.

Said Lot 7 is a subdivision of certain lots, title to which is registered in the Land Registration Office, North Registry District of Middlesex County, and as follows:

- of Lot 31, as shown on Plan No. 34588-C (Certificate of Title No. 19837); Book 102-73

- ~~of Lot 35, as shown on Plan No. 34588-A (Certificate of Title No. 19841);~~ and

- of ~~Lots 4~~ 2 & 4, as shown on Plan No. 31713-A (Certificate of Title No. 19838), Book 102-75

For

LOT 10

A certain parcel of land, located in the Town of North Reading, County of Middlesex, Commonwealth of Massachusetts, said parcel shown as Lot 10 upon a plan entitled "Plan of Land in NORTH READING & WILMINGTON, MASS.", dated September 21, 1983, DANA F. PERKINS and Assoc., Inc., Civil Engineers and Surveyors, and filed with the Engineering Division of the Land Court of Massachusetts as Plan 31713C and Plan 31713D bounded and described as follows:

NORTHERLY	by the Town Line between North Reading and Wilmington, as shown on said Plan, nine hundred seven and 09/100 (907.09) feet;
NORTHWESTERLY	by land shown on said Plan as "Town of North Reading", ninety-eight and 43/100 (98.43) feet;
SOUTHEASTERLY	by Lot 9, as shown on said Plan, four hundred twenty-three and 16/100 (423.16) feet;
SOUTHWESTERLY	by Lot 9, as shown on said Plan, one hundred ten and 41/100 (110.41) feet;
SOUTHEASTERLY	by Lot 9, as shown on said Plan, three hundred ninety and 49/100 (390.49) feet; and
SOUTHWESTELRY	by Lot 9, as shown on said Plan, two hundred forty-eight and 36/100 (248.36) feet.

Said Lot 10, all within the town of North Reading, comprises 3.91 acres of land, more or less (170,477) square feet of land, more or less), as shown on said Plan.

Said Lot 10 is a subdivision of certain lots, title to which is registered in the Land Registration Office, South Registry District of Middlesex County, and as follows:

~~- of Lot 26, as shown on Plan No. 31508-A (Certificate of Title No. 142137)~~; and

Ø of Lot 6, as shown on Plan No. 31713-B (Certificate of Title No. 142138), Bk. 840-188

LOT 30

That certain parcel of land situate in Wilmington, County of Middlesex, Commonwealth of Massachusetts bounded and described as follows:

SOUTHWESTERLY	by the Northeasterly line of Fordham Road, two hundred fifty (250) feet;
NORTHWESTERLY	by land now or formerly of Carl Realty, Inc., six hundred seventy-two and 36/100 (672.36) feet;
EASTERLY	by land now or formerly of So. Mass. Land Developers, Inc., two hundred fifty-five and 07/100 (255.07) feet; and
SOUTHEASTERLY	by land now or formerly of Carl Realty, Inc., six hundred twenty-one and 74/100 (621.74) feet.

All of said boundaries are determined by the Land Court to be located as shown on subdivision plan 34588-B, drawn by Dana F. Perkins & Sons, Inc., Surveyors, dated April 9, 1968, as approved by the Court, filed in the Land Registration Office, a copy of a portion of which is filed with Certificate of title 16261, and said land is shown as Lot thirty (30) on said plan.

Being the same premises evidenced by Certificate of Title No. 19839 (Middlesex North Registry District). Bk. 702-77

LOT 33

That certain parcel of land situate in Wilmington, in the County of Middlesex Commonwealth of Massachusetts, bounded and described as follows:

WESTERLY	by the Easterly line of Fordham Rd. by several lines measuring together, eleven hundred eighty-seven and 97/100 (1,187.97) feet;
NORTHEASTERLY	by land now or formerly of Carl Realty, Inc., five hundred thirty-two and 01/100 (532.01) feet;
NORTHEASTERLY	again by land now or formerly of Max Siegel et al, two hundred ninety-seven (297) feet;
EASTERLY	by land now or formerly of So. Mass. Land Developers, Inc., five hundred ninety-nine and 28/100 (599.28) feet; and
SOUTHEASTERLY	by Lot 30, six hundred seventy-two and 36/100 (672.36) feet.

All of said boundaries are determined by the Land Court to be located as shown on subdivision plan 34588-E, drawn by Dana F. Perkins and Sons, Inc., Surveyors, dated January 27, 1969, as approved by the Court, filed in the Land Registration Office, a copy of a portion of which is filed with Certificate of Title 16620, and said land is shown as Lot thirty-three (33) on said plan.

Being the same premises evidenced by Certificate of Title No. 19840 (Middlesex North Registry District). Bk. 702-77

THE ABOVE DESCRIPTIONS ARE TAKEN FROM LAND COURT RECORD DOCUMENT NUMBER 172247 NORTH MIDDLESEX COUNTY

Raymond P. Shea
Massachusetts PLS No. 33192
Holden Engineering & Surveying, Inc.

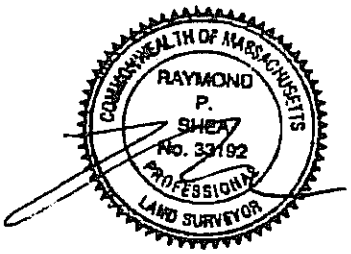


EXHIBIT A-1

LEGAL DESCRIPTION OF PORTION OF PROPERTY SUBJECT TO AUL

AUL BOUNDARY LEGAL DESCRIPTION

Beginning at a stone bound on the easterly sideline of Fordham Road at the northwest corner of lot ID 91-131 Lot 7 and the southwest corner of lot ID 91-131A Lot 30 and the point of beginning of the AUL Boundary, thence along the easterly sideline of Fordham Road North 11° 54' 17" West 285.10 feet past the northwest corner of lot ID 91-131 Lot 30 to lot ID 91-131A Lot 33, thence over lot ID 91-131A Lot 33 North 81° 02' 45" East 443.90 feet, thence over lot ID 91-131A Lot 33, North 16° 31' 27" West 142.97 feet, thence over lot ID 91-131A Lot 33, North 75° 45' 44" East 108.12 feet, thence over lot ID 91-131A Lot 33, North 01° 02' 35" West 85.99 feet, thence over lot ID 91-131A Lot 33, and lot ID 99-1 Lot 4 North 78° 32' 00" East 334.19 feet, thence over lot ID 99-1 Lot 4 South 07° 25' 18" East 335.96 feet, thence over lot ID 99-1 Lot 4 and lot ID 213-212 Lot 10 and along lot ID 213-2-11 South 12° 48' 00" East 847.35 feet, to the southeast corner of the AUL Boundary and southeast corner of lot ID 91-131 Lot 7 at land of lot ID 213-2-11 thence along lot ID 213-2-11 South 72° 23' 59" West 293.36 feet, thence along lot ID 213-2-11 South 63° 19' 49" West 26.31 feet, thence along lot ID 213-2-11 South 63° 19' 49" West 88.69 feet, thence along lot ID 213-2-11 South 25° 37' 41" East 80.00 feet, thence along lot ID 213-2-11 South 64° 22' 25" West 255.00 feet to the southwesterly corner of the AUL Boundary and southwesterly corner of lot ID 91-131 Lot 7 at the easterly sideline of Fordham Road, thence along the easterly sideline of Fordham Road North 48° 17' 49" West 84.60 feet to a point of curvature, thence along the easterly sideline of Fordham Road having a curve to the right having a Radius of 1081.41 feet and a length of 659.84 feet and a chord bearing of North 29° 23' 07" West 649.65 feet to the point of tangency, thence along the easterly sideline of Fordham Road North 11° 54' 17" West 200.00 feet to the point of beginning.

Containing 970,499 Square Feet or 22.280 Acres

Raymond P. Shea
Massachusetts PLS No. 33192
Holden Engineering & Surveying, Inc.

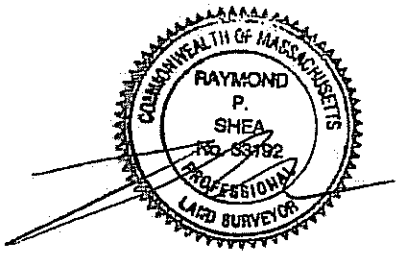
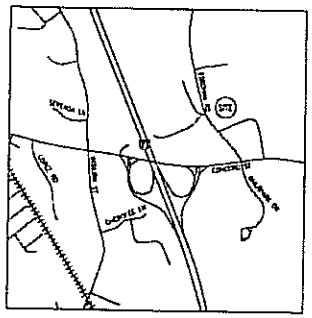


EXHIBIT A-2

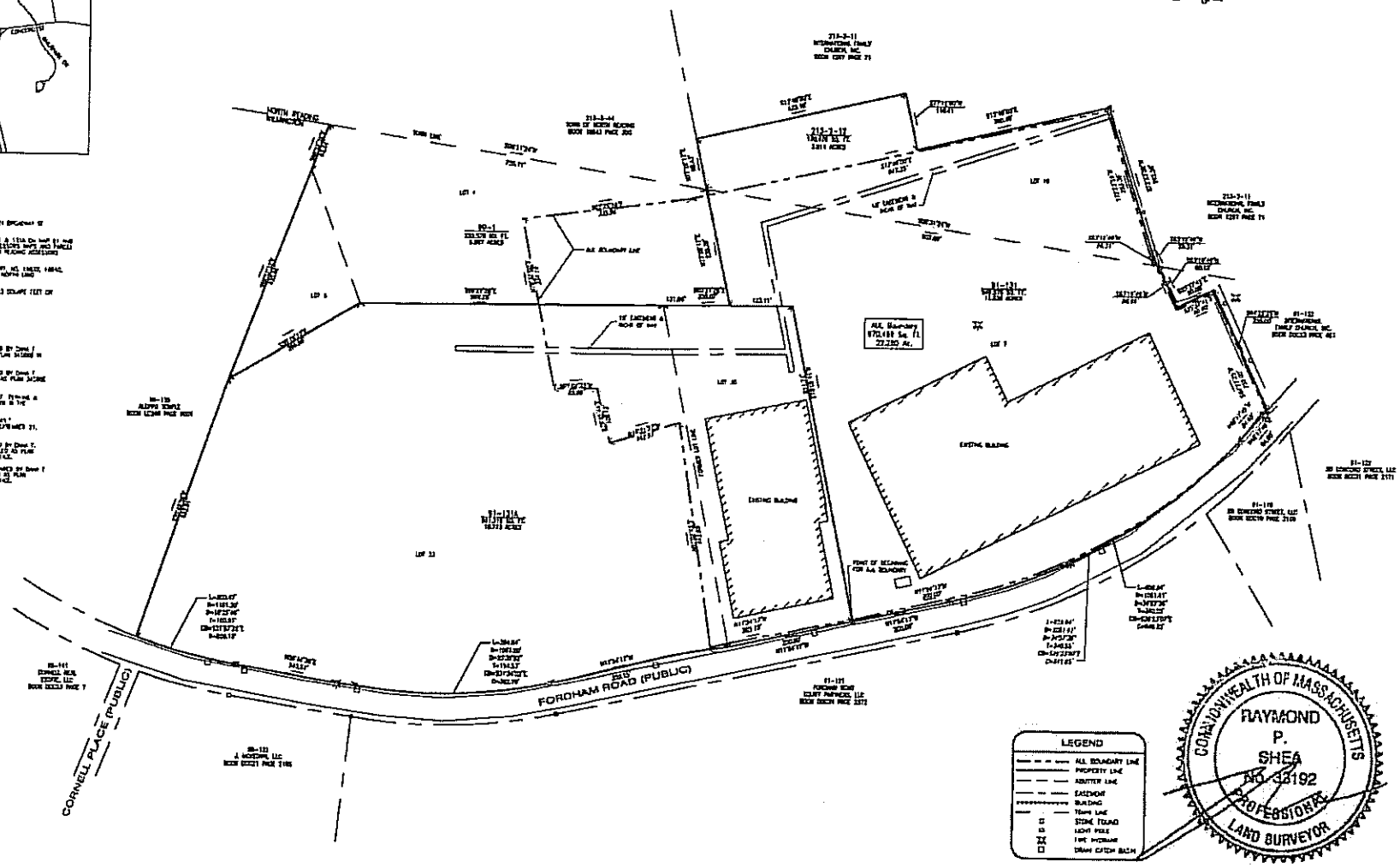
PLAN OF THE PORTION OF THE PROPERTY SPECIFICALLY SUBJECT TO THE AUL PREPARED BY REGISTERED LAND SURVEYOR



VICINITY MAP

NOTES:

PLAN REFERENCES:



HOLDEN ENGINEERING & SURVEYING, Inc.

AUL BOUNDARY PLAN
ROSEMARIE STANIEICH
NORTH READING/WILMINGTON, MA

Date	Revisions	By	Ck
5/21/15	CLIENT COMMENTS	PV	RV
5/27/15	CLIENT COMMENTS	PV	RV

Book | Page

Date: 05/04/2015
Scale: 1" = 100'
Dr. By: SPG By: DJ
Job No. 1320358
Sheet no 1 of 1

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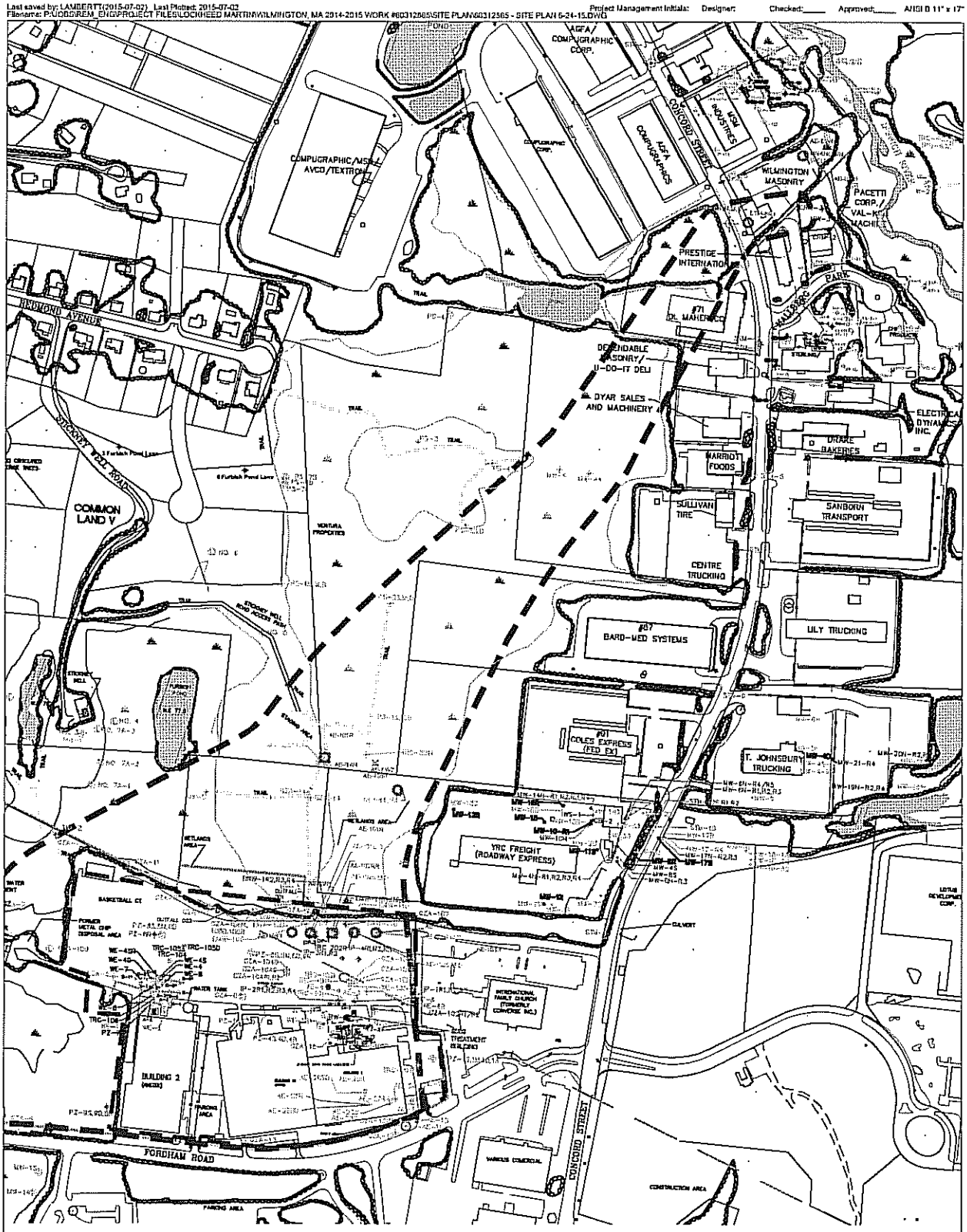
EXHIBIT B

RELATIONSHIP OF THE PORTION OF THE PROPERTY SUBJECT TO THE AUL TO THE BOUNDARIES OF THE DISPOSAL SITE (Sketch Plan)

Last saved by: LAMBERTT(2015-07-02) Last Plotted: 2015-07-02 Project Management Initials: Designed: Checked:____ Approved:____ ANSI B 11" x 17"
Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON, MA 2014-2015 WORK #60312865\SITE PLAN\60312565 - SITE PLAN 6-24-15.DWG



WORKPLAN
#50 FORDHAM ROAD, WILMINGTON, MA
Lockheed Martin
60312865 2015-07-01

SKETCH PLAN

AECOM

EXHIBIT B

EXHIBIT C

ACTIVITY AND USE LIMITATION OPINION

EXHIBIT C - ACTIVITY AND USE LIMITATION OPINION

Purpose of the AUL

This Notice of Activity and Use Limitation ("AUL") provides notice to current and future interest holders of the property commonly known as 50 Fordham Road (including the addresses of 40 and 50 Fordham Road), Wilmington, Massachusetts (the "Property") of residual contamination remaining at the Property. It should be noted that this AUL is being used voluntarily, in accordance with Section 40.1012(3)(h) of the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, and is not required by the MCP, to confirm certain assumptions regarding future uses at the Property for purposes of Risk Characterization of human health and ecological risks at the Disposal Site. This AUL describes certain restrictions upon the use of the Property to promote the ongoing protection of human health and the environment.

This AUL will serve as a notification, concerning appropriate health and safety measures to be taken during any future construction-related or other activities that disturb the subsurface, including (but not limited to) penetration of concrete building slabs, subsurface soil or bedrock excavations and groundwater dewatering activities. It will also be protective of human health and the environment by requiring that any contaminated media generated during construction activities be managed in accordance with Massachusetts Contingency Plan (MCP) Soil Management procedures as described in 310 CMR 40.0030 and the Massachusetts Department of Environmental Protection (MassDEP) guidance documents, including Construction of Buildings in Contaminated Areas (Policy WSC#-00-425) and the Similar Soils Provisions Guidance (WSC#-13-500), as determined by a Licensed Site Professional ("LSP").

Relevant Property History

Contamination of the Stickney Well, a currently inactive public supply well for the town of North Reading, was discovered in the late 1970s. Subsequent investigations of multiple surrounding properties, including the Property (formerly owned and operated by GE Aerospace (sometimes referred to as "GE" herein)), began in the early 1980s. The Property has been subject to remedial investigations and cleanup since 1986, when the MassDEP (then the Department of Environmental Quality Engineering or DEQE) issued GE a Notice of Responsibility. In 1987, the MassDEP

classified the former GE facility as a Priority Disposal Site,[1] and in 1994 the MassDEP assigned Release Tracking Number (RTN) RTN-3-0518 to the site.[2]

The Property has had a history of manufacturing processes that have contributed to releases of fuels, oils, solvents, and metals to the environment. Analytical data have shown that six primary types of organic and inorganic compounds are associated with RTN 3-0518. These include chlorinated volatile organic compounds (CVOCs); total petroleum hydrocarbons (TPH); benzene, toluene, ethyl benzene and xylenes (BTEX) compounds; methyl tertiary butyl ether (MTBE); several metals; and light non-aqueous phase liquids (LNAPL) identified as Stoddard fuel (solvent). Known impacted areas of the Property include four separate operating units (OU), as well as the Tank F and Building 1 Areas, and are summarized in the following table and shown on the attached Figure 1. These areas are designated "Restricted Areas."

Restricted Areas	Description	Affected Media	Compounds of Concern	Regulatory Status
OU-1	Former Tank Farm source area and adjacent Eastern Parking Lot (EPL). Tank Farm had 4 underground storage tanks (USTs) removed in 1987.	Vadose zone soils, and shallow groundwater	Stoddard Solvent LNAPL in groundwater and extractable petroleum hydrocarbons (EPH)-volatile petroleum hydrocarbons (VPH) in both soils and groundwater; associated arsenic	Open
OU-2	Former Tank Farm source area and down-gradient plume on- and off-property	Groundwater	CVOCs and 1,4-dioxane	Open
OU-3	Storm water/Waste water Outfalls 001 and 002	Sediment	Metals and petroleum hydrocarbons	Closed, Partial Class A-2 Response Action Outcome (RAO) (Submitted 2004)

[1] Under 310 CMR 40.0006 (1)(b), the term "Disposal Site" is used to refer to a place or area where an uncontrolled release of oil and/or hazardous material from or at a site or vessel has come to be located.

[2] Martin Marietta acquired GE Aerospace in 1993 and subsequently Martin Marietta and Lockheed merged to form Lockheed Martin Corporation.

Restricted Areas	Description	Affected Media	Compounds of Concern	Regulatory Status
OU-4	Former Tank K source area and immediately down-gradient of plume.	Vadose zone soils and shallow groundwater	Gasoline related petroleum hydrocarbons (VOCs) from former gasoline UST. UST was removed in 1986.	Closed, Partial Class A-2 RAO (Submitted 2010)
Tank F/Building 1 Area	Former Tank F area and area below concrete slab of Building 1	Vadose zone soils and groundwater	CVOCs and petroleum hydrocarbons	Open

OU-1 Area

The Response Actions taken at the Tank Farm/EPL Petroleum Area (OU-1) have included LNAPL recovery, removal of Building 3 and the Oil House/drum storage, and excavation and off-site disposal of petroleum contaminated soil. Since 2011, LNAPL gauging has indicated the absence of measurable LNAPL in any wells that have been gauged. Soil impacts in the OU-1 appear to be consistent with current MCP Industrial/Commercial standards; however, the deeper groundwater and down-gradient plume is impacted with the CVOCs emanating from the former Tank Farm OU-2 Area (see below).

OU-2 Area

The Response Actions taken at the Tank Farm CVOC Source Area (OU-2) have been extensive and included:

- Removal in 1987 of four Underground Storage Tanks ("USTs") at the Tank Farm (Tank D, a 10,000-gal "waste fuel" tank that received waste fuel and oil, thinners, and solvents; Tank G, a 10,000-gal tank used for storing jet fuel and oil; Tank H, a 1,000- gal tank used for storing JP-4 jet fuel; and Tank I, a 500-gal tank used for storing methanol).
- Groundwater pump and treat at the Tank Farm Area between 1993 and 2002. During operation, approximately 1.9 million gallons of groundwater were treated, and approximately 31 pounds of VOCs were removed from the groundwater.
- Groundwater pump and treat in a bedrock well (TRC-202R) located down-gradient of the Tank Farm Area between 2003 and 2008. During operation, approximately 4.3 million gallons of groundwater were treated, and approximately 159 pounds of VOCs were

removed from the groundwater. Groundwater data trends did not indicate significant reductions in contaminant concentrations. The system remains shut down at the present time.

- Addition of a remedial treatment solution known as Emulsified Zero Valent Iron (EZVI) in 2005 through 2006. EZVI was injected directly into bedrock fractures and into the overburden-bedrock interface within the Tank Farm Area. The EZVI treatment was not considered successful.

- Analysis of monitored natural attenuation (MNA) geochemical and microbiological parameters in 2012 for groundwater, indicating conditions supportive of limited enhanced reductive dechlorination. A review of plume geometry and other trends indicate that the off-site CVOC impacts appear to be stable or shrinking.

- Additional groundwater investigation activities from 2012 through 2014 in the Tank Farm, the EPL and off-site in the adjacent wetland areas. This work is on-going and the data will be evaluated and presented in a Supplemental Phase II report in the future.

OU-3 and OU-4 Areas

Areas within OU-3 and OU-4 have been remediated and closed under the MCP in 2004 and 2010, respectively. Response Actions taken at OU-3 included excavation of metal-impacted sediments and wetland restoration. Response Actions taken at OU-4 have included UST removal, soil excavation, and biosparge/soil vapor extraction. Although these areas have been closed under the MCP, it should be noted that contaminated media were cleaned up to Industrial/Commercial standards and that low level impacts may remain. That is, the soil, sediments and groundwater have not been cleaned up to conditions such that these locations would be suitable for Residential, Institutional, or park/playground land use without first completing further response actions.

Tank F and Building 1 Areas

Tank F, formerly located on the southwest side of Building 1 on the former GE facility property, which received acid and caustic wastes plus other degreasing solvent and fuel wastes through floor drains from Building 1, was removed from the Property in 1990. No obvious impacts were

observed during its removal or from samples obtained from soils and other liquids associated with the tank prior to its removal. No remedial efforts have been associated with this tank area.

Investigation results suggest CVOC impacts in the southwestern area of Building 1 and/or the former Tank F area. Shallow groundwater in the overburden does not exhibit elevated CVOC concentrations; however, bedrock wells in this area exhibited much higher concentrations of both PCE and TCE. In June 1987, a small tank was removed adjacent to Tank F and field screening levels of VOCs ranging from 100 to 200 parts per million (ppm) were encountered near the bottom of the excavation. In addition, sampling of sediment from within the chase troughs in Building 1 exhibited petroleum hydrocarbon and CVOC impacts. Soils within the top foot under the metals finishing floor sumps indicated low levels of CVOCs.

Sub-slab and indoor air sampling has been conducted within Building 1 between 2009 through 2014. Elevated levels of petroleum hydrocarbons and CVOCs have been detected below the concrete slab of Building 1. Low levels of CVOCs have also been detected in indoor air samples, however, they have consistently been below MassDEP available MA Commercial/Industrial (C/I) Threshold Values and do not pose a risk to industrial/ commercial workers. It is therefore the opinion of the LSP that industrial and commercial use is a permissible use under the AUL.

In 2013 and 2014, additional soil and groundwater investigation activities have been performed underneath Building 1. This work is on-going and the data will be evaluated and presented in a Supplemental Phase II report in the future.

Nature and Extent of Contamination

The lateral extent of the MCP Disposal Site encompasses a large portion of the Property as shown on the attached **Figure 1**. Within this site boundary, residual levels of contaminants are likely present within soil or groundwater or both. Higher concentrations are expected within the Operable Units and the Tank F/Building 1 Areas than in areas outside of these designated areas. However, low level residual contamination above applicable MCP standards may be present in areas outside of these areas within the Disposal Site boundary. The AUL boundary has been set to encompass a large portion of the Property, including the Restricted Areas, but exclusive of the

northern wetland areas where future construction-related activities are considered to be highly unlikely, and exclusive of the areas beneath and between Buildings 1A and 2.

Recommendations

It is the opinion of the LSP that the restrictions on Activities and Uses of the Property and the Obligations and Conditions contained in the AUL are appropriate, based on the foregoing.

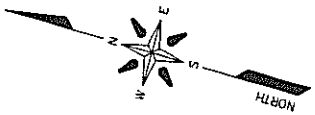
File: J:\Rem_Eng\Project Files\Lockheed Martin\Wilmington, MA 2012 #60267214\Project Implementation files\CADD\ROS_2013-04\AUL Site Plan 2.dwg Layout: _ACM-0 (3) User: barryk Plotted: Oct 13, 2014 - 2:04pm Xref's:

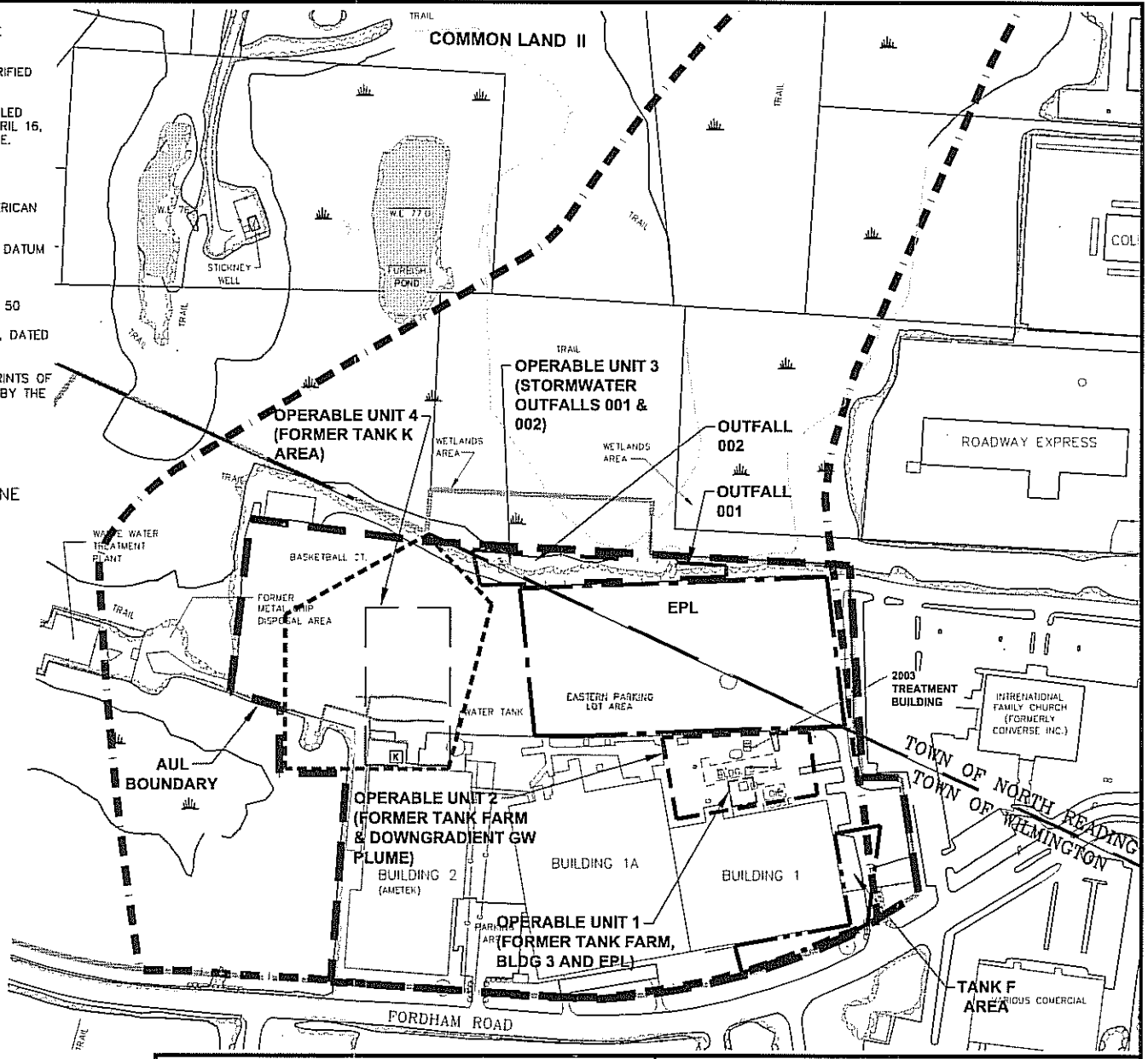
NOTES:

1. SOURCE: "BASE MAP" (TRC ENVIRONMENTAL CORP., 2003). THE ACCURACY OF THE SURVEY INFORMATION PRESENTED HEREIN, INCLUDING THE HORIZONTAL COORDINATE SYSTEM AND THE HORIZONTAL AND VERTICAL DATUMS HAVE BEEN PARTIALLY VERIFIED BY AECOM.
2. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED APRIL 16, 1992 BY EAST COAST MAPPING INC., CONCORD, NEW HAMPSHIRE. MAPPING GROUND CONTROL ESTABLISHED BY FIELD SURVEYS CONDUCTED IN APRIL 1992.
3. THE GRID SYSTEM DEPICTED ON THIS PLAN IS BASED ON THE MASSACHUSETTS STATE PLAN COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1929.
4. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
5. PROPERTY AND TOWN LINE BOUNDARIES WERE ADAPTED FROM:
   A) "REGIONAL EXPLORATION PLAN", GENERAL ELECTRIC COMPANY, 50 FORDHAM ROAD PROPERTY, WILMINGTON/NORTH READING, MASSACHUSETTS, BY GOLDBERG – ZOINO & ASSOCIATES, INC., DATED APRIL 1990;
   B) MODIFIED PER NORTH READING GIS DATA, JUNE 2002; AND
   C) DIGITIZED BY MASSGIS FROM A SET OF STABLE BASED FILM PRINTS OF THE 125:000 7.5' QUADRANGLES PURCHASED FROM THE USGS BY THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS.

LEGEND

- APPROXIMATE PROPERTY LINE
- APPROXIMATE TOWN LINE
- MCP SITE BOUNDARY
- AUL BOUNDARY





0' 150' 300' 600'

APPROXIMATE SCALE IN FEET
1"=300'

AECOM

FORMER GE FACILITY 50 FORDHAM ROAD WILMINGTON, MA			AUL SITE PLAN
DATE: 10/14	DRWN: K.P.B.		FIGURE 1

EXHIBIT D

TRUSTEE CERTIFICATE

WILMINGTON REALTY TRUST
TRUSTEES' CERTIFICATE

The undersigned, Rosemarie Stanieich, Victoria J. Maiyara, and Annette Maria Given, as Trustees of Wilmington Realty Trust under Declaration of Trust dated September 7, 1973, registered in the Middlesex North Registry District of the Land Court as Document No. 63541 and noted on Certificate of Title No. 19837 and registered further in the Middlesex South Registry of the Land Court as Document No. 515729 and noted on Certificate of Title No. 142138 (the "Trust"), hereby certify as follows:

1. That they are all of the current Trustees of the Trust;

2. That the Trust is in full force and effect and has not been revoked, terminated or rescinded in whole or in part;

3. That the undersigned Trustees have been duly authorized and specifically directed by all of the beneficiaries of the Trust to execute, acknowledge and deliver that certain Activity and Use Limitation with respect to the property owned by the Trust and having an address of 50 Fordham Road in Wilmington, Massachusetts, and:

4. No beneficiary of the Trust is a minor, a Massachusetts corporation selling all or substantially of all its Massachusetts assets, or a personal representative of an estate subject to an estate tax lien, deceased, or under any other legal incapacity.

EXECUTED as a sealed instrument this 13th day of July, 2015

WILMINGTON REALTY TRUST

Rosemarie Stanieich, as Trustee and not individually

Victoria J. Maiyara, as Trustee and not individually

Annette Maria Given, as Trustee and not individually

THE COMMONWEALTH OF MASSACHUSETTS

County of Middlesex, ss.

On this 13th day of July, 2015 before me, the undersigned notary public, personally appeared Rosemarie Stanieich, proved to me through satisfactory evidence of identification, which was [✓] photographic identification with signature issued by a federal or state government agency, [ ] oath or affirmation of a credible witness, or [ ] personal knowledge of the undersigned, to be the person whose name is signed on the preceding document as Trustee of Wilmington Realty Trust as aforesaid and acknowledged to me that she signed it voluntarily, for its stated purpose.

Notary Public
Name: Alexandra Danilov
My Commission Expires: 12-26-19

Rhonda L. Rollins
7-14-15

RHONDA L. ROLLINS NOTARY PUBLIC STATE OF NEW HAMPSHIRE - MY COMMISSION EXPIRES AUGUST 22, 2017

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

~~THE COMMONWEALTH OF MASSACHUSETTS~~
THE STATE OF NEW HAMPSHIRE

Merrimack
County of ~~Middlesex~~, ss.

On this 14th day of July, 2015 before me, the undersigned notary public, personally appeared Victoria J. Maiyara proved to me through satisfactory evidence of identification, which was [x] photographic identification with signature issued by a federal or state government agency, [ ] oath or affirmation of a credible witness, or [ ] personal knowledge of the undersigned, to be the person whose name is signed on the preceding document as Trustee of Wilmington Realty Trust as aforesaid and acknowledged to me that she signed it voluntarily, for its stated purpose.

RHONDA L. ROLLINS STATE OF - MY - COMMISSION EXPIRES AUGUST 22, 2017 NEW HAMPSHIRE NOTARY PUBLIC

Rhonda L. Rollins
Notary Public
Name: Rhonda L. Rollins
My Commission Expires: 8/22/17

THE COMMONWEALTH OF MASSACHUSETTS

County of Middlesex, ss.

On this 13th day of July, 2015 before me, the undersigned notary public, personally appeared Annette Maria Given proved to me through satisfactory evidence of identification, which was [X] photographic identification with signature issued by a federal or state government agency, [ ] oath or affirmation of a credible witness, or [ ] personal knowledge of the undersigned, to be the person whose name is signed on the preceding document as Trustee of Wilmington Realty Trust as aforesaid and acknowledged to me that she signed it voluntarily, for its stated purpose.

Alexandra Danilov
Notary Public
Name: Alexandra Danilov
My Commission Expires:
12.26.19

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

APPENDIX F
LABORATORY ANALYTICAL AND DATA VALIDATION REPORTS – GROUNDWATER

PHOENIX
Environmental Laboratories, Inc.

Friday, September 24, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60552044.25**
SDG ID: **GCJ17882**
Sample ID#s: CJ17882 - CJ17887

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

September 24, 2021

SDG I.D.: GCJ17882

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver. 2:
This report has been revised to correct the method reference for MA VPH.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

September 24, 2021

SDG I.D.: GCJ17882

Project ID: LOCKHEED-WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-AE26R2-090121-1	CJ17882	GROUND WATER
21A-AE28R1-090121-1	CJ17883	GROUND WATER
21A-AE28R3-090121-1	CJ17884	GROUND WATER
21A-AE26R1-090121-1	CJ17885	GROUND WATER
21A-TB01-090121-1	CJ17886	GROUND WATER
21A-AE28R4-090121-1	CJ17887	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	10:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/01/21	15:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ17882
Phoenix ID: CJ17882

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE26R2-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.308	0.011	mg/L	1	09/02/21	EK	SW6010D
Manganese (Dissolved)	0.623	0.001	mg/L	1	09/02/21	EK	SW6010D
Iron	0.326	0.010	mg/L	1	09/03/21	CPP	SW6010D
Manganese	0.623	0.001	mg/L	1	09/03/21	CPP	SW6010D
Chloride	120	10.0	mg/L	2	09/02/21	BS\EG	E300.0
Nitrite as Nitrogen	< 0.008	0.008	mg/L	2	09/02/21 03:21	BS\EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/01/21 23:53	BS\EG	E300.0
Sulfate	20.2	5.0	mg/L	1	09/01/21	BS\EG	E300.0
Sulfide	0.27	0.05	mg/L	1	09/07/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/02/21	BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/01/21	AG	SW3005A
Total Metals Digestion	Completed				09/02/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/09/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,1-Dichloroethane	25	1.0	ug/L	1	09/09/21	MH	SW8260C
1,1-Dichloroethene	2.9	1.0	ug/L	1	09/09/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/09/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/09/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/09/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ17882

Client ID: 21A-AE26R2-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/09/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/09/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/09/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/09/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/09/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/09/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/09/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
cis-1,2-Dichloroethene	70	1.0	ug/L	1	09/09/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/09/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/09/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/09/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/09/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/09/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
trans-1,2-Dichloroethene	6.2	1.0	ug/L	1	09/09/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/09/21	MH	SW8260C
Trichloroethene	53	1.0	ug/L	1	09/09/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/09/21	MH	SW8260C
Vinyl chloride	33	1.0	ug/L	1	09/09/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/09/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/09/21	MH	70 - 130 %
% Dibromofluoromethane	108		%	1	09/09/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/09/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/09/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/09/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/09/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/09/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/09/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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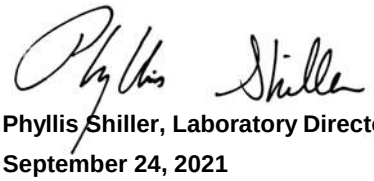

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	10:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/01/21	15:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ17882
Phoenix ID: CJ17883

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE28R1-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,1-Dichloroethane	74	10	ug/L	10	09/10/21	MH	SW8260C
1,1-Dichloroethene	25	10	ug/L	10	09/10/21	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/10/21	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/10/21	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/10/21	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/10/21	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/10/21	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/10/21	MH	SW8260C
Acetone	ND	250	ug/L	10	09/10/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ17883

Client ID: 21A-AE28R1-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/10/21	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/10/21	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/10/21	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
cis-1,2-Dichloroethene	2100	100	ug/L	100	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/10/21	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/10/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/10/21	MH	SW8260C
Methylene chloride	ND	50	ug/L	10	09/10/21	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/10/21	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/10/21	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/10/21	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Styrene	ND	10	ug/L	10	09/10/21	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Tetrachloroethene	3400	100	ug/L	100	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/10/21	MH	SW8260C
Toluene	ND	10	ug/L	10	09/10/21	MH	SW8260C
trans-1,2-Dichloroethene	290	10	ug/L	10	09/10/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Trichloroethene	6600	100	ug/L	100	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
Vinyl chloride	710	10	ug/L	10	09/10/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	103		%	10	09/10/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	91		%	10	09/10/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	105		%	10	09/10/21	MH	70 - 130 %
% Toluene-d8 (10x)	96		%	10	09/10/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	107		%	100	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	93		%	100	09/13/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	115		%	100	09/13/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	96		%	100	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1000	ug/L	10	09/10/21	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/10/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/10/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/10/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/10/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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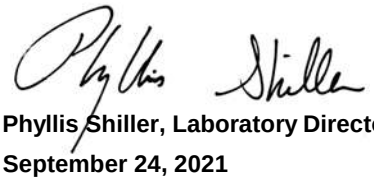

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	10:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/01/21	15:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ17882
Phoenix ID: CJ17884

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE28R3-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,1-Dichloroethane	74	20	ug/L	20	09/09/21	MH	SW8260C
1,1-Dichloroethene	20	20	ug/L	20	09/09/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/09/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/09/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/09/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/09/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/09/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/09/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/09/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ17884

Client ID: 21A-AE28R3-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/09/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/09/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/09/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/09/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/09/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
cis-1,2-Dichloroethene	830	20	ug/L	20	09/09/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/09/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/09/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/09/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/09/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/09/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/09/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/09/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/09/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/09/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Tetrachloroethene	4100	100	ug/L	100	09/07/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/09/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/09/21	MH	SW8260C
trans-1,2-Dichloroethene	140	20	ug/L	20	09/09/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/09/21	MH	SW8260C
Trichloroethene	3800	100	ug/L	100	09/07/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
Vinyl chloride	340	20	ug/L	20	09/09/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	105		%	20	09/09/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	09/09/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	111		%	20	09/09/21	MH	70 - 130 %
% Toluene-d8 (20x)	95		%	20	09/09/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	09/07/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	94		%	100	09/07/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	113		%	100	09/07/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	97		%	100	09/07/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/09/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/09/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/09/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/09/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/09/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	40	0.20	ug/l	1	09/07/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	95		%	1	09/07/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/03/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	11:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/01/21	15:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ17882
Phoenix ID: CJ17885

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE26R1-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.007	0.004	mg/L	1	09/03/21	CPP	SW6010D
Arsenic (Dissolved)	0.009	0.004	mg/L	1	09/02/21	EK	SW6010D
EPH Extraction	Completed				09/08/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/01/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/01/21	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/01/21	AG	SW3005A
Total Metals Digestion	Completed				09/02/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/07/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	09/09/21	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,1-Dichloroethane	30	2.0	ug/L	2	09/09/21	MH	SW8260C
1,1-Dichloroethene	3.7	2.0	ug/L	2	09/09/21	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	2	09/09/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	09/09/21	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	09/09/21	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	09/09/21	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ17885

Client ID: 21A-AE26R1-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	09/09/21	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	09/09/21	MH	SW8260C
Acetone	ND	50	ug/L	2	09/09/21	MH	SW8260C
Benzene	ND	1.4	ug/L	2	09/09/21	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	09/09/21	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	09/09/21	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
cis-1,2-Dichloroethene	78	2.0	ug/L	2	09/09/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	09/09/21	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	09/09/21	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	09/09/21	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	09/09/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Styrene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Tetrachloroethene	340	20	ug/L	20	09/07/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	09/09/21	MH	SW8260C
Toluene	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
trans-1,2-Dichloroethene	20	2.0	ug/L	2	09/09/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	09/09/21	MH	SW8260C
Trichloroethene	600	20	ug/L	20	09/07/21	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	09/09/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	130	2.0	ug/L	2	09/09/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	106		%	2	09/09/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	94		%	2	09/09/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	108		%	2	09/09/21	MH	70 - 130 %
% Toluene-d8 (2x)	96		%	2	09/09/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	105		%	20	09/07/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	09/07/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	111		%	20	09/07/21	MH	70 - 130 %
% Toluene-d8 (20x)	98		%	20	09/07/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	2	09/09/21	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	09/09/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	09/09/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	09/09/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	09/09/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.49	ug/L	1	09/02/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.49	ug/L	1	09/02/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/02/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/02/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	09/02/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.20	ug/L	1	09/02/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/02/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/02/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/02/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/02/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/02/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.49	ug/L	1	09/02/21	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/02/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/02/21	WB	SW8270D (SIM)
Naphthalene	ND	0.49	ug/L	1	09/02/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.49	ug/L	1	09/02/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/02/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	09/02/21	WB	40 - 140 %
% Nitrobenzene-d5	49		%	1	09/02/21	WB	40 - 140 %
% Terphenyl-d14	76		%	1	09/02/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	20	0.20	ug/l	1	09/07/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	93		%	1	09/07/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/03/21	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	114		%	1	09/09/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	128		%	1	09/09/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	101		%	1	09/09/21	AW	40 - 140 %
% o-terphenyl (aromatic)	107		%	1	09/09/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	340	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	340	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	89		%	1	09/07/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	88		%	1	09/07/21	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

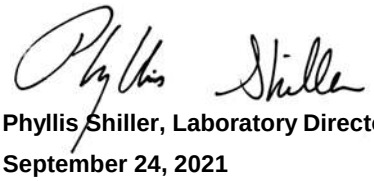
Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/01/21	15:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ17882
Phoenix ID: CJ17886

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-TB01-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/07/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ17886

Client ID: 21A-TB01-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/07/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/07/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	09/07/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/07/21	MH	70 - 130 %
% Dibromofluoromethane	109		%	1	09/07/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/07/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/07/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ17886

Client ID: 21A-TB01-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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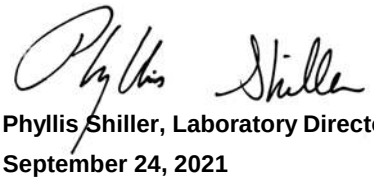

Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	12:11
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/01/21	15:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ17882
Phoenix ID: CJ17887

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE28R4-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,1-Dichloroethane	87	20	ug/L	20	09/09/21	MH	SW8260C
1,1-Dichloroethene	26	20	ug/L	20	09/09/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/09/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/09/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/09/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/09/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/09/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/09/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/09/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/09/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/09/21	MH	SW8260C

Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/09/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/09/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/09/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/09/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/09/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
cis-1,2-Dichloroethene	690	20	ug/L	20	09/09/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/09/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/09/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/09/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/09/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/09/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/09/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/09/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/09/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/09/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/09/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/09/21	MH	SW8260C
Tetrachloroethene	6200	100	ug/L	100	09/07/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/09/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/09/21	MH	SW8260C
trans-1,2-Dichloroethene	100	20	ug/L	20	09/09/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/09/21	MH	SW8260C
Trichloroethene	6700	100	ug/L	100	09/07/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/09/21	MH	SW8260C
Vinyl chloride	130	20	ug/L	20	09/09/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	106		%	20	09/09/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	09/09/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	111		%	20	09/09/21	MH	70 - 130 %
% Toluene-d8 (20x)	95		%	20	09/09/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	09/07/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	94		%	100	09/07/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	110		%	100	09/07/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	97		%	100	09/07/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/09/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/09/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/09/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/09/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/09/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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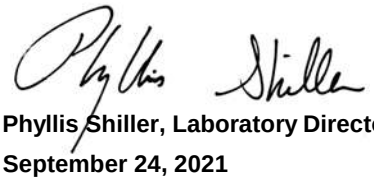

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 24, 2021

QA/QC Data

SDG I.D.: GCJ17882

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 590398 (mg/L), QC Sample No: CJ16627 (CJ17882, CJ17885)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	106	105	0.9	108			80 - 120	20
Iron	BRL	0.010	3.19	3.19	0	102	102	0.0	80.3			80 - 120	20
Manganese	BRL	0.001	0.479	0.475	0.80	103	103	0.0	100			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 590228 (mg/L), QC Sample No: CJ17885 (CJ17882, CJ17885)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.009	0.006	NC	93.5	92.3	1.3	96.3			80 - 120	20
Iron	BRL	0.011	0.120	0.117	2.50	93.4	92.4	1.1	94.5			80 - 120	20
Manganese	BRL	0.001	0.466	0.470	0.90	93.4	92.4	1.1	94.4			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

September 24, 2021

QA/QC Data

SDG I.D.: GCJ17882

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 590501 (mg/L), QC Sample No: CJ17687 (CJ17882)														
Total Organic Carbon	BRL	1.0	1.8	1.7	NC	102			99.0			85 - 115	20	
Comment:														
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.														
QA/QC Batch 590833 (mg/L), QC Sample No: CJ17882 (CJ17882)														
Sulfide	BRL	0.05	0.27	0.27	0	92.0			95.8			90 - 110	20	
QA/QC Batch 590381 (mg/L), QC Sample No: CJ17483 (CJ17882)														
Chloride	BRL	5.0	200	200	0	97.2			99.8			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.01	<0.05	NC	92.5			112			90 - 110	20	m
Nitrite as Nitrogen	BRL	0.004	<0.020	<0.020	NC	95.4			102			90 - 110	20	
Sulfate	BRL	5.0	19.2	18.9	NC	95.2			98.6			90 - 110	20	
QA/QC Batch 590382 (mg/L), QC Sample No: CJ17825 (CJ17882)														
Chloride	BRL	5.0	<5.0	<5.0	NC	97.8			97.8			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.01	<0.05	NC	92.1			91.5			90 - 110	20	
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	96.5			96.4			90 - 110	20	
Sulfate	BRL	5.0	7.4	7.1	NC	95.4			96.7			90 - 110	20	

m = This parameter is outside laboratory MS/MSD specified recovery limits.

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QA/QC Report

September 24, 2021

QA/QC Data

SDG I.D.: GCJ17882

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 590531 (ug/l), QC Sample No: CJ16600 (CJ17884, CJ17885)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	83	100	18.6	112			70 - 130	20
% 1,4-dioxane-d8	88	%	107	103	3.8	102			70 - 130	20
QA/QC Batch 590929 (ug/L), QC Sample No: CJ16894 (CJ17885)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	68	71	4.3				40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	102	111	8.5				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	107	104	2.8				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	87	94	7.7				40 - 140	25
C9 - Nonane	ND	10	45	43	4.5				40 - 140	25
C-10 Decane	ND	10	58	59	1.7				40 - 140	25
C12 - Dodecane	ND	10	58	62	6.7				40 - 140	25
C14 - Tetradecane	ND	10	70	75	6.9				40 - 140	25
C16 - Hexadecane	ND	10	78	85	8.6				40 - 140	25
C18 - Octadecane	ND	10	97	104	7.0				40 - 140	25
C19 - Nonadecane	ND	10	96	103	7.0				40 - 140	25
C20 - Eicosane	ND	10	96	103	7.0				40 - 140	25
C22 - Docosane	ND	10	99	106	6.8				40 - 140	25
C24 - Tetracosane	ND	10	103	110	6.6				40 - 140	25
C26 - Hexacosane	ND	10	102	110	7.5				40 - 140	25
C28 - Octacosane	ND	10	105	114	8.2				40 - 140	25
C30 - Tricotane	ND	10	102	112	9.3				40 - 140	25
C36 - Hexatriacontane	ND	10	111	128	14.2				40 - 140	25
% 1-chlorooctadecane (aliphatic)	91	%	94	102	8.2				40 - 140	25
% o-terphenyl (aromatic)	94	%	95	93	2.1				40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	96	%	105	98	6.9				40 - 140	25
% 2-Bromonaphthalene (Fractionati	108	%	116	108	7.1				40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 590241 (ug/L), QC Sample No: CJ11320 (CJ17885)										
Semivolatiles by SIM, PAH - Ground Water										
2-Methylnaphthalene	ND	0.50	68	79	15.0				40 - 140	20
Acenaphthene	ND	0.50	75	80	6.5				40 - 140	20
Acenaphthylene	ND	0.10	71	73	2.8				40 - 140	20
Anthracene	ND	0.10	81	84	3.6				40 - 140	20
Benz(a)anthracene	ND	0.02	67	67	0.0				40 - 140	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(a)pyrene	ND	0.02	78	84	7.4				40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	76	88	14.6				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	79	90	13.0				40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	66	75	12.8				40 - 140	20	
Chrysene	ND	0.02	81	85	4.8				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	86	105	19.9				40 - 140	20	
Fluoranthene	ND	0.50	85	87	2.3				40 - 140	20	
Fluorene	ND	0.10	77	81	5.1				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	84	93	10.2				40 - 140	20	
Naphthalene	ND	0.50	60	79	27.3				40 - 140	20	r
Phenanthrene	ND	0.06	70	73	4.2				40 - 140	20	
Pyrene	ND	0.07	87	88	1.1				40 - 140	20	
% 2-Fluorobiphenyl	72	%	66	73	10.1				40 - 140	20	
% Nitrobenzene-d5	60	%	60	68	12.5				40 - 140	20	
% Terphenyl-d14	85	%	78	81	3.8				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 591383 (ug/L), QC Sample No: CJ17882 (CJ17882, CJ17884 (20X) , CJ17885 (2X) , CJ17887 (20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	99	100	1.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	99	99	0.0				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	102	103	1.0				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	98	101	3.0				70 - 130	20	
1,1-Dichloroethane	ND	1.0	99	99	0.0				70 - 130	20	
1,1-Dichloroethene	ND	1.0	94	94	0.0				70 - 130	20	
1,1-Dichloropropene	ND	1.0	106	105	0.9				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	107	109	1.9				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	105	105	0.0				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	103	103	0.0				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	108	107	0.9				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	108	108	0.0				70 - 130	20	
1,2-Dibromoethane	ND	1.0	103	103	0.0				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	95	96	1.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	95	95	0.0				70 - 130	20	
1,2-Dichloropropane	ND	1.0	97	96	1.0				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	106	105	0.9				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	98	97	1.0				70 - 130	20	
1,3-Dichloropropane	ND	1.0	103	104	1.0				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	98	98	0.0				70 - 130	20	
1,4-dioxane	ND	100	93	102	9.2				40 - 160	20	
2,2-Dichloropropane	ND	1.0	103	102	1.0				70 - 130	20	
2-Chlorotoluene	ND	1.0	101	103	2.0				70 - 130	20	
2-Hexanone	ND	5.0	101	105	3.9				40 - 160	20	
4-Chlorotoluene	ND	1.0	104	102	1.9				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	103	106	2.9				40 - 160	20	
Acetone	ND	5.0	98	99	1.0				40 - 160	20	
Benzene	ND	0.70	98	97	1.0				70 - 130	20	
Bromobenzene	ND	1.0	97	96	1.0				70 - 130	20	
Bromochloromethane	ND	1.0	100	102	2.0				70 - 130	20	
Bromodichloromethane	ND	0.50	95	96	1.0				70 - 130	20	
Bromoform	ND	1.0	102	102	0.0				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ17882

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromomethane	ND	1.0	93	94	1.1				40 - 160	20
Carbon Disulfide	ND	1.0	91	90	1.1				70 - 130	20
Carbon tetrachloride	ND	1.0	104	104	0.0				70 - 130	20
Chlorobenzene	ND	1.0	96	96	0.0				70 - 130	20
Chloroethane	ND	1.0	98	95	3.1				70 - 130	20
Chloroform	ND	1.0	93	93	0.0				70 - 130	20
Chloromethane	ND	1.0	96	95	1.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	98	95	3.1				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	104	104	0.0				70 - 130	20
Dibromochloromethane	ND	0.50	100	99	1.0				70 - 130	20
Dibromomethane	ND	1.0	99	101	2.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	109	109	0.0				40 - 160	20
Di-isopropyl ether	ND	1.0	101	103	2.0				70 - 130	20
Ethyl ether	ND	1.0	85	88	3.5				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	104	108	3.8				70 - 130	20
Ethylbenzene	ND	1.0	101	97	4.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	90	88	2.2				70 - 130	20
Isopropylbenzene	ND	1.0	110	109	0.9				70 - 130	20
m&p-Xylene	ND	1.0	105	104	1.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	103	108	4.7				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	101	104	2.9				70 - 130	20
Methylene chloride	ND	1.0	93	94	1.1				70 - 130	20
Naphthalene	ND	1.0	118	120	1.7				70 - 130	20
n-Butylbenzene	ND	1.0	111	110	0.9				70 - 130	20
n-Propylbenzene	ND	1.0	105	104	1.0				70 - 130	20
o-Xylene	ND	1.0	105	103	1.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	111	112	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	112	111	0.9				70 - 130	20
Styrene	ND	1.0	110	108	1.8				70 - 130	20
tert-amyl methyl ether	ND	1.0	98	99	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	109	108	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	97	98	1.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	108	112	3.6				70 - 130	20
Toluene	ND	1.0	96	97	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	93	96	3.2				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	103	1.0				70 - 130	20
Trichloroethene	ND	1.0	98	97	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	105	102	2.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	93	89	4.4				70 - 130	20
Vinyl chloride	ND	1.0	104	104	0.0				70 - 130	20
% 1,2-dichlorobenzene-d4	104	%	98	99	1.0				70 - 130	20
% Bromofluorobenzene	95	%	101	102	1.0				70 - 130	20
% Dibromofluoromethane	106	%	102	103	1.0				70 - 130	20
% Toluene-d8	101	%	100	100	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 591863 (ug/L), QC Sample No: CJ17883 (CJ17883 (10X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	103	99	4.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ17882

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1,1-Trichloroethane	ND	1.0	103	101	2.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	102	101	1.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	102	102	0.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	100	99	1.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	100	97	3.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	115	109	5.4				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	110	111	0.9				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	96	104	8.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	108	109	0.9				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	116	117	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	105	106	0.9				70 - 130	20
1,2-Dibromoethane	ND	1.0	104	102	1.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	100	102	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	98	95	3.1				70 - 130	20
1,2-Dichloropropane	ND	1.0	99	98	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	116	116	0.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	107	107	0.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	104	102	1.9				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	98	100	2.0				70 - 130	20
1,4-dioxane	ND	100	93	93	0.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	107	103	3.8				70 - 130	20
2-Chlorotoluene	ND	1.0	111	111	0.0				70 - 130	20
2-Hexanone	ND	5.0	93	90	3.3				40 - 160	20
4-Chlorotoluene	ND	1.0	109	110	0.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	94	91	3.2				40 - 160	20
Acetone	ND	5.0	86	87	1.2				40 - 160	20
Benzene	ND	0.70	104	103	1.0				70 - 130	20
Bromobenzene	ND	1.0	102	104	1.9				70 - 130	20
Bromochloromethane	ND	1.0	99	101	2.0				70 - 130	20
Bromodichloromethane	ND	0.50	100	97	3.0				70 - 130	20
Bromoform	ND	1.0	101	99	2.0				70 - 130	20
Bromomethane	ND	1.0	96	94	2.1				40 - 160	20
Carbon Disulfide	ND	1.0	95	92	3.2				70 - 130	20
Carbon tetrachloride	ND	1.0	109	107	1.9				70 - 130	20
Chlorobenzene	ND	1.0	101	99	2.0				70 - 130	20
Chloroethane	ND	1.0	102	100	2.0				70 - 130	20
Chloroform	ND	1.0	93	95	2.1				70 - 130	20
Chloromethane	ND	1.0	102	98	4.0				40 - 160	20
cis-1,3-Dichloropropene	ND	0.40	106	104	1.9				70 - 130	20
Dibromochloromethane	ND	0.50	101	99	2.0				70 - 130	20
Dibromomethane	ND	1.0	100	99	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	129	123	4.8				40 - 160	20
Di-isopropyl ether	ND	1.0	99	101	2.0				70 - 130	20
Ethyl ether	ND	1.0	82	83	1.2				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	103	104	1.0				70 - 130	20
Ethylbenzene	ND	1.0	105	103	1.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	98	98	0.0				70 - 130	20
Isopropylbenzene	ND	1.0	123	120	2.5				70 - 130	20
m&p-Xylene	ND	1.0	110	107	2.8				70 - 130	20
Methyl ethyl ketone	ND	5.0	88	88	0.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	97	97	0.0				70 - 130	20
Methylene chloride	ND	1.0	92	92	0.0				70 - 130	20
Naphthalene	ND	1.0	117	117	0.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
n-Butylbenzene	ND	1.0	121	120	0.8				70 - 130	20
n-Propylbenzene	ND	1.0	115	114	0.9				70 - 130	20
o-Xylene	ND	1.0	111	109	1.8				70 - 130	20
p-Isopropyltoluene	ND	1.0	122	121	0.8				70 - 130	20
sec-Butylbenzene	ND	1.0	123	121	1.6				70 - 130	20
Styrene	ND	1.0	118	113	4.3				70 - 130	20
tert-amyl methyl ether	ND	1.0	99	97	2.0				70 - 130	20
tert-Butylbenzene	ND	1.0	121	119	1.7				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	102	100	2.0				70 - 130	20
Toluene	ND	1.0	102	100	2.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	99	96	3.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	105	102	2.9				70 - 130	20
Trichlorofluoromethane	ND	1.0	110	106	3.7				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	98	94	4.2				70 - 130	20
Vinyl chloride	ND	1.0	111	107	3.7				70 - 130	20
% 1,2-dichlorobenzene-d4	102	%	100	100	0.0				70 - 130	20
% Bromofluorobenzene	93	%	99	99	0.0				70 - 130	20
% Dibromofluoromethane	106	%	97	99	2.0				70 - 130	20
% Toluene-d8	101	%	100	99	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 590973 (ug/L), QC Sample No: CJ17886 (CJ17884 (100X) , CJ17885 (20X) , CJ17886, CJ17887 (100X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	97	97	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	97	98	1.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	92	93	1.1				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	95	94	1.1				70 - 130	20
1,1-Dichloroethane	ND	1.0	96	97	1.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	95	95	0.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	104	104	0.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	102	101	1.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	93	95	2.1				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	97	97	0.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	109	108	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	96	96	0.0				70 - 130	20
1,2-Dibromoethane	ND	1.0	97	97	0.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	95	95	0.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	92	93	1.1				70 - 130	20
1,2-Dichloropropane	ND	1.0	93	92	1.1				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	109	108	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	99	98	1.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	99	98	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	97	98	1.0				70 - 130	20
1,4-dioxane	ND	100	88	92	4.4				40 - 160	20
2,2-Dichloropropane	ND	1.0	94	95	1.1				70 - 130	20
2-Chlorotoluene	ND	1.0	102	103	1.0				70 - 130	20
2-Hexanone	ND	5.0	84	87	3.5				40 - 160	20
4-Chlorotoluene	ND	1.0	100	101	1.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	89	89	0.0				40 - 160	20

QA/QC Data

SDG I.D.: GCJ17882

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Acetone	ND	5.0	84	88	4.7				40 - 160	20
Benzene	ND	0.70	98	96	2.1				70 - 130	20
Bromobenzene	ND	1.0	97	96	1.0				70 - 130	20
Bromochloromethane	ND	1.0	97	98	1.0				70 - 130	20
Bromodichloromethane	ND	0.50	93	94	1.1				70 - 130	20
Bromoform	ND	1.0	96	94	2.1				70 - 130	20
Bromomethane	ND	1.0	91	92	1.1				40 - 160	20
Carbon Disulfide	ND	1.0	92	93	1.1				70 - 130	20
Carbon tetrachloride	ND	1.0	103	103	0.0				70 - 130	20
Chlorobenzene	ND	1.0	96	95	1.0				70 - 130	20
Chloroethane	ND	1.0	98	100	2.0				70 - 130	20
Chloroform	ND	1.0	91	92	1.1				70 - 130	20
Chloromethane	ND	1.0	97	98	1.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	95	98	3.1				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	98	99	1.0				70 - 130	20
Dibromochloromethane	ND	0.50	96	95	1.0				70 - 130	20
Dibromomethane	ND	1.0	94	95	1.1				70 - 130	20
Dichlorodifluoromethane	ND	1.0	115	114	0.9				40 - 160	20
Di-isopropyl ether	ND	1.0	95	97	2.1				70 - 130	20
Ethyl ether	ND	1.0	81	83	2.4				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	97	100	3.0				70 - 130	20
Ethylbenzene	ND	1.0	99	98	1.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	91	87	4.5				70 - 130	20
Isopropylbenzene	ND	1.0	111	110	0.9				70 - 130	20
m&p-Xylene	ND	1.0	103	102	1.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	86	87	1.2				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	93	95	2.1				70 - 130	20
Methylene chloride	ND	1.0	92	94	2.2				70 - 130	20
Naphthalene	ND	1.0	106	105	0.9				70 - 130	20
n-Butylbenzene	ND	1.0	110	109	0.9				70 - 130	20
n-Propylbenzene	ND	1.0	107	105	1.9				70 - 130	20
o-Xylene	ND	1.0	102	103	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	113	112	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	112	111	0.9				70 - 130	20
Styrene	ND	1.0	109	107	1.9				70 - 130	20
tert-amyl methyl ether	ND	1.0	92	91	1.1				70 - 130	20
tert-Butylbenzene	ND	1.0	110	110	0.0				70 - 130	20
Tetrachloroethene	ND	1.0	97	99	2.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	92	93	1.1				70 - 130	20
Toluene	ND	1.0	97	97	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	95	96	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	97	97	0.0				70 - 130	20
Trichloroethene	ND	1.0	97	98	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	104	105	1.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	92	90	2.2				70 - 130	20
Vinyl chloride	ND	1.0	105	106	0.9				70 - 130	20
% 1,2-dichlorobenzene-d4	105	%	101	100	1.0				70 - 130	20
% Bromofluorobenzene	97	%	99	100	1.0				70 - 130	20
% Dibromofluoromethane	126	%	101	101	0.0				70 - 130	20
% Toluene-d8	103	%	100	100	0.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ17882

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Comment:										
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.										
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%. The RPD criteria for the LCS/LCSD is 20%, The MS/MSD RPD criteria is listed above.										
QA/QC Batch 591823 (ug/L), QC Sample No: CJ22041 (CJ17883 (100X))										
Volatiles - Ground Water										
cis-1,2-Dichloroethene	ND	1.0	99	98	1.0				70 - 130	20
Tetrachloroethene	ND	1.0	103	99	4.0				70 - 130	20
Trichloroethene	ND	1.0	102	100	2.0				70 - 130	20
% 1,2-dichlorobenzene-d4	103	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	94	%	100	101	1.0				70 - 130	20
% Dibromofluoromethane	107	%	100	99	1.0				70 - 130	20
% Toluene-d8	102	%	100	102	2.0				70 - 130	20
Comment:										
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.										
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%. The RPD criteria for the LCS/LCSD is 20%, The MS/MSD RPD criteria is listed above.										
QA/QC Batch 590926 (ug/L), QC Sample No: CJ17860 (CJ17885)										
Volatile Petroleum Hydrocarbons - Ground Water										
Unadjusted C5-C8 Aliphatics (*1)	ND	100	99	96	3.1				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	84	83	1.2				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	99	96	3.1				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	84	83	1.2				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	84	84	0.0				70 - 130	25
Benzene	ND	1.0	95	96	1.0				70 - 130	25
Ethyl Benzene	ND	1.0	88	88	0.0				70 - 130	25
MTBE	ND	1.0	89	92	3.3				70 - 130	25
Naphthalene	ND	5.0	92	93	1.1				70 - 130	25
Toluene	ND	1.0	91	92	1.1				70 - 130	25
m,p-Xylenes	ND	2.0	88	88	0.0				70 - 130	25
o-Xylene	ND	1.0	86	85	1.2				70 - 130	25
% 2,5-Dibromotoluene (PID)	83	%	83	84	1.2				70 - 130	25
% 2,5-Dibromotoluene (FID)	83	%	93	83	11.4				70 - 130	25
Comment:										
This batch consists of a Blank, LCS and LCSD.										

r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
September 24, 2021

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ17882 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ17882	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ17882	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ17882	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	70	1.0	20	20	ug/L
CJ17882	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ17882	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	53	1.0	5	5	ug/L
CJ17882	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	33	1.0	2	2	ug/L
CJ17882	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ17882	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	70	1.0	20	20	ug/L
CJ17882	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	53	1.0	5	5	ug/L
CJ17882	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	1.0	2	2	ug/L
CJ17882	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	1.0	2	2	ug/L
CJ17882	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	70	1.0	20	20	ug/L
CJ17882	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	53	1.0	5	5	ug/L
CJ17882	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	33	1.0	2	2	ug/L
CJ17882	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	53	1.0	5	5	ug/L
CJ17882	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ17882	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	70	1.0	20	20	ug/L
CJ17882	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	53	1.0	5	5	ug/L
CJ17882	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	33	1.0	2	2	ug/L
CJ17882	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ17882	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ17882	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ17882	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.623	0.001	0.43	0.43	mg/L
CJ17882	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.623	0.001	0.43	0.43	mg/L
CJ17883	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.6	0.6	ug/L
CJ17883	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ17883	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ17883	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ17883	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ17883	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ17883	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	4	4	ug/L
CJ17883	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2100	100	20	20	ug/L
CJ17883	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	290	10	80	80	ug/L
CJ17883	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3400	100	5	5	ug/L
CJ17883	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.0075	0.0075	ug/L
CJ17883	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00033	0.00033	ug/L
CJ17883	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00075	0.00075	ug/L
CJ17883	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	710	10	2	2	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ17882 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ17883	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ17883	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ17883	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	74	10	70	70	ug/L
CJ17883	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6600	100	5	5	ug/L
CJ17883	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2100	100	20	20	ug/L
CJ17883	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ17883	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3400	100	5	5	ug/L
CJ17883	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ17883	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ17883	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CJ17883	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	290	10	80	80	ug/L
CJ17883	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ17883	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6600	100	5	5	ug/L
CJ17883	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	25	10	7	7	ug/L
CJ17883	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CJ17883	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ17883	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CJ17883	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	710	10	2	2	ug/L
CJ17883	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	74	10	70	70	ug/L
CJ17883	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	710	10	2	2	ug/L
CJ17883	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	290	10	80	80	ug/L
CJ17883	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CJ17883	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3400	100	50	50	ug/L
CJ17883	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6600	100	5	5	ug/L
CJ17883	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2100	100	20	20	ug/L
CJ17883	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	710	10	2	2	ug/L
CJ17883	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	290	10	100	100	ug/L
CJ17883	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6600	100	5	5	ug/L
CJ17883	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3400	100	5	5	ug/L
CJ17883	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CJ17883	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	74	10	70	70	ug/L
CJ17883	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	25	10	7	7	ug/L
CJ17883	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CJ17883	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CJ17883	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2100	100	70	70	ug/L
CJ17883	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ17882 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ17883	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CJ17883	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ17883	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2100	100	20	20	ug/L
CJ17883	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	290	10	80	80	ug/L
CJ17883	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6600	100	5	5	ug/L
CJ17883	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ17883	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3400	100	50	50	ug/L
CJ17883	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	710	10	2	2	ug/L
CJ17883	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CJ17883	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	6600	100	5000	5000	ug/L
CJ17883	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1000	0.3	0.3	ug/L
CJ17883	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1000	0.3	0.3	ug/L
CJ17883	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	1000	0.3	0.3	ug/L
CJ17884	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ17884	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	340	20	2	2	ug/L
CJ17884	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ17884	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ17884	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ17884	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	830	20	20	20	ug/L
CJ17884	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ17884	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ17884	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ17884	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	140	20	80	80	ug/L
CJ17884	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ17884	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3800	100	5	5	ug/L
CJ17884	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ17884	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ17884	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ17884	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ17884	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ17884	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	74	20	70	70	ug/L
CJ17884	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	4100	100	5	5	ug/L
CJ17884	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ17882 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ17884	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ17884	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ17884	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	20	80	80	ug/L
CJ17884	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ17884	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ17884	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4100	100	5	5	ug/L
CJ17884	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3800	100	5	5	ug/L
CJ17884	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ17884	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	340	20	2	2	ug/L
CJ17884	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ17884	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	74	20	70	70	ug/L
CJ17884	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	20	7	7	ug/L
CJ17884	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	830	20	20	20	ug/L
CJ17884	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ17884	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ17884	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ17884	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ17884	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ17884	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ17884	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ17884	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ17884	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3800	100	5	5	ug/L
CJ17884	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	20	80	80	ug/L
CJ17884	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	830	20	20	20	ug/L
CJ17884	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	340	20	2	2	ug/L
CJ17884	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ17884	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4100	100	50	50	ug/L
CJ17884	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	830	20	70	70	ug/L
CJ17884	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ17882 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ17884	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ17884	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ17884	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ17884	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ17884	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	20	20	7	7	ug/L
CJ17884	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	74	20	70	70	ug/L
CJ17884	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ17884	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	20	100	100	ug/L
CJ17884	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	4100	100	5	5	ug/L
CJ17884	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	3800	100	5	5	ug/L
CJ17884	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	340	20	2	2	ug/L
CJ17884	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	3800	100	5	5	ug/L
CJ17884	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ17884	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ17884	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	4100	100	50	50	ug/L
CJ17884	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	340	20	2	2	ug/L
CJ17884	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	830	20	20	20	ug/L
CJ17884	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	20	80	80	ug/L
CJ17884	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ17884	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ17884	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ17884	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ17884	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	40	0.20	0.3	0.3	ug/l
CJ17884	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	40	0.20	0.3	0.3	ug/l
CJ17884	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	40	0.20	0.3	0.3	ug/l
CJ17884	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ17885	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	78	2.0	20	20	ug/L
CJ17885	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.0075	0.0075	ug/L
CJ17885	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00033	0.00033	ug/L
CJ17885	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00075	0.00075	ug/L
CJ17885	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	130	2.0	2	2	ug/L
CJ17885	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.6	0.6	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ17882 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ17885	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	340	20	5	5	ug/L
CJ17885	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ17885	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ17885	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	600	20	5	5	ug/L
CJ17885	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ17885	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ17885	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CJ17885	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	340	20	5	5	ug/L
CJ17885	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	78	2.0	20	20	ug/L
CJ17885	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CJ17885	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	600	20	5	5	ug/L
CJ17885	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	2.0	2	2	ug/L
CJ17885	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	78	2.0	20	20	ug/L
CJ17885	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	600	20	5	5	ug/L
CJ17885	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	2.0	2	2	ug/L
CJ17885	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	340	20	50	50	ug/L
CJ17885	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	340	20	5	5	ug/L
CJ17885	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	600	20	5	5	ug/L
CJ17885	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CJ17885	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	130	2.0	2	2	ug/L
CJ17885	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	78	2.0	70	70	ug/L
CJ17885	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CJ17885	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	78	2.0	20	20	ug/L
CJ17885	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	130	2.0	2	2	ug/L
CJ17885	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	600	20	5	5	ug/L
CJ17885	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	340	20	50	50	ug/L
CJ17885	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	20	0.20	0.3	0.3	ug/l
CJ17885	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	0.20	0.3	0.3	ug/l
CJ17885	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	20	0.20	0.3	0.3	ug/l
CJ17885	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	0.3	0.3	ug/L
CJ17885	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED-WILMINGT	340	100	300	300	ug/L
CJ17885	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	340	100	300	300	ug/L
CJ17885	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	340	100	300	300	ug/L
CJ17886	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ17886	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ17886	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ17886	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ17886	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ17886	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ17886	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ17886	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ17882 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ17887	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ17887	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ17887	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ17887	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	690	20	20	20	ug/L
CJ17887	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	130	20	2	2	ug/L
CJ17887	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ17887	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ17887	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ17887	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ17887	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ17887	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ17887	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6200	100	5	5	ug/L
CJ17887	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	100	20	80	80	ug/L
CJ17887	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ17887	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6700	100	5	5	ug/L
CJ17887	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ17887	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	87	20	70	70	ug/L
CJ17887	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ17887	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ17887	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ17887	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ17887	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ17887	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ17887	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	87	20	70	70	ug/L
CJ17887	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6200	100	5	5	ug/L
CJ17887	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	20	7	7	ug/L
CJ17887	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	690	20	20	20	ug/L
CJ17887	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ17887	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ17882 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ17887	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ17887	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ17887	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ17887	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ17887	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ17887	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	20	2	2	ug/L
CJ17887	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	100	20	80	80	ug/L
CJ17887	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6700	100	5	5	ug/L
CJ17887	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	690	20	20	20	ug/L
CJ17887	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	20	2	2	ug/L
CJ17887	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ17887	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6700	100	5	5	ug/L
CJ17887	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ17887	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6200	100	50	50	ug/L
CJ17887	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ17887	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	100	20	80	80	ug/L
CJ17887	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ17887	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6700	100	5	5	ug/L
CJ17887	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ17887	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	6200	100	5	5	ug/L
CJ17887	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	690	20	70	70	ug/L
CJ17887	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	130	20	2	2	ug/L
CJ17887	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	26	20	7	7	ug/L
CJ17887	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ17887	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ17887	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ17887	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ17887	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	87	20	70	70	ug/L
CJ17887	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ17882 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ17887	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	130	20	2	2	ug/L
CJ17887	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ17887	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ17887	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	6200	100	50	50	ug/L
CJ17887	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ17887	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	690	20	20	20	ug/L
CJ17887	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ17887	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	100	20	80	80	ug/L
CJ17887	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ17887	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ17887	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6700	100	5	5	ug/L
CJ17887	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	6700	100	5000	5000	ug/L
CJ17887	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ17887	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ17887	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ17882, CJ17883, CJ17884, CJ17885, CJ17886, CJ17887

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: SVOASIM Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Friday, September 24, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ17882

SDG Comments

CJ17882 - The following analytes from the 6010 Metals list were not reported: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

CJ17885 - The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/07/21-1 Adam Werner, Chemist 09/07/21

CJ17884 (1X), CJ17885 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0907_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: Tetrahydrofuran (44)
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 590531 (CJ16600)

CJ17884, CJ17885

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

AU-FID4 09/08/21-1 Adam Werner, Chemist 09/08/21

CJ17885 (1X)

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MCP Certification Report

September 24, 2021

SDG I.D.: GCJ17882

EPH Narration

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 590929 (CJ16894)

CJ17885

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/07/21-1 Greg Danielewski, Chemist 09/07/21

CJ17882

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 590501 (CJ17687)

CJ17882

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 590833 (CJ17882)

CJ17882

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

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MCP Certification Report

September 24, 2021

SDG I.D.: GCJ17882

IC

IC 09/01/21-2

CJ17882

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 590381 (CJ17483)

CJ17882

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 590382 (CJ17825)

CJ17882

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/02/21 08:45 Emily Kolominskaya, Chemist 09/02/21

CJ17882, CJ17885

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/03/21 08:05 Cindy Pearce, Chemist 09/03/21

CJ17882, CJ17885

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 590228 (CJ17885)

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Certification Report

September 24, 2021

SDG I.D.: GCJ17882

ICP Metals Narration

CJ17882, CJ17885

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 590398 (CJ16627)

CJ17882, CJ17885

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 590241 (Samples: CJ17885): -----

The LCS/LCSD RPD exceeds the method criteria for one analyte, but this analyte was not reported in the sample(s). No significant variability is suspected. (Naphthalene)

Instrument:

CHEM27 09/02/21-1 Wes Bryon, Chemist 09/02/21

CJ17885 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0706):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/0902_03-27_BNSIM18_0706) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Benz(a)anthracene 27%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 590241 (CJ11320)

CJ17885

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Naphthalene(27.3%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid

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NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ17882

SVOASIM Narration

surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/07/21-2 Michael Hahn, Chemist 09/07/21

CJ17884 (100X), CJ17885 (20X), CJ17886 (1X), CJ17887 (100X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0907_17-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/09/21-1 Michael Hahn, Chemist 09/09/21

CJ17882 (1X), CJ17884 (20X), CJ17885 (2X), CJ17887 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0909_02-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.183 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/10/21-1 Michael Hahn, Chemist 09/10/21

CJ17883 (1X, 10X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.

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NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ17882

VOA Narration

The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0910_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.099 (0.1)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/13/21-1 Michael Hahn, Chemist 09/13/21

CJ17883 (100X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0913_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.193 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 590973 (CJ17886) CHEM23 9/7/2021-2

CJ17884(100X), CJ17885(20X), CJ17886(1X), CJ17887(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 591383 (CJ17882) CHEM23 9/9/2021-1

CJ17882(1X), CJ17884(20X), CJ17885(2X), CJ17887(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ17882

VOA Narration

The MS/MSD RPD criteria is listed above.

Batch 591823 (CJ22041) CHEM23 9/13/2021-1

CJ17883(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 591863 (CJ17883) CHEM23 9/10/2021-1

CJ17883(10X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/07/21-1 Raman Makol, Chemist 09/07/21

CJ17885 (1X)

Initial Calibration Evaluation (PIDFID/VPH_090221_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 590926 (CJ17860)

CJ17885(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

CHAIN OF CUSTODY RECORD

Temp 21 °C Pg of

PHOENIX *Environmental Laboratories, Inc.*

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5236
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Samplers Signature Date:

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
17882	21A-AE26R2-090121-1	GW	9/1/21	1000	3	1		4				X				X	X	X	X	X	Fe, Mn only for Metals
17883	21A-AE28R1-090121-1	GW	9/1/21	1010	3	~~1~~	~~1~~ 9/1/21					X	~~X~~	~~X~~	~~X~~ 9/1/21						VOCs only
17884	21A-AE28R3-090121-1	GW	9/1/21	1055	3	1						X	X								
17885	21A-AE26R1-090121-1	GW	9/1/21	1150	5	4		2				X	X	X	X	X	X				As only
17886	21A-TB01-090121-1	GW	9/1/21	0800	2							X									
17887	21A-AE28R4-090121-1	GW	9/1/21	1211	3							X									

Relinquished by:	Accepted by:	Date:	Time:
		9-1-21	14:05
		9/1/21	15:55

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Wednesday, September 29, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60552044.25**
SDG ID: **GCJ19155**
Sample ID#s: CJ19155 - CJ19181

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

September 29, 2021

SDG I.D.: GCJ19155

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver. 2:
This report has been revised to correct the method reference for MA VPH.

Ver. 3:
This report has been revised per client request to modify CJ19161 sample ID from 21A-AE109R7-090221-2 to 21A-AE109R2-090221-2.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

September 29, 2021

SDG I.D.: GCJ19155

Project ID: LOCKHEED-WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-AE109R2-090221-1	CJ19155	GROUND WATER
21A-AE109R3-090221-1	CJ19156	GROUND WATER
21A-AE109R4-090221-1	CJ19157	GROUND WATER
21A-AE109R5-090221-1	CJ19158	GROUND WATER
21A-AE109R6-090221-1	CJ19159	GROUND WATER
21A-AE109R7-090221-1	CJ19160	GROUND WATER
21A-AE109R2-090221-2	CJ19161	GROUND WATER
21A-AE109R8-090221-1	CJ19162	GROUND WATER
21A-AE110R1-090221-1	CJ19163	GROUND WATER
21A-AE110R2-090221-1	CJ19164	GROUND WATER
21A-AE110R3-090221-1	CJ19165	GROUND WATER
21A-AE110R4-090221-1	CJ19166	GROUND WATER
21A-AE26R3-090121-1	CJ19167	GROUND WATER
21A-AE26R4-090121-1	CJ19168	GROUND WATER
21A-AE26R5-090121-1	CJ19169	GROUND WATER
21A-AE28R2-090121-1	CJ19170	GROUND WATER
21A-TB02-090121-1	CJ19171	GROUND WATER
21A-AE104R1-090221-1	CJ19172	GROUND WATER
21A-AE104R2-090221-1	CJ19173	GROUND WATER
21A-AE104R3-090221-1	CJ19174	GROUND WATER
21A-AE104R4-090221-1	CJ19175	GROUND WATER
21A-AE104R5-090221-1	CJ19176	GROUND WATER
21A-AE104R6-090221-1	CJ19177	GROUND WATER
21A-AE109R1-090221-1	CJ19178	GROUND WATER
21A-AE110R5-090221-1	CJ19179	GROUND WATER
21A-AE110R6-090221-1	CJ19180	GROUND WATER
21A-AE110R7-090221-1	CJ19181	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19155

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE109R2-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/07/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19155

Client ID: 21A-AE109R2-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/07/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
cis-1,2-Dichloroethene	3.6	1.0	ug/L	1	09/07/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/07/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Trichloroethene	1.3	1.0	ug/L	1	09/07/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	09/07/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/07/21	MH	70 - 130 %
% Dibromofluoromethane	105		%	1	09/07/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/07/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/07/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)

Ver 3

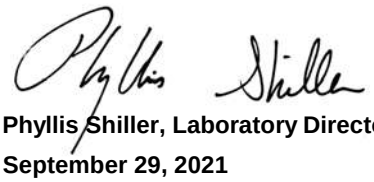
Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19155
Client ID: 21A-AE109R2-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	6.4	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	94		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19156

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE109R3-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/07/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19156

Client ID: 21A-AE109R3-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/07/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
cis-1,2-Dichloroethene	7.9	1.0	ug/L	1	09/07/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/07/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/07/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/07/21	MH	70 - 130 %
% Dibromofluoromethane	108		%	1	09/07/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/07/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/07/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19156

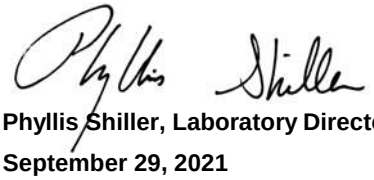
Client ID: 21A-AE109R3-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 29, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19157

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE109R4-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloroethane	2.5	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/07/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/07/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19157

Client ID: 21A-AE109R4-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/07/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
cis-1,2-Dichloroethene	140	5.0	ug/L	5	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/07/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/07/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/07/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
trans-1,2-Dichloroethene	2.3	1.0	ug/L	1	09/07/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/07/21	MH	SW8260C
Trichloroethene	10	1.0	ug/L	1	09/07/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/07/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/07/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/07/21	MH	70 - 130 %
% Dibromofluoromethane	108		%	1	09/07/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/07/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	104		%	5	09/08/21	MH	70 - 130 %
% Bromofluorobenzene (5x)	95		%	5	09/08/21	MH	70 - 130 %
% Dibromofluoromethane (5x)	110		%	5	09/08/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (5x)	100		%	5	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/07/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/07/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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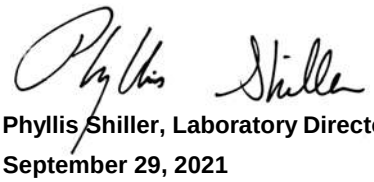


Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19158

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE109R5-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/03/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/03/21	EK	SW6010D
EPH Extraction	Completed				09/08/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/02/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/03/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/02/21	AG	SW3005A
Total Metals Digestion	Completed				09/02/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/07/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloroethane	7.0	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloroethene	1.4	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19158

Client ID: 21A-AE109R5-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/10/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/10/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
cis-1,2-Dichloroethene	170	20	ug/L	20	09/07/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Tetrachloroethene	44	1.0	ug/L	1	09/10/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/10/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
trans-1,2-Dichloroethene	2.8	1.0	ug/L	1	09/10/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Trichloroethene	240	20	ug/L	20	09/07/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	1.3	1.0	ug/L	1	09/10/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	09/10/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/10/21	MH	70 - 130 %
% Dibromofluoromethane	105		%	1	09/10/21	MH	70 - 130 %
% Toluene-d8	97		%	1	09/10/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	105		%	20	09/07/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	09/07/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	112		%	20	09/07/21	MH	70 - 130 %
% Toluene-d8 (20x)	99		%	20	09/07/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/10/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/07/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/07/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/07/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/07/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/07/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/07/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/07/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/07/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	68		%	1	09/07/21	WB	40 - 140 %
% Nitrobenzene-d5	64		%	1	09/07/21	WB	40 - 140 %
% Terphenyl-d14	84		%	1	09/07/21	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	73		%	1	09/09/21	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 2-Bromonaphthalene (Fractionation)	100		%	1	09/09/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	102		%	1	09/09/21	AW	40 - 140 %
% o-terphenyl (aromatic)	95		%	1	09/09/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	160	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	160	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	90		%	1	09/07/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	86		%	1	09/07/21	RM	70 - 130 %

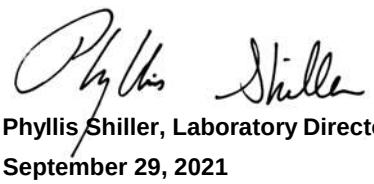
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19159

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE109R6-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloroethane	6.1	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloroethene	1.4	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/10/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/10/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
cis-1,2-Dichloroethene	170	20	ug/L	20	09/07/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Tetrachloroethene	6.1	1.0	ug/L	1	09/10/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/10/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
trans-1,2-Dichloroethene	3.3	1.0	ug/L	1	09/10/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Trichloroethene	110	20	ug/L	20	09/07/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Vinyl chloride	6.2	1.0	ug/L	1	09/10/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	09/10/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/10/21	MH	70 - 130 %
% Dibromofluoromethane	107		%	1	09/10/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/10/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	106		%	20	09/07/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	94		%	20	09/07/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	112		%	20	09/07/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	100		%	20	09/07/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/10/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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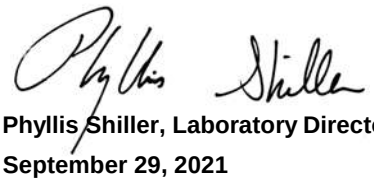

Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19160

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE109R7-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethane	2.3	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/08/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19160

Client ID: 21A-AE109R7-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/08/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,2-Dichloroethene	66	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/08/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,2-Dichloroethene	1.6	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Trichloroethene	3.6	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Vinyl chloride	3.8	1.0	ug/L	1	09/08/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/08/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/08/21	MH	70 - 130 %
% Dibromofluoromethane	109		%	1	09/08/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/08/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19160
Client ID: 21A-AE109R7-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	1.5	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	90		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19161

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE109R2-090221-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/08/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19161

Client ID: 21A-AE109R2-090221-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/08/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,2-Dichloroethene	3.8	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/08/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Trichloroethene	1.2	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/08/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/08/21	MH	70 - 130 %
% Dibromofluoromethane	110		%	1	09/08/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/08/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

Ver 3

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	6.8	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	97		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19162

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE109R8-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/08/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/08/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,2-Dichloroethene	4.9	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/08/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Trichloroethene	1.9	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/08/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/08/21	MH	70 - 130 %
% Dibromofluoromethane	111		%	1	09/08/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/08/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

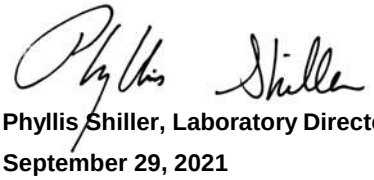
Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19162
Client ID: 21A-AE109R8-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19163

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE110R1-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19163

Client ID: 21A-AE110R1-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	5.1	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	117		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19163
Client ID: 21A-AE110R1-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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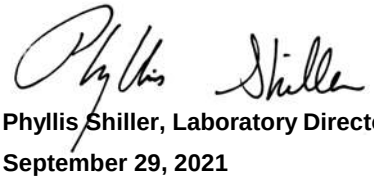

Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19164

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE110R2-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/08/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19164

Client ID: 21A-AE110R2-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/08/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/08/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	107		%	1	09/08/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/08/21	MH	70 - 130 %
% Dibromofluoromethane	117		%	1	09/08/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/08/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19164
Client ID: 21A-AE110R2-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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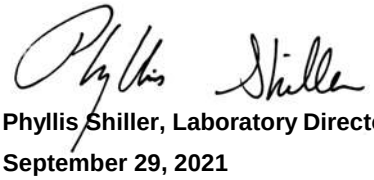


Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19165

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE110R3-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/10/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/10/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/10/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/10/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/10/21	MH	70 - 130 %
% Dibromofluoromethane	109		%	1	09/10/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/10/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/10/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)

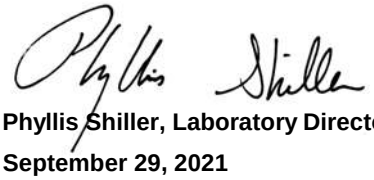
Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19165
Client ID: 21A-AE110R3-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19166

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE110R4-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/08/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19166

Client ID: 21A-AE110R4-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/08/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/08/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/08/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/08/21	MH	70 - 130 %
% Dibromofluoromethane	111		%	1	09/08/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/08/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19166
Client ID: 21A-AE110R4-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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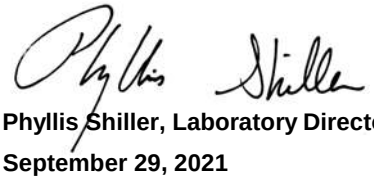

Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	13:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19167

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE26R3-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloroethane	24	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloroethene	2.9	1.0	ug/L	1	09/10/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/10/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/10/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19167

Client ID: 21A-AE26R3-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/10/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
cis-1,2-Dichloroethene	73	1.0	ug/L	1	09/10/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/10/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/10/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Tetrachloroethene	3.4	1.0	ug/L	1	09/10/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/10/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
trans-1,2-Dichloroethene	11	1.0	ug/L	1	09/10/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/10/21	MH	SW8260C
Trichloroethene	63	1.0	ug/L	1	09/10/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/10/21	MH	SW8260C
Vinyl chloride	98	1.0	ug/L	1	09/10/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	09/10/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/10/21	MH	70 - 130 %
% Dibromofluoromethane	109		%	1	09/10/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/10/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/10/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19167

Client ID: 21A-AE26R3-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/10/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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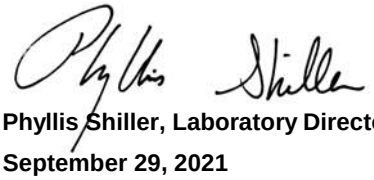

Phyllis Shiller, Laboratory Director

September 29, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	14:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19168

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE26R4-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	09/10/21	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,1-Dichloroethane	26	2.0	ug/L	2	09/10/21	MH	SW8260C
1,1-Dichloroethene	6.0	2.0	ug/L	2	09/10/21	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	2	09/10/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	09/10/21	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	09/10/21	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	09/10/21	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	09/10/21	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	09/10/21	MH	SW8260C
Acetone	ND	50	ug/L	2	09/10/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	09/10/21	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	09/10/21	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	09/10/21	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
cis-1,2-Dichloroethene	430	20	ug/L	20	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	09/10/21	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	09/10/21	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	09/10/21	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	09/10/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Styrene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Tetrachloroethene	440	20	ug/L	20	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	09/10/21	MH	SW8260C
Toluene	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
trans-1,2-Dichloroethene	68	2.0	ug/L	2	09/10/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	09/10/21	MH	SW8260C
Trichloroethene	530	20	ug/L	20	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	09/10/21	MH	SW8260C
Vinyl chloride	140	2.0	ug/L	2	09/10/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	105		%	2	09/10/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	92		%	2	09/10/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	109		%	2	09/10/21	MH	70 - 130 %
% Toluene-d8 (2x)	96		%	2	09/10/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	108		%	20	09/08/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	94		%	20	09/08/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	115		%	20	09/08/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19168
Client ID: 21A-AE26R4-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	97		%	20	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	2	09/10/21	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	09/10/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	09/10/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	09/10/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	09/10/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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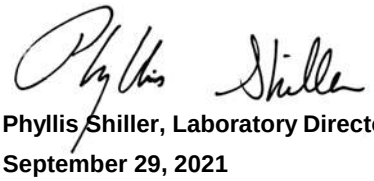

Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	15:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19169

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE26R5-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,1-Dichloroethane	44	10	ug/L	10	09/10/21	MH	SW8260C
1,1-Dichloroethene	11	10	ug/L	10	09/10/21	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/10/21	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/10/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/10/21	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/10/21	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/10/21	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/10/21	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/10/21	MH	SW8260C
Acetone	ND	250	ug/L	10	09/10/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/10/21	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/10/21	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/10/21	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
cis-1,2-Dichloroethene	340	10	ug/L	10	09/10/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/10/21	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/10/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/10/21	MH	SW8260C
Methylene chloride	ND	50	ug/L	10	09/10/21	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/10/21	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/10/21	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/10/21	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Styrene	ND	10	ug/L	10	09/10/21	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/10/21	MH	SW8260C
Tetrachloroethene	1300	20	ug/L	20	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/10/21	MH	SW8260C
Toluene	ND	10	ug/L	10	09/10/21	MH	SW8260C
trans-1,2-Dichloroethene	27	10	ug/L	10	09/10/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/10/21	MH	SW8260C
Trichloroethene	1600	20	ug/L	20	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/10/21	MH	SW8260C
Vinyl chloride	32	10	ug/L	10	09/10/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	106		%	10	09/10/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	93		%	10	09/10/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	110		%	10	09/10/21	MH	70 - 130 %
% Toluene-d8 (10x)	96		%	10	09/10/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	105		%	20	09/08/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	92		%	20	09/08/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	112		%	20	09/08/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19169
Client ID: 21A-AE26R5-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	96		%	20	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1000	ug/L	10	09/10/21	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/10/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/10/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/10/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/10/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	28	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	91		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	14:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19170

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE28R2-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/03/21	EK	SW6010D
Arsenic (Dissolved)	0.005	0.004	mg/L	1	09/03/21	EK	SW6010D
Iron (Dissolved)	1.09	0.011	mg/L	1	09/03/21	EK	SW6010D
Manganese (Dissolved)	2.11	0.011	mg/L	10	09/07/21	EK	SW6010D
Iron	1.04	0.010	mg/L	1	09/03/21	EK	SW6010D
Manganese	2.21	0.010	mg/L	10	09/07/21	CPP	SW6010D
Chloride	458	50.0	mg/L	10	09/03/21	BS/EG	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/03/21 03:15	BS/EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/02/21 23:24	BS/EG	E300.0
Sulfate	37.0	5.0	mg/L	1	09/02/21	BS/EG	E300.0
Sulfide	0.42	0.05	mg/L	1	09/08/21	GD	SM4500S-D-11
Total Organic Carbon	1.7	1.0	mg/L	1	09/07/21	BJA	SM5310B-11
EPH Extraction	Completed				09/08/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/02/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/03/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/02/21	AG	SW3005A
Total Metals Digestion	Completed				09/02/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/08/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	50	ug/L	100	09/07/21	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	09/07/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	50	ug/L	100	09/07/21	MH	SW8260C
1,1,2-Trichloroethane	ND	50	ug/L	100	09/07/21	MH	SW8260C
1,1-Dichloroethane	160	100	ug/L	100	09/07/21	MH	SW8260C
1,1-Dichloroethene	56	50	ug/L	100	09/07/21	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	09/07/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,3-Trichlorobenzene	ND	50	ug/L	100	09/07/21	MH	SW8260C
1,2,3-Trichloropropane	ND	50	ug/L	100	09/07/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	09/07/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	09/07/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	09/07/21	MH	SW8260C
1,2-Dibromoethane	ND	50	ug/L	100	09/07/21	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	09/07/21	MH	SW8260C
1,2-Dichloroethane	ND	50	ug/L	100	09/07/21	MH	SW8260C
1,2-Dichloropropane	ND	50	ug/L	100	09/07/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	09/07/21	MH	SW8260C
1,3-Dichlorobenzene	ND	100	ug/L	100	09/07/21	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	09/07/21	MH	SW8260C
1,4-Dichlorobenzene	ND	50	ug/L	100	09/07/21	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	09/07/21	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	09/07/21	MH	SW8260C
2-Hexanone	ND	500	ug/L	100	09/07/21	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	09/07/21	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	100	09/07/21	MH	SW8260C
Acetone	ND	2500	ug/L	100	09/07/21	MH	SW8260C
Benzene	ND	50	ug/L	100	09/07/21	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	09/07/21	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	09/07/21	MH	SW8260C
Bromodichloromethane	ND	50	ug/L	100	09/07/21	MH	SW8260C
Bromoform	ND	50	ug/L	100	09/07/21	MH	SW8260C
Bromomethane	ND	50	ug/L	100	09/07/21	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	09/07/21	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	100	09/07/21	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	09/07/21	MH	SW8260C
Chloroethane	ND	100	ug/L	100	09/07/21	MH	SW8260C
Chloroform	ND	50	ug/L	100	09/07/21	MH	SW8260C
Chloromethane	ND	100	ug/L	100	09/07/21	MH	SW8260C
cis-1,2-Dichloroethene	1600	100	ug/L	100	09/07/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	50	ug/L	100	09/07/21	MH	SW8260C
Dibromochloromethane	ND	50	ug/L	100	09/07/21	MH	SW8260C
Dibromomethane	ND	50	ug/L	100	09/07/21	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	09/07/21	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	09/07/21	MH	SW8260C
Hexachlorobutadiene	ND	50	ug/L	100	09/07/21	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	09/07/21	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	09/07/21	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	100	09/07/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	09/07/21	MH	SW8260C
Methylene chloride	ND	500	ug/L	100	09/07/21	MH	SW8260C
Naphthalene	ND	100	ug/L	100	09/07/21	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	09/07/21	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	09/07/21	MH	SW8260C
o-Xylene	ND	100	ug/L	100	09/07/21	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	09/07/21	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	09/07/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Styrene	ND	100	ug/L	100	09/07/21	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	09/07/21	MH	SW8260C
Tetrachloroethene	20000	500	ug/L	500	09/10/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	09/07/21	MH	SW8260C
Toluene	ND	100	ug/L	100	09/07/21	MH	SW8260C
trans-1,2-Dichloroethene	250	100	ug/L	100	09/07/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	50	ug/L	100	09/07/21	MH	SW8260C
Trichloroethene	19000	500	ug/L	500	09/10/21	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	09/07/21	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	09/07/21	MH	SW8260C
Vinyl chloride	180	100	ug/L	100	09/07/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	09/07/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	93		%	100	09/07/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	115		%	100	09/07/21	MH	70 - 130 %
% Toluene-d8 (100x)	94		%	100	09/07/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	105		%	500	09/10/21	MH	70 - 130 %
% Bromofluorobenzene (500x)	93		%	500	09/10/21	MH	70 - 130 %
% Dibromofluoromethane (500x)	111		%	500	09/10/21	MH	70 - 130 %
% Toluene-d8 (500x)	97		%	500	09/10/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	10000	ug/L	100	09/07/21	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	09/07/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	100	ug/L	100	09/07/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	09/07/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	09/07/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/07/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/07/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/07/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/07/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/07/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Naphthalene	0.93	0.47	ug/L	1	09/07/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/07/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/07/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	68		%	1	09/07/21	WB	40 - 140 %
% Nitrobenzene-d5	72		%	1	09/07/21	WB	40 - 140 %
% Terphenyl-d14	81		%	1	09/07/21	WB	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,4-dioxane							
1,4-dioxane	48	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	76		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	96		%	1	09/09/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	97		%	1	09/09/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	106		%	1	09/09/21	AW	40 - 140 %
% o-terphenyl (aromatic)	91		%	1	09/09/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	11000	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	110	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	11000	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Ethyl Benzene	5.6	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Toluene	11	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
m,p-Xylenes	5.9	2.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	87		%	1	09/08/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	85		%	1	09/08/21	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

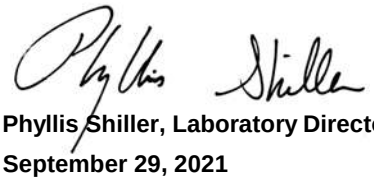
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/01/21	8:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19171

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-TB02-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/08/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19171

Client ID: 21A-TB02-090121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/08/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/08/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	09/08/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/08/21	MH	70 - 130 %
% Dibromofluoromethane	116		%	1	09/08/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/08/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19171

Client ID: 21A-TB02-090121-1

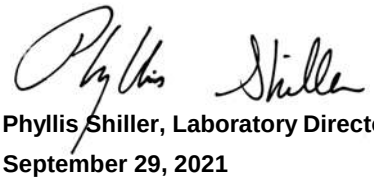
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 29, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	13:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19172

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE104R1-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/10/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,1-Dichloroethane	49	5.0	ug/L	5	09/10/21	MH	SW8260C
1,1-Dichloroethene	10	5.0	ug/L	5	09/10/21	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/10/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/10/21	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/10/21	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/10/21	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/10/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/10/21	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/10/21	MH	SW8260C
Acetone	ND	130	ug/L	5	09/10/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19172

Client ID: 21A-AE104R1-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	09/10/21	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/10/21	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/10/21	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/10/21	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/10/21	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
cis-1,2-Dichloroethene	170	5.0	ug/L	5	09/10/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/10/21	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/10/21	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/10/21	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/10/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Tetrachloroethene	410	20	ug/L	20	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/10/21	MH	SW8260C
Toluene	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
trans-1,2-Dichloroethene	6.1	5.0	ug/L	5	09/10/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/10/21	MH	SW8260C
Trichloroethene	1200	20	ug/L	20	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/10/21	MH	SW8260C
Vinyl chloride	18	5.0	ug/L	5	09/10/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	106		%	5	09/10/21	MH	70 - 130 %
% Bromofluorobenzene (5x)	92		%	5	09/10/21	MH	70 - 130 %
% Dibromofluoromethane (5x)	108		%	5	09/10/21	MH	70 - 130 %
% Toluene-d8 (5x)	95		%	5	09/10/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	107		%	20	09/08/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	09/08/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	116		%	20	09/08/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19172
Client ID: 21A-AE104R1-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	96		%	20	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	09/10/21	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/10/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	09/10/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/10/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/10/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	14	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	94		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	13:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19173

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE104R2-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,1-Dichloroethane	45	10	ug/L	10	09/11/21	MH	SW8260C
1,1-Dichloroethene	8.6	7.0	ug/L	10	09/11/21	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/11/21	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/11/21	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/11/21	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/11/21	MH	SW8260C
Acetone	ND	250	ug/L	10	09/11/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19173

Client ID: 21A-AE104R2-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/11/21	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/11/21	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/11/21	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
cis-1,2-Dichloroethene	270	10	ug/L	10	09/11/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/11/21	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/11/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/11/21	MH	SW8260C
Methylene chloride	ND	50	ug/L	10	09/11/21	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/11/21	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/11/21	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Styrene	ND	10	ug/L	10	09/11/21	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Tetrachloroethene	290	10	ug/L	10	09/11/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/11/21	MH	SW8260C
Toluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	09/11/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Trichloroethene	1600	20	ug/L	20	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Vinyl chloride	26	10	ug/L	10	09/11/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	105		%	10	09/11/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	93		%	10	09/11/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	116		%	10	09/11/21	MH	70 - 130 %
% Toluene-d8 (10x)	97		%	10	09/11/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	107		%	20	09/08/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	92		%	20	09/08/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	112		%	20	09/08/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19173
Client ID: 21A-AE104R2-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	94		%	20	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1000	ug/L	10	09/11/21	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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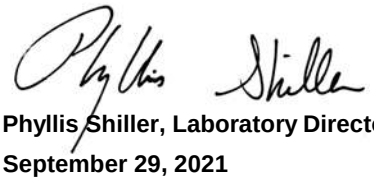

Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	13:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19174

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE104R3-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,1-Dichloroethane	49	10	ug/L	10	09/11/21	MH	SW8260C
1,1-Dichloroethene	12	10	ug/L	10	09/11/21	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/11/21	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/11/21	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/11/21	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/11/21	MH	SW8260C
Acetone	ND	250	ug/L	10	09/11/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19174

Client ID: 21A-AE104R3-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/11/21	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/11/21	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/11/21	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
cis-1,2-Dichloroethene	150	10	ug/L	10	09/11/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/11/21	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/11/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/11/21	MH	SW8260C
Methylene chloride	ND	50	ug/L	10	09/11/21	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/11/21	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/11/21	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Styrene	ND	10	ug/L	10	09/11/21	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Tetrachloroethene	1600	50	ug/L	50	09/11/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/11/21	MH	SW8260C
Toluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	09/11/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Trichloroethene	2800	50	ug/L	50	09/11/21	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Vinyl chloride	6.3	5.0	ug/L	10	09/11/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	106		%	10	09/11/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	92		%	10	09/11/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	117		%	10	09/11/21	MH	70 - 130 %
% Toluene-d8 (10x)	96		%	10	09/11/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	105		%	50	09/11/21	MH	70 - 130 %
% Bromofluorobenzene (50x)	93		%	50	09/11/21	MH	70 - 130 %
% Dibromofluoromethane (50x)	115		%	50	09/11/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19174
Client ID: 21A-AE104R3-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (50x)	97		%	50	09/11/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1000	ug/L	10	09/11/21	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	14	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	98		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19175

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE104R4-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/08/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/02/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/03/21	P/D	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/07/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,1-Dichloroethane	69	20	ug/L	20	09/08/21	MH	SW8260C
1,1-Dichloroethene	15	10	ug/L	20	09/08/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/08/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/08/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19175

Client ID: 21A-AE104R4-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	20	ug/L	20	09/08/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/08/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/08/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/08/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/08/21	MH	SW8260C
Benzene	ND	10	ug/L	20	09/08/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/08/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/08/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/08/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/08/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
cis-1,2-Dichloroethene	430	20	ug/L	20	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/08/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/08/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/08/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/08/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/08/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/08/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/08/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/08/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/08/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Tetrachloroethene	1500	20	ug/L	20	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/08/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/08/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/08/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/08/21	MH	SW8260C
Trichloroethene	3400	100	ug/L	100	09/11/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
Vinyl chloride	27	20	ug/L	20	09/08/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	108		%	20	09/08/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	92		%	20	09/08/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (20x)	115		%	20	09/08/21	MH	70 - 130 %
% Toluene-d8 (20x)	94		%	20	09/08/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	09/11/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	94		%	100	09/11/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	115		%	100	09/11/21	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	09/11/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/08/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/08/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/08/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/08/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/08/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.48	ug/L	1	09/07/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	09/07/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/07/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/07/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/07/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/07/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/07/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	09/07/21	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/07/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/07/21	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	09/07/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	09/07/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/07/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	09/07/21	WB	40 - 140 %
% Nitrobenzene-d5	60		%	1	09/07/21	WB	40 - 140 %
% Terphenyl-d14	78		%	1	09/07/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	22	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	92		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/09/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/09/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/09/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/09/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/09/21	AW	MAEPH 5/2019

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19175
Client ID: 21A-AE104R4-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	73		%	1	09/09/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	110		%	1	09/09/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	99		%	1	09/09/21	AW	40 - 140 %
% o-terphenyl (aromatic)	94		%	1	09/09/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	1600	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	1600	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	92		%	1	09/07/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	87		%	1	09/07/21	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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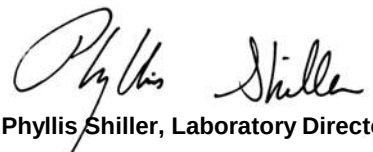

Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19176

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE104R5-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,1-Dichloroethane	71	20	ug/L	20	09/08/21	MH	SW8260C
1,1-Dichloroethene	18	10	ug/L	20	09/08/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/08/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/08/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/08/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/08/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/08/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/08/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/08/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/08/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/08/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19176

Client ID: 21A-AE104R5-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/08/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/08/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/08/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/08/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/08/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
cis-1,2-Dichloroethene	500	20	ug/L	20	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/08/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/08/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/08/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/08/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/08/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/08/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/08/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/08/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/08/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/08/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/08/21	MH	SW8260C
Tetrachloroethene	1300	200	ug/L	200	09/11/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/08/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/08/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/08/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/08/21	MH	SW8260C
Trichloroethene	2700	200	ug/L	200	09/11/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/08/21	MH	SW8260C
Vinyl chloride	43	20	ug/L	20	09/08/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	106		%	20	09/08/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	92		%	20	09/08/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	115		%	20	09/08/21	MH	70 - 130 %
% Toluene-d8 (20x)	93		%	20	09/08/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	105		%	200	09/11/21	MH	70 - 130 %
% Bromofluorobenzene (200x)	94		%	200	09/11/21	MH	70 - 130 %
% Dibromofluoromethane (200x)	116		%	200	09/11/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19176
Client ID: 21A-AE104R5-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	99		%	200	09/11/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/08/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/08/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/08/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/08/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/08/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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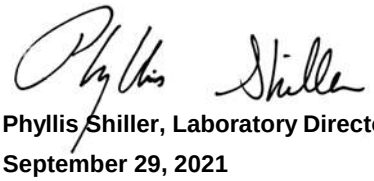

Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19177

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE104R6-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,1-Dichloroethane	57	10	ug/L	10	09/11/21	MH	SW8260C
1,1-Dichloroethene	11	10	ug/L	10	09/11/21	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/11/21	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/11/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/11/21	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/11/21	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/11/21	MH	SW8260C
Acetone	ND	250	ug/L	10	09/11/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19177

Client ID: 21A-AE104R6-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/11/21	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/11/21	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/11/21	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
cis-1,2-Dichloroethene	330	10	ug/L	10	09/11/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/11/21	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/11/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/11/21	MH	SW8260C
Methylene chloride	ND	50	ug/L	10	09/11/21	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/11/21	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/11/21	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Styrene	ND	10	ug/L	10	09/11/21	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/11/21	MH	SW8260C
Tetrachloroethene	1300	100	ug/L	100	09/11/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/11/21	MH	SW8260C
Toluene	ND	10	ug/L	10	09/11/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	09/11/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/11/21	MH	SW8260C
Trichloroethene	2800	100	ug/L	100	09/11/21	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/11/21	MH	SW8260C
Vinyl chloride	20	10	ug/L	10	09/11/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	106		%	10	09/11/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	93		%	10	09/11/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	118		%	10	09/11/21	MH	70 - 130 %
% Toluene-d8 (10x)	96		%	10	09/11/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	106		%	100	09/11/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	94		%	100	09/11/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	116		%	100	09/11/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19177
Client ID: 21A-AE104R6-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	98		%	100	09/11/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1000	ug/L	10	09/11/21	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/11/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	21	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	97		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	13:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19178

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE109R1-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/08/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/08/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19178

Client ID: 21A-AE109R1-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/08/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,2-Dichloroethene	2.4	1.0	ug/L	1	09/08/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/08/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/08/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/08/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/08/21	MH	SW8260C
Trichloroethene	1.1	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/08/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	107		%	1	09/08/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/08/21	MH	70 - 130 %
% Dibromofluoromethane	113		%	1	09/08/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/08/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/08/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

Ver 3

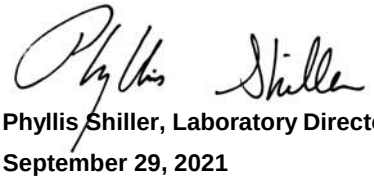
Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19178
Client ID: 21A-AE109R1-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/08/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19179

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE110R5-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19179

Client ID: 21A-AE110R5-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/14/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
cis-1,2-Dichloroethene	1.6	1.0	ug/L	1	09/14/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	09/14/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/14/21	MH	70 - 130 %
% Dibromofluoromethane	107		%	1	09/14/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/14/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19179

Client ID: 21A-AE110R5-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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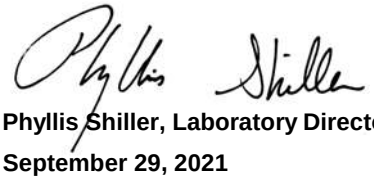


Phyllis Shiller, Laboratory Director

September 29, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19180

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE110R6-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19180

Client ID: 21A-AE110R6-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/14/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
cis-1,2-Dichloroethene	1.8	1.0	ug/L	1	09/14/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/14/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/14/21	MH	70 - 130 %
% Dibromofluoromethane	107		%	1	09/14/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/14/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)

Ver 3

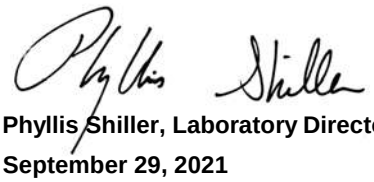
Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19180
Client ID: 21A-AE110R6-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	1.4	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	91		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 29, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 29, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/02/21	14:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/02/21	16:46
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ19155
Phoenix ID: CJ19181

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE110R7-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/11/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19181

Client ID: 21A-AE110R7-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/11/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
cis-1,2-Dichloroethene	1.7	1.0	ug/L	1	09/11/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/11/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	107		%	1	09/11/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/11/21	MH	70 - 130 %
% Dibromofluoromethane	119		%	1	09/11/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/11/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/11/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ19181

Client ID: 21A-AE110R7-090221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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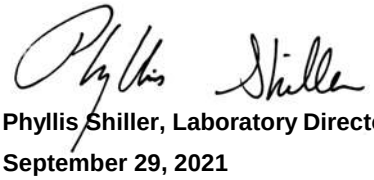

Phyllis Shiller, Laboratory Director

September 29, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 29, 2021

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 590419 (mg/L), QC Sample No: CJ19110 (CJ19158, CJ19170)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	102	100	2.0	101			80 - 120	20
Iron	BRL	0.010	0.159	0.158	0.60	102	101	1.0	99.1			80 - 120	20
Manganese	BRL	0.001	0.563	0.559	0.70	103	101	2.0	97.6			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 590400 (mg/L), QC Sample No: CJ19170 (CJ19158, CJ19170)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.005	<0.004	NC	99.9	96.5	3.5	97.7			80 - 120	20
Iron	BRL	0.011	1.09	1.08	0.90	98.2	95.0	3.3	92.5			80 - 120	20
Manganese	BRL	0.001	2.11	2.42	13.7	96.5	95.0	1.6	106			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

September 29, 2021

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 590972 (mg/L), QC Sample No: CJ17820 (CJ19170)													
Sulfide	BRL	0.05	0.16	0.16	NC	93.9			91.8			90 - 110	20
QA/QC Batch 590916 (mg/L), QC Sample No: CJ20115 (CJ19170)													
Total Organic Carbon	BRL	1.0	1.8	1.8	NC	93.0			97.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 590564 (mg/L), QC Sample No: CJ19289 (CJ19170)													
Chloride	BRL	5.0	<5.0	<5.0	NC	92.5			99.9			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.11	0.12	NC	93.5			98.1			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	93.8			97.6			90 - 110	20
Sulfate	BRL	5.0	<5.0	<5.0	NC	93.1			100			90 - 110	20

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QA/QC Report

September 29, 2021

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 590939 (ug/l), QC Sample No: CJ19155 (CJ19155, CJ19160, CJ19161, CJ19169, CJ19170, CJ19172, CJ19174, CJ19175, CJ19177, CJ19180)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	88	94	6.6	96			70 - 130	20	
% 1,4-dioxane-d8	87	%	98	97	1.0	101			70 - 130	20	
QA/QC Batch 590929 (ug/L), QC Sample No: CJ16894 (CJ19158, CJ19170, CJ19175)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	68	71	4.3				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	102	111	8.5				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	107	104	2.8				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	87	94	7.7				40 - 140	25	
C9 - Nonane	ND	10	45	43	4.5				40 - 140	25	
C-10 Decane	ND	10	58	59	1.7				40 - 140	25	
C12 - Dodecane	ND	10	58	62	6.7				40 - 140	25	
C14 - Tetradecane	ND	10	70	75	6.9				40 - 140	25	
C16 - Hexadecane	ND	10	78	85	8.6				40 - 140	25	
C18 - Octadecane	ND	10	97	104	7.0				40 - 140	25	
C19 - Nonadecane	ND	10	96	103	7.0				40 - 140	25	
C20 - Eicosane	ND	10	96	103	7.0				40 - 140	25	
C22 - Docosane	ND	10	99	106	6.8				40 - 140	25	
C24 - Tetracosane	ND	10	103	110	6.6				40 - 140	25	
C26 - Hexacosane	ND	10	102	110	7.5				40 - 140	25	
C28 - Octacosane	ND	10	105	114	8.2				40 - 140	25	
C30 - Tricotane	ND	10	102	112	9.3				40 - 140	25	
C36 - Hexatriacontane	ND	10	111	128	14.2				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	91	%	94	102	8.2				40 - 140	25	
% o-terphenyl (aromatic)	94	%	95	93	2.1				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	96	%	105	98	6.9				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	108	%	116	108	7.1				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 590599 (ug/L), QC Sample No: CJ19087 (CJ19158, CJ19170, CJ19175)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	73	65	11.6				40 - 140	20	
Acenaphthene	ND	0.50	76	81	6.4				40 - 140	20	
Acenaphthylene	ND	0.10	35	76	73.9				40 - 140	20	l,r
Anthracene	ND	0.10	79	85	7.3				40 - 140	20	
Benz(a)anthracene	ND	0.02	69	76	9.7				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(a)pyrene	ND	0.02	65	86	27.8				40 - 140	20	r
Benzo(b)fluoranthene	ND	0.02	85	88	3.5				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	77	86	11.0				40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	77	85	9.9				40 - 140	20	
Chrysene	ND	0.02	84	88	4.7				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	89	95	6.5				40 - 140	20	
Fluoranthene	ND	0.50	85	90	5.7				40 - 140	20	
Fluorene	ND	0.10	82	84	2.4				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	86	96	11.0				40 - 140	20	
Naphthalene	ND	0.50	73	65	11.6				40 - 140	20	
Phenanthrene	ND	0.06	72	75	4.1				40 - 140	20	
Pyrene	ND	0.07	78	92	16.5				40 - 140	20	
% 2-Fluorobiphenyl	66	%	73	68	7.1				40 - 140	20	
% Nitrobenzene-d5	54	%	58	67	14.4				40 - 140	20	
% Terphenyl-d14	85	%	85	86	1.2				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 591863 (ug/L), QC Sample No: CJ17883 (CJ19158, CJ19159, CJ19165, CJ19167, CJ19168 (2X) , CJ19169 (10X) , CJ19170 (500X) , CJ19172 (5X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	103	99	4.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	103	101	2.0				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	102	101	1.0				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	102	102	0.0				70 - 130	20	
1,1-Dichloroethane	ND	1.0	100	99	1.0				70 - 130	20	
1,1-Dichloroethene	ND	1.0	100	97	3.0				70 - 130	20	
1,1-Dichloropropene	ND	1.0	115	109	5.4				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	110	111	0.9				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	96	104	8.0				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	108	109	0.9				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	116	117	0.9				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	105	106	0.9				70 - 130	20	
1,2-Dibromoethane	ND	1.0	104	102	1.9				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	100	102	2.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	98	95	3.1				70 - 130	20	
1,2-Dichloropropane	ND	1.0	99	98	1.0				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	116	116	0.0				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	107	107	0.0				70 - 130	20	
1,3-Dichloropropane	ND	1.0	104	102	1.9				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	98	100	2.0				70 - 130	20	
1,4-dioxane	ND	100	93	93	0.0				40 - 160	20	
2,2-Dichloropropane	ND	1.0	107	103	3.8				70 - 130	20	
2-Chlorotoluene	ND	1.0	111	111	0.0				70 - 130	20	
2-Hexanone	ND	5.0	93	90	3.3				40 - 160	20	
4-Chlorotoluene	ND	1.0	109	110	0.9				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	94	91	3.2				40 - 160	20	
Acetone	ND	5.0	86	87	1.2				40 - 160	20	
Benzene	ND	0.70	104	103	1.0				70 - 130	20	
Bromobenzene	ND	1.0	102	104	1.9				70 - 130	20	
Bromochloromethane	ND	1.0	99	101	2.0				70 - 130	20	
Bromodichloromethane	ND	0.50	100	97	3.0				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromoform	ND	1.0	101	99	2.0				70 - 130	20
Bromomethane	ND	1.0	96	94	2.1				40 - 160	20
Carbon Disulfide	ND	1.0	95	92	3.2				70 - 130	20
Carbon tetrachloride	ND	1.0	109	107	1.9				70 - 130	20
Chlorobenzene	ND	1.0	101	99	2.0				70 - 130	20
Chloroethane	ND	1.0	102	100	2.0				70 - 130	20
Chloroform	ND	1.0	93	95	2.1				70 - 130	20
Chloromethane	ND	1.0	102	98	4.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	97	4.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	106	104	1.9				70 - 130	20
Dibromochloromethane	ND	0.50	101	99	2.0				70 - 130	20
Dibromomethane	ND	1.0	100	99	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	129	123	4.8				40 - 160	20
Di-isopropyl ether	ND	1.0	99	101	2.0				70 - 130	20
Ethyl ether	ND	1.0	82	83	1.2				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	103	104	1.0				70 - 130	20
Ethylbenzene	ND	1.0	105	103	1.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	98	98	0.0				70 - 130	20
Isopropylbenzene	ND	1.0	123	120	2.5				70 - 130	20
m&p-Xylene	ND	1.0	110	107	2.8				70 - 130	20
Methyl ethyl ketone	ND	5.0	88	88	0.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	97	97	0.0				70 - 130	20
Methylene chloride	ND	1.0	92	92	0.0				70 - 130	20
Naphthalene	ND	1.0	117	117	0.0				70 - 130	20
n-Butylbenzene	ND	1.0	121	120	0.8				70 - 130	20
n-Propylbenzene	ND	1.0	115	114	0.9				70 - 130	20
o-Xylene	ND	1.0	111	109	1.8				70 - 130	20
p-Isopropyltoluene	ND	1.0	122	121	0.8				70 - 130	20
sec-Butylbenzene	ND	1.0	123	121	1.6				70 - 130	20
Styrene	ND	1.0	118	113	4.3				70 - 130	20
tert-amyl methyl ether	ND	1.0	99	97	2.0				70 - 130	20
tert-Butylbenzene	ND	1.0	121	119	1.7				70 - 130	20
Tetrachloroethene	ND	1.0	108	103	4.7				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	102	100	2.0				70 - 130	20
Toluene	ND	1.0	102	100	2.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	99	96	3.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	105	102	2.9				70 - 130	20
Trichloroethene	ND	1.0	106	102	3.8				70 - 130	20
Trichlorofluoromethane	ND	1.0	110	106	3.7				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	98	94	4.2				70 - 130	20
Vinyl chloride	ND	1.0	111	107	3.7				70 - 130	20
% 1,2-dichlorobenzene-d4	102	%	100	100	0.0				70 - 130	20
% Bromofluorobenzene	93	%	99	99	0.0				70 - 130	20
% Dibromofluoromethane	106	%	97	99	2.0				70 - 130	20
% Toluene-d8	101	%	100	99	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 590973 (ug/L), QC Sample No: CJ17886 (CJ19155, CJ19156, CJ19157, CJ19158 (20X) , CJ19159 (20X) , CJ19170 (100X))										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	97	97	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	97	98	1.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	92	93	1.1				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	95	94	1.1				70 - 130	20
1,1-Dichloroethane	ND	1.0	96	97	1.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	95	95	0.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	104	104	0.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	102	101	1.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	93	95	2.1				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	97	97	0.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	109	108	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	96	96	0.0				70 - 130	20
1,2-Dibromoethane	ND	1.0	97	97	0.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	95	95	0.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	92	93	1.1				70 - 130	20
1,2-Dichloropropane	ND	1.0	93	92	1.1				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	109	108	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	99	98	1.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	99	98	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	97	98	1.0				70 - 130	20
1,4-dioxane	ND	100	88	92	4.4				40 - 160	20
2,2-Dichloropropane	ND	1.0	94	95	1.1				70 - 130	20
2-Chlorotoluene	ND	1.0	102	103	1.0				70 - 130	20
2-Hexanone	ND	5.0	84	87	3.5				40 - 160	20
4-Chlorotoluene	ND	1.0	100	101	1.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	89	89	0.0				40 - 160	20
Acetone	ND	5.0	84	88	4.7				40 - 160	20
Benzene	ND	0.70	98	96	2.1				70 - 130	20
Bromobenzene	ND	1.0	97	96	1.0				70 - 130	20
Bromochloromethane	ND	1.0	97	98	1.0				70 - 130	20
Bromodichloromethane	ND	0.50	93	94	1.1				70 - 130	20
Bromoform	ND	1.0	96	94	2.1				70 - 130	20
Bromomethane	ND	1.0	91	92	1.1				40 - 160	20
Carbon Disulfide	ND	1.0	92	93	1.1				70 - 130	20
Carbon tetrachloride	ND	1.0	103	103	0.0				70 - 130	20
Chlorobenzene	ND	1.0	96	95	1.0				70 - 130	20
Chloroethane	ND	1.0	98	100	2.0				70 - 130	20
Chloroform	ND	1.0	91	92	1.1				70 - 130	20
Chloromethane	ND	1.0	97	98	1.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	95	98	3.1				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	98	99	1.0				70 - 130	20
Dibromochloromethane	ND	0.50	96	95	1.0				70 - 130	20
Dibromomethane	ND	1.0	94	95	1.1				70 - 130	20
Dichlorodifluoromethane	ND	1.0	115	114	0.9				40 - 160	20
Di-isopropyl ether	ND	1.0	95	97	2.1				70 - 130	20
Ethyl ether	ND	1.0	81	83	2.4				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	97	100	3.0				70 - 130	20
Ethylbenzene	ND	1.0	99	98	1.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	91	87	4.5				70 - 130	20

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Isopropylbenzene	ND	1.0	111	110	0.9				70 - 130	20
m&p-Xylene	ND	1.0	103	102	1.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	86	87	1.2				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	93	95	2.1				70 - 130	20
Methylene chloride	ND	1.0	92	94	2.2				70 - 130	20
Naphthalene	ND	1.0	106	105	0.9				70 - 130	20
n-Butylbenzene	ND	1.0	110	109	0.9				70 - 130	20
n-Propylbenzene	ND	1.0	107	105	1.9				70 - 130	20
o-Xylene	ND	1.0	102	103	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	113	112	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	112	111	0.9				70 - 130	20
Styrene	ND	1.0	109	107	1.9				70 - 130	20
tert-amyl methyl ether	ND	1.0	92	91	1.1				70 - 130	20
tert-Butylbenzene	ND	1.0	110	110	0.0				70 - 130	20
Tetrachloroethene	ND	1.0	97	99	2.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	92	93	1.1				70 - 130	20
Toluene	ND	1.0	97	97	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	95	96	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	97	97	0.0				70 - 130	20
Trichloroethene	ND	1.0	97	98	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	104	105	1.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	92	90	2.2				70 - 130	20
Vinyl chloride	ND	1.0	105	106	0.9				70 - 130	20
% 1,2-dichlorobenzene-d4	105	%	101	100	1.0				70 - 130	20
% Bromofluorobenzene	97	%	99	100	1.0				70 - 130	20
% Dibromofluoromethane	126	%	101	101	0.0				70 - 130	20
% Toluene-d8	103	%	100	100	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 591188 (ug/L), QC Sample No: CJ19171 (CJ19157 (5X) , CJ19160, CJ19161, CJ19162, CJ19164, CJ19166, CJ19168 (20X) , CJ19169 (20X) , CJ19171, CJ19172 (20X) , CJ19173 (20X) , CJ19175 (20X) , CJ19176 (20X) , CJ19178)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	97	97	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	97	98	1.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	100	100	0.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	97	100	3.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	97	98	1.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	94	93	1.1				70 - 130	20
1,1-Dichloropropene	ND	1.0	104	104	0.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	107	108	0.9				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	99	99	0.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	100	104	3.9				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	107	108	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	103	110	6.6				70 - 130	20
1,2-Dibromoethane	ND	1.0	100	101	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	94	95	1.1				70 - 130	20
1,2-Dichloroethane	ND	1.0	93	94	1.1				70 - 130	20
1,2-Dichloropropane	ND	1.0	92	98	6.3				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	108	108	0.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,3-Dichlorobenzene	ND	1.0	98	99	1.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	100	101	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	96	97	1.0				70 - 130	20
1,4-dioxane	ND	100	103	101	2.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	100	99	1.0				70 - 130	20
2-Chlorotoluene	ND	1.0	101	102	1.0				70 - 130	20
2-Hexanone	ND	5.0	99	97	2.0				40 - 160	20
4-Chlorotoluene	ND	1.0	100	103	3.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	98	102	4.0				40 - 160	20
Acetone	ND	5.0	94	100	6.2				40 - 160	20
Benzene	ND	0.70	96	99	3.1				70 - 130	20
Bromobenzene	ND	1.0	96	98	2.1				70 - 130	20
Bromochloromethane	ND	1.0	95	97	2.1				70 - 130	20
Bromodichloromethane	ND	0.50	94	96	2.1				70 - 130	20
Bromoform	ND	1.0	98	101	3.0				70 - 130	20
Bromomethane	ND	1.0	90	91	1.1				40 - 160	20
Carbon Disulfide	ND	1.0	89	89	0.0				70 - 130	20
Carbon tetrachloride	ND	1.0	104	103	1.0				70 - 130	20
Chlorobenzene	ND	1.0	94	94	0.0				70 - 130	20
Chloroethane	ND	1.0	97	99	2.0				70 - 130	20
Chloroform	ND	1.0	91	93	2.2				70 - 130	20
Chloromethane	ND	1.0	92	92	0.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	93	98	5.2				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	99	102	3.0				70 - 130	20
Dibromochloromethane	ND	0.50	98	97	1.0				70 - 130	20
Dibromomethane	ND	1.0	97	99	2.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	102	101	1.0				40 - 160	20
Di-isopropyl ether	ND	1.0	99	99	0.0				70 - 130	20
Ethyl ether	ND	1.0	82	86	4.8				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	101	103	2.0				70 - 130	20
Ethylbenzene	ND	1.0	99	98	1.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	89	92	3.3				70 - 130	20
Isopropylbenzene	ND	1.0	109	108	0.9				70 - 130	20
m&p-Xylene	ND	1.0	103	103	0.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	99	103	4.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	99	101	2.0				70 - 130	20
Methylene chloride	ND	1.0	90	93	3.3				70 - 130	20
Naphthalene	ND	1.0	117	119	1.7				70 - 130	20
n-Butylbenzene	ND	1.0	111	110	0.9				70 - 130	20
n-Propylbenzene	ND	1.0	105	105	0.0				70 - 130	20
o-Xylene	ND	1.0	101	102	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	112	110	1.8				70 - 130	20
sec-Butylbenzene	ND	1.0	112	112	0.0				70 - 130	20
Styrene	ND	1.0	107	108	0.9				70 - 130	20
tert-amyl methyl ether	ND	1.0	95	97	2.1				70 - 130	20
tert-Butylbenzene	ND	1.0	110	110	0.0				70 - 130	20
Tetrachloroethene	ND	1.0	98	97	1.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	105	110	4.7				70 - 130	20
Toluene	ND	1.0	95	96	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	91	94	3.2				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	99	102	3.0				70 - 130	20
Trichloroethene	ND	1.0	98	97	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	103	102	1.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Trichlorotrifluoroethane	ND	1.0	91	91	0.0				70 - 130	20
Vinyl chloride	ND	1.0	102	102	0.0				70 - 130	20
% 1,2-dichlorobenzene-d4	105	%	100	99	1.0				70 - 130	20
% Bromofluorobenzene	95	%	99	100	1.0				70 - 130	20
% Dibromofluoromethane	107	%	100	102	2.0				70 - 130	20
% Toluene-d8	101	%	100	100	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 591670 (ug/L), QC Sample No: CJ19174 (CJ19173 (10X) , CJ19174 (10X, 50X) , CJ19175 (100X) , CJ19176 (200X) , CJ19177 (10X, 100X) , CJ19181)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	100	100	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	102	102	0.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	98	101	3.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	105	106	0.9				70 - 130	20
1,1-Dichloroethane	ND	1.0	102	103	1.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	94	94	0.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	106	109	2.8				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	84	88	4.7				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	96	101	5.1				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	92	98	6.3				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	113	116	2.6				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	96	96	0.0				70 - 130	20
1,2-Dibromoethane	ND	1.0	101	103	2.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	97	98	1.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	98	101	3.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	101	102	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	114	1.8				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	102	104	1.9				70 - 130	20
1,3-Dichloropropane	ND	1.0	103	103	0.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20
1,4-dioxane	ND	100	99	104	4.9				40 - 160	20
2,2-Dichloropropane	ND	1.0	108	105	2.8				70 - 130	20
2-Chlorotoluene	ND	1.0	105	108	2.8				70 - 130	20
2-Hexanone	ND	5.0	91	92	1.1				40 - 160	20
4-Chlorotoluene	ND	1.0	104	106	1.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	97	101	4.0				40 - 160	20
Acetone	ND	5.0	97	99	2.0				40 - 160	20
Benzene	ND	0.70	102	105	2.9				70 - 130	20
Bromobenzene	ND	1.0	98	100	2.0				70 - 130	20
Bromochloromethane	ND	1.0	105	105	0.0				70 - 130	20
Bromodichloromethane	ND	0.50	100	102	2.0				70 - 130	20
Bromoform	ND	1.0	98	100	2.0				70 - 130	20
Bromomethane	ND	1.0	96	96	0.0				40 - 160	20
Carbon Disulfide	ND	1.0	91	89	2.2				70 - 130	20
Carbon tetrachloride	ND	1.0	107	105	1.9				70 - 130	20
Chlorobenzene	ND	1.0	99	99	0.0				70 - 130	20
Chloroethane	ND	1.0	97	97	0.0				70 - 130	20
Chloroform	ND	1.0	97	99	2.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloromethane	ND	1.0	97	96	1.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	104	101	2.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	108	109	0.9				70 - 130	20
Dibromochloromethane	ND	0.50	99	100	1.0				70 - 130	20
Dibromomethane	ND	1.0	102	105	2.9				70 - 130	20
Dichlorodifluoromethane	ND	1.0	113	111	1.8				40 - 160	20
Di-isopropyl ether	ND	1.0	106	108	1.9				70 - 130	20
Ethyl ether	ND	1.0	89	92	3.3				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	110	112	1.8				70 - 130	20
Ethylbenzene	ND	1.0	102	102	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	90	93	3.3				70 - 130	20
Isopropylbenzene	ND	1.0	111	112	0.9				70 - 130	20
m&p-Xylene	ND	1.0	107	105	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	103	101	2.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	104	106	1.9				70 - 130	20
Methylene chloride	ND	1.0	97	97	0.0				70 - 130	20
Naphthalene	ND	1.0	88	92	4.4				70 - 130	20
n-Butylbenzene	ND	1.0	118	120	1.7				70 - 130	20
n-Propylbenzene	ND	1.0	110	111	0.9				70 - 130	20
o-Xylene	ND	1.0	107	108	0.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	118	120	1.7				70 - 130	20
sec-Butylbenzene	ND	1.0	116	119	2.6				70 - 130	20
Styrene	ND	1.0	114	112	1.8				70 - 130	20
tert-amyl methyl ether	ND	1.0	100	104	3.9				70 - 130	20
tert-Butylbenzene	ND	1.0	114	115	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	102	102	0.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	109	114	4.5				70 - 130	20
Toluene	ND	1.0	101	103	2.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	95	97	2.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	106	110	3.7				70 - 130	20
Trichloroethene	ND	1.0	100	102	2.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	103	104	1.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	91	89	2.2				70 - 130	20
Vinyl chloride	ND	1.0	103	104	1.0				70 - 130	20
% 1,2-dichlorobenzene-d4	103	%	98	99	1.0				70 - 130	20
% Bromofluorobenzene	96	%	101	100	1.0				70 - 130	20
% Dibromofluoromethane	113	%	106	101	4.8				70 - 130	20
% Toluene-d8	102	%	101	103	2.0				70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 591965 (ug/L), QC Sample No: CJ20188 (CJ19179, CJ19180)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	97	95	2.1	105	110	4.7	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	102	98	4.0	112	117	4.4	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	100	97	3.0	103	106	2.9	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	101	100	1.0	108	112	3.6	70 - 130	20
1,1-Dichloroethane	ND	1.0	106	102	3.8	115	122	5.9	70 - 130	20
1,1-Dichloroethene	ND	1.0	96	91	5.3	103	109	5.7	70 - 130	20
1,1-Dichloropropene	ND	1.0	104	102	1.9	105	115	9.1	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	89	86	3.4	86	96	11.0	70 - 130	20

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,3-Trichloropropane	ND	1.0	97	96	1.0	100	110	9.5	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	91	88	3.4	85	94	10.1	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	111	108	2.7	110	118	7.0	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	90	90	0.0	90	96	6.5	70 - 130	20
1,2-Dibromoethane	ND	1.0	98	98	0.0	105	106	0.9	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	95	94	1.1	98	104	5.9	70 - 130	20
1,2-Dichloroethane	ND	1.0	95	95	0.0	106	108	1.9	70 - 130	20
1,2-Dichloropropane	ND	1.0	99	99	0.0	104	110	5.6	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	108	3.6	110	118	7.0	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	100	97	3.0	101	107	5.8	70 - 130	20
1,3-Dichloropropane	ND	1.0	101	100	1.0	108	112	3.6	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	94	91	3.2	96	101	5.1	70 - 130	20
1,4-dioxane	ND	100	92	101	9.3	91	107	16.2	40 - 160	20
2,2-Dichloropropane	ND	1.0	107	101	5.8	91	96	5.3	70 - 130	20
2-Chlorotoluene	ND	1.0	105	102	2.9	104	111	6.5	70 - 130	20
2-Hexanone	ND	5.0	90	87	3.4	88	93	5.5	40 - 160	20
4-Chlorotoluene	ND	1.0	103	101	2.0	103	112	8.4	70 - 130	20
4-Methyl-2-pentanone	ND	5.0	96	97	1.0	97	99	2.0	40 - 160	20
Acetone	ND	5.0	87	89	2.3	116	111	4.4	40 - 160	20
Benzene	ND	0.70	102	100	2.0	106	114	7.3	70 - 130	20
Bromobenzene	ND	1.0	97	94	3.1	95	104	9.0	70 - 130	20
Bromochloromethane	ND	1.0	103	99	4.0	116	117	0.9	70 - 130	20
Bromodichloromethane	ND	0.50	96	95	1.0	107	110	2.8	70 - 130	20
Bromoform	ND	1.0	94	93	1.1	103	103	0.0	70 - 130	20
Bromomethane	ND	1.0	92	88	4.4	90	100	10.5	40 - 160	20
Carbon Disulfide	ND	1.0	91	87	4.5	95	102	7.1	70 - 130	20
Carbon tetrachloride	ND	1.0	108	103	4.7	116	123	5.9	70 - 130	20
Chlorobenzene	ND	1.0	97	93	4.2	103	108	4.7	70 - 130	20
Chloroethane	ND	1.0	94	93	1.1	105	110	4.7	70 - 130	20
Chloroform	ND	1.0	99	95	4.1	112	114	1.8	70 - 130	20
Chloromethane	ND	1.0	99	97	2.0	102	111	8.5	40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	100	98	2.0	108	115	6.3	70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	105	104	1.0	90	99	9.5	70 - 130	20
Dibromochloromethane	ND	0.50	96	94	2.1	103	106	2.9	70 - 130	20
Dibromomethane	ND	1.0	98	97	1.0	105	110	4.7	70 - 130	20
Dichlorodifluoromethane	ND	1.0	103	98	5.0	99	107	7.8	40 - 160	20
Di-isopropyl ether	ND	1.0	109	107	1.9	111	120	7.8	70 - 130	20
Ethyl ether	ND	1.0	86	86	0.0	97	102	5.0	70 - 130	20
Ethyl tert-butyl ether	ND	1.0	109	107	1.9	110	117	6.2	70 - 130	20
Ethylbenzene	ND	1.0	101	98	3.0	105	112	6.5	70 - 130	20
Hexachlorobutadiene	ND	0.40	87	82	5.9	84	96	13.3	70 - 130	20
Isopropylbenzene	ND	1.0	112	106	5.5	106	116	9.0	70 - 130	20
m&p-Xylene	ND	1.0	105	102	2.9	111	116	4.4	70 - 130	20
Methyl ethyl ketone	ND	5.0	97	98	1.0	106	111	4.6	40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	99	97	2.0	107	110	2.8	70 - 130	20
Methylene chloride	ND	1.0	95	91	4.3	105	108	2.8	70 - 130	20
Naphthalene	ND	1.0	92	90	2.2	85	97	13.2	70 - 130	20
n-Butylbenzene	ND	1.0	117	111	5.3	114	124	8.4	70 - 130	20
n-Propylbenzene	ND	1.0	108	103	4.7	108	115	6.3	70 - 130	20
o-Xylene	ND	1.0	105	102	2.9	106	113	6.4	70 - 130	20
p-Isopropyltoluene	ND	1.0	115	111	3.5	110	121	9.5	70 - 130	20
sec-Butylbenzene	ND	1.0	117	111	5.3	112	124	10.2	70 - 130	20
Styrene	ND	1.0	110	108	1.8	116	121	4.2	70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
tert-amyl methyl ether	ND	1.0	95	96	1.0	96	104	8.0	70 - 130	20
tert-Butylbenzene	ND	1.0	112	109	2.7	108	120	10.5	70 - 130	20
Tetrachloroethene	ND	1.0	99	96	3.1	NC	NC	NC	70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	109	108	0.9	112	117	4.4	70 - 130	20
Toluene	ND	1.0	101	98	3.0	105	112	6.5	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	95	92	3.2	102	109	6.6	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	103	1.0	105	112	6.5	70 - 130	20
Trichloroethene	ND	1.0	98	95	3.1	105	110	4.7	70 - 130	20
Trichlorofluoromethane	ND	1.0	103	99	4.0	114	119	4.3	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	89	86	3.4	96	99	3.1	70 - 130	20
Vinyl chloride	ND	1.0	105	100	4.9	105	117	10.8	70 - 130	20
% 1,2-dichlorobenzene-d4	105	%	99	100	1.0	99	99	0.0	70 - 130	20
% Bromofluorobenzene	95	%	101	100	1.0	103	101	2.0	70 - 130	20
% Dibromofluoromethane	106	%	103	101	2.0	107	107	0.0	70 - 130	20
% Toluene-d8	101	%	101	101	0.0	100	100	0.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 591823 (ug/L), QC Sample No: CJ22041 (CJ19163)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	99	97	2.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	103	100	3.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	100	102	2.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	103	104	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	103	100	3.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	96	95	1.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	107	104	2.8				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	93	94	1.1				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	102	102	0.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	94	96	2.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	111	111	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	96	99	3.1				70 - 130	20
1,2-Dibromoethane	ND	1.0	102	101	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	97	96	1.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	96	96	0.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	99	98	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	111	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	100	99	1.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	102	103	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	95	95	0.0				70 - 130	20
1,4-dioxane	ND	100	91	100	9.4				40 - 160	20
2,2-Dichloropropane	ND	1.0	106	103	2.9				70 - 130	20
2-Chlorotoluene	ND	1.0	105	104	1.0				70 - 130	20
2-Hexanone	ND	5.0	90	92	2.2				40 - 160	20
4-Chlorotoluene	ND	1.0	105	104	1.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	95	100	5.1				40 - 160	20
Acetone	ND	5.0	85	89	4.6				40 - 160	20
Benzene	ND	0.70	102	100	2.0				70 - 130	20
Bromobenzene	ND	1.0	97	97	0.0				70 - 130	20
Bromochloromethane	ND	1.0	103	101	2.0				70 - 130	20
Bromodichloromethane	ND	0.50	98	97	1.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromoform	ND	1.0	97	101	4.0				70 - 130	20
Bromomethane	ND	1.0	95	93	2.1				40 - 160	20
Carbon Disulfide	ND	1.0	94	89	5.5				70 - 130	20
Carbon tetrachloride	ND	1.0	109	105	3.7				70 - 130	20
Chlorobenzene	ND	1.0	99	97	2.0				70 - 130	20
Chloroethane	ND	1.0	98	96	2.1				70 - 130	20
Chloroform	ND	1.0	98	94	4.2				70 - 130	20
Chloromethane	ND	1.0	102	102	0.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	99	98	1.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	105	104	1.0				70 - 130	20
Dibromochloromethane	ND	0.50	97	99	2.0				70 - 130	20
Dibromomethane	ND	1.0	100	101	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	128	122	4.8				40 - 160	20
Di-isopropyl ether	ND	1.0	105	105	0.0				70 - 130	20
Ethyl ether	ND	1.0	89	86	3.4				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	107	106	0.9				70 - 130	20
Ethylbenzene	ND	1.0	102	102	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	91	92	1.1				70 - 130	20
Isopropylbenzene	ND	1.0	113	112	0.9				70 - 130	20
m&p-Xylene	ND	1.0	107	106	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	97	99	2.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	99	100	1.0				70 - 130	20
Methylene chloride	ND	1.0	94	91	3.2				70 - 130	20
Naphthalene	ND	1.0	97	101	4.0				70 - 130	20
n-Butylbenzene	ND	1.0	117	117	0.0				70 - 130	20
n-Propylbenzene	ND	1.0	108	109	0.9				70 - 130	20
o-Xylene	ND	1.0	105	104	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	117	115	1.7				70 - 130	20
sec-Butylbenzene	ND	1.0	118	116	1.7				70 - 130	20
Styrene	ND	1.0	111	115	3.5				70 - 130	20
tert-amyl methyl ether	ND	1.0	97	98	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	114	113	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	103	99	4.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	104	110	5.6				70 - 130	20
Toluene	ND	1.0	101	100	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	97	94	3.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	103	104	1.0				70 - 130	20
Trichloroethene	ND	1.0	102	100	2.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	109	104	4.7				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	96	93	3.2				70 - 130	20
Vinyl chloride	ND	1.0	111	105	5.6				70 - 130	20
% 1,2-dichlorobenzene-d4	103	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	94	%	100	101	1.0				70 - 130	20
% Dibromofluoromethane	107	%	100	99	1.0				70 - 130	20
% Toluene-d8	102	%	100	102	2.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCJ19155

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 590926 (ug/L), QC Sample No: CJ17860 (CJ19158, CJ19175)										
Volatile Petroleum Hydrocarbons - Ground Water										
Unadjusted C5-C8 Aliphatics (*1)	ND	100	99	96	3.1				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	84	83	1.2				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	99	96	3.1				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	84	83	1.2				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	84	84	0.0				70 - 130	25
Benzene	ND	1.0	95	96	1.0				70 - 130	25
Ethyl Benzene	ND	1.0	88	88	0.0				70 - 130	25
MTBE	ND	1.0	89	92	3.3				70 - 130	25
Naphthalene	ND	5.0	92	93	1.1				70 - 130	25
Toluene	ND	1.0	91	92	1.1				70 - 130	25
m,p-Xylenes	ND	2.0	88	88	0.0				70 - 130	25
o-Xylene	ND	1.0	86	85	1.2				70 - 130	25
% 2,5-Dibromotoluene (PID)	83	%	83	84	1.2				70 - 130	25
% 2,5-Dibromotoluene (FID)	83	%	93	83	11.4				70 - 130	25
Comment:										
This batch consists of a Blank, LCS and LCSD.										
QA/QC Batch 591177 (ug/L), QC Sample No: CJ22046 (CJ19170)										
Volatile Petroleum Hydrocarbons - Ground Water										
Unadjusted C5-C8 Aliphatics (*1)	ND	100	96	97	1.0				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	72	73	1.4				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	96	97	1.0				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	72	73	1.4				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	83	85	2.4				70 - 130	25
Benzene	ND	1.0	93	98	5.2				70 - 130	25
Ethyl Benzene	ND	1.0	86	90	4.5				70 - 130	25
MTBE	ND	1.0	101	101	0.0				70 - 130	25
Naphthalene	ND	5.0	96	96	0.0				70 - 130	25
Toluene	ND	1.0	89	93	4.4				70 - 130	25
m,p-Xylenes	ND	2.0	86	90	4.5				70 - 130	25
o-Xylene	ND	1.0	84	87	3.5				70 - 130	25
% 2,5-Dibromotoluene (PID)	83	%	81	81	0.0				70 - 130	25
% 2,5-Dibromotoluene (FID)	84	%	84	87	3.5				70 - 130	25
Comment:										
This batch consists of a Blank, LCS and LCSD.										

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
September 29, 2021

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19155	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19155	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19155	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19155	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19155	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19155	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6.4	0.20	0.3	0.3	ug/l
CJ19155	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.4	0.20	0.3	0.3	ug/l
CJ19155	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	6.4	0.20	0.3	0.3	ug/l
CJ19155	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19156	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19156	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19156	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19156	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19156	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19156	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19156	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19156	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19157	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19157	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19157	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	140	5.0	20	20	ug/L
CJ19157	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	10	1.0	5	5	ug/L
CJ19157	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19157	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	5.0	20	20	ug/L
CJ19157	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19157	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	1.0	5	5	ug/L
CJ19157	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	10	1.0	5	5	ug/L
CJ19157	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	5.0	20	20	ug/L
CJ19157	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19157	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	1.0	5	5	ug/L
CJ19157	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	5.0	70	70	ug/L
CJ19157	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	5.0	20	20	ug/L
CJ19157	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	10	1.0	5	5	ug/L
CJ19157	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19157	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19157	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19158	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	240	20	5	5	ug/L
CJ19158	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19158	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19158	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19158	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	170	20	20	20	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19158	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	44	1.0	5	5	ug/L
CJ19158	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	240	20	5	5	ug/L
CJ19158	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	44	1.0	5	5	ug/L
CJ19158	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	170	20	20	20	ug/L
CJ19158	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19158	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	170	20	20	20	ug/L
CJ19158	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	240	20	5	5	ug/L
CJ19158	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	44	1.0	5	5	ug/L
CJ19158	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19158	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	240	20	5	5	ug/L
CJ19158	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	170	20	70	70	ug/L
CJ19158	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	170	20	20	20	ug/L
CJ19158	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	240	20	5	5	ug/L
CJ19158	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19158	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19158	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19159	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6.1	1.0	5	5	ug/L
CJ19159	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19159	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19159	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19159	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6.2	1.0	2	2	ug/L
CJ19159	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	170	20	20	20	ug/L
CJ19159	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	110	20	5	5	ug/L
CJ19159	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.2	1.0	2	2	ug/L
CJ19159	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	20	5	5	ug/L
CJ19159	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.1	1.0	5	5	ug/L
CJ19159	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19159	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	170	20	20	20	ug/L
CJ19159	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	6.2	1.0	2	2	ug/L
CJ19159	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	170	20	20	20	ug/L
CJ19159	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	110	20	5	5	ug/L
CJ19159	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	6.2	1.0	2	2	ug/L
CJ19159	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19159	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	110	20	5	5	ug/L
CJ19159	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	6.1	1.0	5	5	ug/L
CJ19159	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	170	20	70	70	ug/L
CJ19159	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	110	20	5	5	ug/L
CJ19159	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	170	20	20	20	ug/L
CJ19159	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	6.2	1.0	2	2	ug/L
CJ19159	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19159	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19159	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19160	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3.8	1.0	2	2	ug/L
CJ19160	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	66	1.0	20	20	ug/L
CJ19160	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19160	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19160	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19160	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.8	1.0	2	2	ug/L
CJ19160	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19160	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	66	1.0	20	20	ug/L
CJ19160	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	66	1.0	20	20	ug/L
CJ19160	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	3.8	1.0	2	2	ug/L
CJ19160	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19160	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	3.8	1.0	2	2	ug/L
CJ19160	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	66	1.0	20	20	ug/L
CJ19160	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	3.8	1.0	2	2	ug/L
CJ19160	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.5	0.20	0.3	0.3	ug/l
CJ19160	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	1.5	0.20	0.3	0.3	ug/l
CJ19160	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	1.5	0.20	0.3	0.3	ug/l
CJ19160	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19161	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19161	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19161	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19161	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19161	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19161	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6.8	0.20	0.3	0.3	ug/l
CJ19161	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.8	0.20	0.3	0.3	ug/l
CJ19161	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	6.8	0.20	0.3	0.3	ug/l
CJ19161	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19162	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19162	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19162	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19162	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19162	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19162	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19162	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19162	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19163	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19163	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19163	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19163	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19163	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19163	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19163	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19163	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19164	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19164	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19164	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19164	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19164	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19164	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19164	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19164	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19165	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19165	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19165	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19165	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19165	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19165	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19165	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19165	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19166	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19166	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19166	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19166	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19166	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19166	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19166	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19166	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19167	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	63	1.0	5	5	ug/L
CJ19167	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19167	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19167	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19167	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	98	1.0	2	2	ug/L
CJ19167	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	73	1.0	20	20	ug/L
CJ19167	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	98	1.0	2	2	ug/L
CJ19167	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	63	1.0	5	5	ug/L
CJ19167	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	73	1.0	20	20	ug/L
CJ19167	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19167	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	73	1.0	20	20	ug/L
CJ19167	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	63	1.0	5	5	ug/L
CJ19167	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	98	1.0	2	2	ug/L
CJ19167	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	63	1.0	5	5	ug/L
CJ19167	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19167	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	98	1.0	2	2	ug/L
CJ19167	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	73	1.0	70	70	ug/L
CJ19167	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	73	1.0	20	20	ug/L
CJ19167	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	63	1.0	5	5	ug/L
CJ19167	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	98	1.0	2	2	ug/L
CJ19167	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19167	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19167	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19168	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	440	20	5	5	ug/L
CJ19168	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00033	0.00033	ug/L
CJ19168	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.0075	0.0075	ug/L
CJ19168	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	140	2.0	2	2	ug/L
CJ19168	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	430	20	20	20	ug/L
CJ19168	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	530	20	5	5	ug/L
CJ19168	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ19168	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ19168	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.6	0.6	ug/L
CJ19168	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00075	0.00075	ug/L
CJ19168	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	2.0	2	2	ug/L
CJ19168	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	530	20	5	5	ug/L
CJ19168	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ19168	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	440	20	5	5	ug/L
CJ19168	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CJ19168	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ19168	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CJ19168	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	430	20	20	20	ug/L
CJ19168	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	2.0	2	2	ug/L
CJ19168	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	440	20	50	50	ug/L
CJ19168	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	430	20	20	20	ug/L
CJ19168	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	530	20	5	5	ug/L
CJ19168	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CJ19168	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CJ19168	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	140	2.0	2	2	ug/L
CJ19168	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	430	20	70	70	ug/L
CJ19168	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	530	20	5	5	ug/L
CJ19168	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	440	20	5	5	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19168	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	530	20	5	5	ug/L
CJ19168	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	430	20	20	20	ug/L
CJ19168	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	140	2.0	2	2	ug/L
CJ19168	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	440	20	50	50	ug/L
CJ19168	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	0.3	0.3	ug/L
CJ19168	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	0.3	0.3	ug/L
CJ19168	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	200	0.3	0.3	ug/L
CJ19169	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ19169	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ19169	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ19169	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ19169	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.6	0.6	ug/L
CJ19169	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1300	20	5	5	ug/L
CJ19169	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ19169	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ19169	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ19169	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.0075	0.0075	ug/L
CJ19169	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00033	0.00033	ug/L
CJ19169	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1600	20	5	5	ug/L
CJ19169	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	4	4	ug/L
CJ19169	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	32	10	2	2	ug/L
CJ19169	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	340	10	20	20	ug/L
CJ19169	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00075	0.00075	ug/L
CJ19169	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ19169	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	340	10	20	20	ug/L
CJ19169	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CJ19169	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ19169	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	20	5	5	ug/L
CJ19169	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ19169	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	32	10	2	2	ug/L
CJ19169	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1600	20	5	5	ug/L
CJ19169	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ19169	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	10	7	7	ug/L
CJ19169	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CJ19169	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19169	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ19169	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1600	20	5	5	ug/L
CJ19169	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	20	50	50	ug/L
CJ19169	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	32	10	2	2	ug/L
CJ19169	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CJ19169	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	340	10	20	20	ug/L
CJ19169	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	20	5	5	ug/L
CJ19169	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1600	20	5	5	ug/L
CJ19169	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	340	10	70	70	ug/L
CJ19169	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ19169	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	32	10	2	2	ug/L
CJ19169	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	11	10	7	7	ug/L
CJ19169	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CJ19169	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CJ19169	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CJ19169	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CJ19169	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	32	10	2	2	ug/L
CJ19169	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CJ19169	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	340	10	20	20	ug/L
CJ19169	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1600	20	5	5	ug/L
CJ19169	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ19169	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	20	50	50	ug/L
CJ19169	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	28	0.20	0.3	0.3	ug/l
CJ19169	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	28	0.20	0.3	0.3	ug/l
CJ19169	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	28	0.20	0.3	0.3	ug/l
CJ19169	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1000	0.3	0.3	ug/L
CJ19170	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.6	0.6	ug/L
CJ19170	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.47	0.47	ug/L
CJ19170	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	3	3	ug/L
CJ19170	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	250	100	80	80	ug/L
CJ19170	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	38	38	ug/L
CJ19170	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	350	350	ug/L
CJ19170	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	3	3	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19170	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	4	4	ug/L
CJ19170	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	5	5	ug/L
CJ19170	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	7	7	ug/L
CJ19170	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.0075	0.0075	ug/L
CJ19170	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	7	7	ug/L
CJ19170	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1600	100	20	20	ug/L
CJ19170	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	38	38	ug/L
CJ19170	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.47	0.47	ug/L
CJ19170	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	20000	500	5	5	ug/L
CJ19170	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	19000	500	5	5	ug/L
CJ19170	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	8.3	8.3	ug/L
CJ19170	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.00033	0.00033	ug/L
CJ19170	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	160	100	70	70	ug/L
CJ19170	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	180	100	2	2	ug/L
CJ19170	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.00075	0.00075	ug/L
CJ19170	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CJ19170	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	180	100	2	2	ug/L
CJ19170	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L
CJ19170	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1600	100	20	20	ug/L
CJ19170	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CJ19170	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	350	350	ug/L
CJ19170	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	4	4	ug/L
CJ19170	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CJ19170	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.02	0.02	ug/L
CJ19170	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.6	0.6	ug/L
CJ19170	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CJ19170	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	56	50	7	7	ug/L
CJ19170	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	160	100	70	70	ug/L
CJ19170	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CJ19170	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	250	100	80	80	ug/L
CJ19170	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	19000	500	5	5	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19170	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	20000	500	5	5	ug/L
CJ19170	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1600	100	20	20	ug/L
CJ19170	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	180	100	2	2	ug/L
CJ19170	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	20	20	ug/L
CJ19170	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	10	10	ug/L
CJ19170	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	19000	500	5	5	ug/L
CJ19170	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	3	3	ug/L
CJ19170	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	250	100	80	80	ug/L
CJ19170	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	6	6	ug/L
CJ19170	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	20000	500	50	50	ug/L
CJ19170	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	9	9	ug/L
CJ19170	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	7	7	ug/L
CJ19170	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	20000	500	5	5	ug/L
CJ19170	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	19000	500	5	5	ug/L
CJ19170	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	250	100	100	100	ug/L
CJ19170	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CJ19170	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	180	100	2	2	ug/L
CJ19170	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.6	0.6	ug/L
CJ19170	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	160	100	70	70	ug/L
CJ19170	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	56	50	7	7	ug/L
CJ19170	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.02	0.02	ug/L
CJ19170	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	500	350	350	ug/L
CJ19170	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1600	100	70	70	ug/L
CJ19170	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	50	4	4	ug/L
CJ19170	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	10	10	ug/L
CJ19170	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	3	3	ug/L
CJ19170	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	180	100	2	2	ug/L
CJ19170	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	7	7	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19170	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	10	10	ug/L
CJ19170	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1600	100	20	20	ug/L
CJ19170	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	9	9	ug/L
CJ19170	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CJ19170	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	20	20	ug/L
CJ19170	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	250	100	80	80	ug/L
CJ19170	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	5	5	ug/L
CJ19170	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	3	3	ug/L
CJ19170	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	6	6	ug/L
CJ19170	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	20000	500	50	50	ug/L
CJ19170	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	19000	500	5	5	ug/L
CJ19170	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	19000	500	5000	5000	ug/L
CJ19170	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	48	0.20	0.3	0.3	ug/l
CJ19170	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	48	0.20	0.3	0.3	ug/l
CJ19170	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	48	0.20	0.3	0.3	ug/l
CJ19170	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10000	0.3	0.3	ug/L
CJ19170	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED-WILMINGT	11000	100	300	300	ug/L
CJ19170	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	11000	100	300	300	ug/L
CJ19170	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-2 (mg/l)	11000	100	3000	3000	ug/L
CJ19170	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	11000	100	300	300	ug/L
CJ19170	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-2	11000	100	3000	3000	ug/L
CJ19170	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2.11	0.011	0.43	0.43	mg/L
CJ19170	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2.21	0.010	0.43	0.43	mg/L
CJ19171	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19171	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19171	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19171	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19171	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19171	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19171	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19171	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19172	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	170	5.0	20	20	ug/L
CJ19172	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CJ19172	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	410	20	5	5	ug/L
CJ19172	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.6	0.6	ug/L
CJ19172	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00033	0.00033	ug/L
CJ19172	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CJ19172	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	18	5.0	2	2	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19172	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1200	20	5	5	ug/L
CJ19172	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.0075	0.0075	ug/L
CJ19172	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00075	0.00075	ug/L
CJ19172	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	5.0	7	7	ug/L
CJ19172	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1200	20	5	5	ug/L
CJ19172	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	18	5.0	2	2	ug/L
CJ19172	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	410	20	5	5	ug/L
CJ19172	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CJ19172	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CJ19172	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ19172	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	170	5.0	20	20	ug/L
CJ19172	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ19172	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	410	20	50	50	ug/L
CJ19172	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	170	5.0	20	20	ug/L
CJ19172	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	18	5.0	2	2	ug/L
CJ19172	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1200	20	5	5	ug/L
CJ19172	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	170	5.0	70	70	ug/L
CJ19172	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CJ19172	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CJ19172	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	410	20	5	5	ug/L
CJ19172	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	5.0	7	7	ug/L
CJ19172	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	18	5.0	2	2	ug/L
CJ19172	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1200	20	5	5	ug/L
CJ19172	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	170	5.0	20	20	ug/L
CJ19172	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ19172	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	410	20	50	50	ug/L
CJ19172	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	18	5.0	2	2	ug/L
CJ19172	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1200	20	5	5	ug/L
CJ19172	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ19172	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	14	0.20	0.3	0.3	ug/l
CJ19172	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	0.20	0.3	0.3	ug/l
CJ19172	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	14	0.20	0.3	0.3	ug/l
CJ19172	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	0.3	0.3	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19173	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.6	0.6	ug/L
CJ19173	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ19173	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	290	10	5	5	ug/L
CJ19173	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ19173	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ19173	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ19173	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00033	0.00033	ug/L
CJ19173	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	26	10	2	2	ug/L
CJ19173	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00075	0.00075	ug/L
CJ19173	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ19173	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.0075	0.0075	ug/L
CJ19173	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ19173	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	4	4	ug/L
CJ19173	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ19173	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	270	10	20	20	ug/L
CJ19173	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1600	20	5	5	ug/L
CJ19173	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ19173	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CJ19173	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	290	10	5	5	ug/L
CJ19173	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1600	20	5	5	ug/L
CJ19173	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	10	2	2	ug/L
CJ19173	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ19173	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ19173	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	270	10	20	20	ug/L
CJ19173	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ19173	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CJ19173	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CJ19173	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.6	7.0	7	7	ug/L
CJ19173	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ19173	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	270	10	20	20	ug/L
CJ19173	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	26	10	2	2	ug/L
CJ19173	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	290	10	50	50	ug/L
CJ19173	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1600	20	5	5	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19173	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CJ19173	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	8.6	7.0	7	7	ug/L
CJ19173	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ19173	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	26	10	2	2	ug/L
CJ19173	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1600	20	5	5	ug/L
CJ19173	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	290	10	5	5	ug/L
CJ19173	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CJ19173	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CJ19173	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CJ19173	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CJ19173	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	270	10	70	70	ug/L
CJ19173	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	290	10	50	50	ug/L
CJ19173	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ19173	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CJ19173	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	26	10	2	2	ug/L
CJ19173	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1600	20	5	5	ug/L
CJ19173	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	270	10	20	20	ug/L
CJ19173	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ19173	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1000	0.3	0.3	ug/L
CJ19173	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1000	0.3	0.3	ug/L
CJ19173	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	1000	0.3	0.3	ug/L
CJ19174	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ19174	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	4	4	ug/L
CJ19174	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	150	10	20	20	ug/L
CJ19174	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ19174	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ19174	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ19174	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ19174	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1600	50	5	5	ug/L
CJ19174	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ19174	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2800	50	5	5	ug/L
CJ19174	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6.3	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.6	0.6	ug/L
CJ19174	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00075	0.00075	ug/L
CJ19174	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.0075	0.0075	ug/L
CJ19174	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ19174	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19174	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00033	0.00033	ug/L
CJ19174	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ19174	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CJ19174	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CJ19174	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1600	50	5	5	ug/L
CJ19174	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ19174	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ19174	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2800	50	5	5	ug/L
CJ19174	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.3	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	10	7	7	ug/L
CJ19174	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CJ19174	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ19174	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ19174	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	10	20	20	ug/L
CJ19174	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2800	50	5	5	ug/L
CJ19174	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	10	20	20	ug/L
CJ19174	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CJ19174	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	6.3	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1600	50	50	50	ug/L
CJ19174	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CJ19174	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2800	50	5	5	ug/L
CJ19174	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CJ19174	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1600	50	5	5	ug/L
CJ19174	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150	10	70	70	ug/L
CJ19174	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ19174	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	10	7	7	ug/L
CJ19174	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CJ19174	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CJ19174	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	6.3	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1600	50	50	50	ug/L
CJ19174	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	6.3	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CJ19174	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ19174	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150	10	20	20	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19174	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2800	50	5	5	ug/L
CJ19174	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	14	0.20	0.3	0.3	ug/l
CJ19174	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	0.20	0.3	0.3	ug/l
CJ19174	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	14	0.20	0.3	0.3	ug/l
CJ19174	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1000	0.3	0.3	ug/L
CJ19175	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ19175	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ19175	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ19175	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ19175	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	430	20	20	20	ug/L
CJ19175	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	27	20	2	2	ug/L
CJ19175	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ19175	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ19175	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ19175	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ19175	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ19175	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1500	20	5	5	ug/L
CJ19175	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ19175	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3400	100	5	5	ug/L
CJ19175	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ19175	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ19175	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ19175	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ19175	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ19175	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ19175	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	15	10	7	7	ug/L
CJ19175	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	430	20	20	20	ug/L
CJ19175	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ19175	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1500	20	5	5	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19175	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ19175	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3400	100	5	5	ug/L
CJ19175	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	20	2	2	ug/L
CJ19175	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ19175	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ19175	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ19175	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ19175	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ19175	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ19175	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ19175	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1500	20	50	50	ug/L
CJ19175	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ19175	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	430	20	20	20	ug/L
CJ19175	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3400	100	5	5	ug/L
CJ19175	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ19175	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ19175	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	20	2	2	ug/L
CJ19175	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ19175	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1500	20	5	5	ug/L
CJ19175	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	3400	100	5	5	ug/L
CJ19175	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ19175	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	27	20	2	2	ug/L
CJ19175	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	430	20	70	70	ug/L
CJ19175	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ19175	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	15	10	7	7	ug/L
CJ19175	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ19175	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ19175	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19175	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ19175	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1500	20	50	50	ug/L
CJ19175	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	430	20	20	20	ug/L
CJ19175	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ19175	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ19175	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	3400	100	5	5	ug/L
CJ19175	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ19175	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ19175	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ19175	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	27	20	2	2	ug/L
CJ19175	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ19175	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	22	0.20	0.3	0.3	ug/l
CJ19175	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	22	0.20	0.3	0.3	ug/l
CJ19175	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	22	0.20	0.3	0.3	ug/l
CJ19175	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ19175	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1600	100	300	300	ug/L
CJ19175	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	1600	100	300	300	ug/L
CJ19175	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	1600	100	300	300	ug/L
CJ19176	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ19176	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ19176	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ19176	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ19176	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ19176	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ19176	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	500	20	20	20	ug/L
CJ19176	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ19176	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ19176	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ19176	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ19176	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	43	20	2	2	ug/L
CJ19176	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ19176	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ19176	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2700	200	5	5	ug/L
CJ19176	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1300	200	5	5	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19176	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ19176	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	71	20	70	70	ug/L
CJ19176	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ19176	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ19176	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	43	20	2	2	ug/L
CJ19176	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ19176	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2700	200	5	5	ug/L
CJ19176	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ19176	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ19176	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	500	20	20	20	ug/L
CJ19176	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	200	5	5	ug/L
CJ19176	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ19176	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ19176	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ19176	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ19176	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ19176	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ19176	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	18	10	7	7	ug/L
CJ19176	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	71	20	70	70	ug/L
CJ19176	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ19176	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2700	200	5	5	ug/L
CJ19176	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	43	20	2	2	ug/L
CJ19176	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	500	20	20	20	ug/L
CJ19176	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	200	50	50	ug/L
CJ19176	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ19176	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ19176	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19176	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	200	5	5	ug/L
CJ19176	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ19176	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ19176	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ19176	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2700	200	5	5	ug/L
CJ19176	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	43	20	2	2	ug/L
CJ19176	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	18	10	7	7	ug/L
CJ19176	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ19176	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	500	20	70	70	ug/L
CJ19176	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ19176	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	71	20	70	70	ug/L
CJ19176	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ19176	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ19176	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ19176	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ19176	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2700	200	5	5	ug/L
CJ19176	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	200	50	50	ug/L
CJ19176	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	43	20	2	2	ug/L
CJ19176	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ19176	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	500	20	20	20	ug/L
CJ19176	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ19176	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ19176	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ19176	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CJ19177	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1300	100	5	5	ug/L
CJ19177	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	4	4	ug/L
CJ19177	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.6	0.6	ug/L
CJ19177	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ19177	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ19177	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19177	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ19177	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ19177	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ19177	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.0075	0.0075	ug/L
CJ19177	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00033	0.00033	ug/L
CJ19177	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00075	0.00075	ug/L
CJ19177	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	330	10	20	20	ug/L
CJ19177	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ19177	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	20	10	2	2	ug/L
CJ19177	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2800	100	5	5	ug/L
CJ19177	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	330	10	20	20	ug/L
CJ19177	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ19177	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CJ19177	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ19177	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	100	5	5	ug/L
CJ19177	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2800	100	5	5	ug/L
CJ19177	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	10	2	2	ug/L
CJ19177	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ19177	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	10	7	7	ug/L
CJ19177	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CJ19177	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CJ19177	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ19177	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ19177	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	20	10	2	2	ug/L
CJ19177	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2800	100	5	5	ug/L
CJ19177	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	100	50	50	ug/L
CJ19177	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CJ19177	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	330	10	20	20	ug/L
CJ19177	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	20	10	2	2	ug/L
CJ19177	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CJ19177	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	330	10	70	70	ug/L
CJ19177	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2800	100	5	5	ug/L
CJ19177	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CJ19177	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	11	10	7	7	ug/L
CJ19177	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19177	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CJ19177	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	100	5	5	ug/L
CJ19177	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ19177	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	100	50	50	ug/L
CJ19177	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	330	10	20	20	ug/L
CJ19177	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2800	100	5	5	ug/L
CJ19177	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ19177	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CJ19177	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	20	10	2	2	ug/L
CJ19177	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	21	0.20	0.3	0.3	ug/l
CJ19177	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	0.20	0.3	0.3	ug/l
CJ19177	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	21	0.20	0.3	0.3	ug/l
CJ19177	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1000	0.3	0.3	ug/L
CJ19178	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19178	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19178	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19178	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19178	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19178	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19178	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19178	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19179	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19179	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19179	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19179	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19179	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19179	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19179	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19179	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ19180	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19180	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19180	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19180	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19180	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19180	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.4	0.20	0.3	0.3	ug/l
CJ19180	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	1.4	0.20	0.3	0.3	ug/l
CJ19180	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	1.4	0.20	0.3	0.3	ug/l

Wednesday, September 29, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ19155 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ19180	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19181	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ19181	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ19181	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ19181	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ19181	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ19181	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ19181	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ19181	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ19155, CJ19156, CJ19157, CJ19158, CJ19159, CJ19160, CJ19161, CJ19162, CJ19163, CJ19164, CJ19165, CJ19166, CJ19167, CJ19168, CJ19169, CJ19170, CJ19171, CJ19172, CJ19173, CJ19174, CJ19175, CJ19176, CJ19177, CJ19178, CJ19179, CJ19180, CJ19181

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: SVOASIM Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Wednesday, September 29, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 29, 2021

SDG I.D.: GCJ19155

SDG Comments

Metals Analysis: CJ19158, CJ19170 -
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/09/21-1 Adam Werner, Chemist 09/09/21

CJ19155 (1X), CJ19160 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0909_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM34 09/09/21-2 Adam Werner, Chemist 09/09/21

CJ19161 (1X), CJ19169 (1X), CJ19170 (1X), CJ19172 (1X), CJ19174 (1X), CJ19175 (1X), CJ19177 (1X), CJ19180 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0909_42-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 590939 (CJ19155)

CJ19155, CJ19160, CJ19161, CJ19169, CJ19170, CJ19172, CJ19174, CJ19175, CJ19177, CJ19180

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.

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NY # 11301

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September 29, 2021

SDG I.D.: GCJ19155

522 - DIOXANE

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

AU-FID3 09/09/21-1 Adam Werner, Chemist 09/09/21

CJ19158 (1X), CJ19175 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/08/21-1 Adam Werner, Chemist 09/08/21

CJ19170 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/09/21-1 Adam Werner, Chemist 09/09/21

CJ19158 (1X), CJ19175 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 590929 (CJ16894)

CJ19158, CJ19170, CJ19175

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/08/21-1 Greg Danielewski, Chemist 09/08/21

CJ19170

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MCP Certification Report

September 29, 2021

SDG I.D.: GCJ19155

Wet Chemistry Analysis

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 590916 (CJ20115)

CJ19170

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 590972 (CJ17820)

CJ19170

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/02/21-1 Brian Sheriden, Eric Geyer, Chemist 09/02/21

CJ19170

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 590564 (CJ19289)

CJ19170

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/03/21 08:24 Cindy Pearce, Emily Kolominskaya, Chemist 09/03/21

CJ19158, CJ19170

Additional criteria for CCV and ICSAB:

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Certification Report

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SDG I.D.: GCJ19155

ICP Metals Narration

Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS 09/07/21 08:33 Cindy Pearce, Emily Kolominskaya, Chemist 09/07/21

CJ19170

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/03/21 08:05 Emily Kolominskaya, Chemist 09/03/21

CJ19158, CJ19170

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/07/21 08:13 Emily Kolominskaya, Chemist 09/07/21

CJ19170

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 590400 (CJ19170)

CJ19158, CJ19170

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 590419 (CJ19110)

CJ19158, CJ19170

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NY # 11301

Certification Report

September 29, 2021

SDG I.D.: GCJ19155

ICP Metals Narration

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 590599 (Samples: CJ19158, CJ19170, CJ19175): -----

The LCS recovery is below the lower range. The LCSD is acceptable. No significant bias is suspected. (Acenaphthylene)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (Acenaphthylene, Benzo(a)pyrene)

Instrument:

CHEM27 09/06/21-1 Matt Richard, Chemist 09/06/21

CJ19158 (1X), CJ19170 (1X), CJ19175 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0706):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/0906_08-27_BNSIM18_0706) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
90% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Benzo(a)pyrene 28%H (20%), Indeno(1,2,3-cd)pyrene 21%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 590599 (CJ19087)

CJ19158, CJ19170, CJ19175

All LCS recoveries were within 40 - 140 with the following exceptions: Acenaphthylene(35%)
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Acenaphthylene(73.9%), Benzo(a)pyrene(27.8%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

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MCP Certification Report

September 29, 2021

SDG I.D.: GCJ19155

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/07/21-2 Michael Hahn, Chemist 09/07/21

CJ19155 (1X), CJ19156 (1X), CJ19157 (1X), CJ19158 (20X), CJ19159 (20X), CJ19170 (100X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0907_17-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/08/21-1 Michael Hahn, Chemist 09/08/21

CJ19157 (5X), CJ19160 (1X), CJ19161 (1X), CJ19162 (1X), CJ19164 (1X), CJ19166 (1X), CJ19168 (20X), CJ19169 (20X), CJ19171 (1X), CJ19172 (20X), CJ19173 (20X), CJ19175 (20X), CJ19176 (20X), CJ19178 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0908_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.180 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/10/21-1 Michael Hahn, Chemist 09/10/21

CJ19158 (1X), CJ19159 (1X), CJ19165 (1X), CJ19167 (1X), CJ19168 (2X), CJ19169 (10X), CJ19170 (500X), CJ19172 (5X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0910_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

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September 29, 2021

SDG I.D.: GCJ19155

VOA Narration

99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.099 (0.1)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/11/21-1 Michael Hahn, Chemist 09/11/21

CJ19173 (10X), CJ19174 (1X, 10X, 50X), CJ19175 (100X), CJ19176 (200X), CJ19177 (10X, 100X), CJ19181 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0911_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2,3-Trichlorobenzene 22%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.180 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/13/21-1 Michael Hahn, Chemist 09/13/21

CJ19163 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0913_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.095 (0.1), Tetrachloroethene 0.193 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/14/21-1 Michael Hahn, Chemist 09/14/21

CJ19179 (1X), CJ19180 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 29, 2021

SDG I.D.: GCJ19155

VOA Narration

Continuing Calibration Verification (CHEM23/0914_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.184 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 590973 (CJ17886) CHEM23 9/7/2021-2

CJ19155(1X), CJ19156(1X), CJ19157(1X), CJ19158(20X), CJ19159(20X), CJ19170(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 591188 (CJ19171) CHEM23 9/8/2021-1

CJ19157(5X), CJ19160(1X), CJ19161(1X), CJ19162(1X), CJ19164(1X), CJ19166(1X), CJ19168(20X), CJ19169(20X), CJ19171(1X), CJ19172(20X), CJ19173(20X), CJ19175(20X), CJ19176(20X), CJ19178(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 591670 (CJ19174) CHEM23 9/11/2021-1

CJ19173(10X), CJ19174(10X, 50X), CJ19175(100X), CJ19176(200X), CJ19177(10X, 100X), CJ19181(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 591823 (CJ22041) CHEM23 9/13/2021-1

CJ19163(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 29, 2021

SDG I.D.: GCJ19155

VOA Narration

Batch 591863 (CJ17883) CHEM23 9/10/2021-1

CJ19158(1X), CJ19159(1X), CJ19165(1X), CJ19167(1X), CJ19168(2X), CJ19169(10X), CJ19170(500X), CJ19172(5X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 591965 (CJ20188) CHEM23 9/14/2021-1

CJ19179(1X), CJ19180(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/07/21-1 Raman Makol, Chemist 09/07/21

CJ19158 (1X), CJ19175 (1X)

Initial Calibration Evaluation (PIDFID/VPH_090221_T):
The following compounds exceeded %RSD criteria: None.

PIDFID 09/08/21-1 Raman Makol, Chemist 09/08/21

CJ19170 (1X)

Initial Calibration Evaluation (PIDFID/VPH_090221_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 590926 (CJ17860)

CJ19158(1X), CJ19175(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

Batch 591177 (CJ22046)

CJ19170(1X)

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 29, 2021

SDG I.D.: GCJ19155

VPH Narration

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☐ ICE ☑ No ☐
Temp 1.6°C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature [signature] Date: 9/2/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, [redacted] (6010C) - HNO3 (FF)	Dissolved As, [redacted] (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
19155 (B)	21A-AE109R2-090221-1	GW	9/2/21	1350	3	1						X	X								
19156	21A-AE109R3-090221-1	GW	9/2/21	1400	3							X									
19159	21A-AE109R4-090221-1	GW	9/2/21	1405	3							X									
19158	21A-AE109R5-090221-1	GW	9/2/21	1425	5	4		2				X		X	X	X	X				
19157	21A-AE109R6-090221-1	GW	9/2/21	1410	3							X									
19160	21A-AE109R7-090221-1	GW	9/2/21	1418	3	1						X	X								
(1) 19161	21A-AE109R2-090221-2	GW	9/2/21	1355	3	1						X	X								
(2) 19162	21A-AE109R8-090221-1	GW	9/2/21	1420	3							X									
19163	21A-AE110R1-090221-1	GW	9/2/21	1350	3							X									
19164	21A-AE110R2-090221-1	GW	9/2/21	1355	3							X									
19165	21A-AE110R3-090221-1	GW	9/2/21	1400	3							X									
19166	21A-AE110R4-090221-1	GW	9/2/21	1410	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-2-21	15:00
[signature]	Lori Bailey	9-2-21	16:46
	NO (B)		

Comments, Special Requirements or Regulations:
(1) Per Client ~~add~~ Dioxane (B)
(2) Per Client Add Dioxane

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

Cooler: Yes ☒ No ☐
Coolant: IPK ☒ ICE ☐ No ☐
Temp 4.0 °C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX *Environmental Laboratories, Inc.*

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/2/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

					# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP: VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP: EPH-04-1.1 Rev 1)	Total Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	
PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled																	Comments
19167	21A-AE26R3-090121-1	GW	9/1/21	1345	3							X									
19168	21A-AE26R4-090121-1	GW	9/1/21	1440	3							X									
19169	21A-AE26R5-090121-1	GW	9/1/21	1535	3	1						X	X								
19170	21A-AE28R2-090121-1	GW	9/1/21	1415	5	5		4				X	X	X	X	X	X	X	X	X	
19171	21A-TB02-090121-1	GW	9/1/21	0805	2							X									
19172	21A-AE104R1-090221-1	GW	9/2/21	1335	3	1						X	X								
(1) 19173	21A-AE104R2-090221-1	GW	9/2/21	1340	3	1						X	X								VOCs 3-5 ppm
(2) 19174	21A-AE104R3-090221-1	GW	9/2/21	1345	3							X									
19175	21A-AE104R4-090221-1	GW	9/2/21	1350	5	4						X	X	X	X						
19176	21A-AE104R5-090221-1	GW	9/2/21	1355	3							X									
19177	21A-AE104R6-090221-1	GW	9/2/21	1400	3	1						X	X								
19178	21A-AE109R1-090221-1	GW	9/2/21	1345	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-2-21	15:00
	[signature]	9-2-21	16:46

Comments, Special Requirements or Regulations:
(1) Per Client No Dioxane
(2) Per Client add Dioxane

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
x MCP (CAM Rpt)
x GW-1
x GW-2
x GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]

CHAIN OF CUSTODY RECORD

Temp 1.6 °C Pg of

PHOENIX *Environmental Laboratories, Inc.*

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

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lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature [signature] Date: 9/2/21

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
19179	2A-AE110R5-090221-1	GW	9/2/21	1415	3							X									
19180	2A-AE110R6-090221-1	GW	9/2/21	1420	3	1						X	X								
19181	2A-AE110R7-090221-1	GW	9/2/21	1425	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-2-21	15:00
	[signature]	9-2-21	16:46

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- [ ] Direct Exposure (Residential)
- [ ] GW
- [ ] Other

CT
- [ ] RCP Cert
- [ ] GW Protection
- [ ] SW Protection
- [ ] GA Mobility
- [ ] GB Mobility
- [ ] Residential DEC
- [ ] I/C DEC
- [ ] Other

MA
- [x] MCP (CAM Rpt)
- [x] GW-1
- [x] GW-2
- [x] GW-3
- [ ] S-1
- [ ] S-2
- [ ] S-3
- [ ] MWRA eSMART
- [ ] Other

State where samples were collected: MA

Data Format
- [x] PDF
- [x] AECOM EQuIS 4-File EDD format

Data Package
- [ ] Tier II Checklist
- [ ] Full Data Package*
- [ ] Phoenix Std Report
- [ ] Other

* SURCHARGE APPLIES

Rebecca Merz

From: Herberich, Lori <Lori.Herberich@aecom.com>
Sent: Tuesday, September 28, 2021 3:54 PM
To: Rebecca Merz
Subject: RE: field duplicates

Hi,

Dylan confirmed that sample CJ19161 should be 109R2. Can you revise the report to reflect that? And now the field duplicate results look way better.

Thanks,

Lori

From: Rebecca Merz <Rebeccam@phoenixlabs.com>
Sent: Tuesday, September 28, 2021 12:56 PM
To: Herberich, Lori <Lori.Herberich@aecom.com>
Subject: [EXTERNAL] RE: field duplicates

Hi Lori,

We re-ran the 1,-4-Dioxane extracts and they confirmed. Also, pulled different VOC vials to verify the data and that checks out. Pic of vials below. One thing we noticed is that on the chain of custody CJ19161 (21A-109R7-090221-2) looks more like a 109R2. I did a quick comparison of the data between CJ19155 (21A-109R2-090221-1) & CJ19161 (21A-109R7-090221-2) and they check out. Please let us know if you'd like the sample ID updated from 7 to 2 on CJ19161.

1,4-Dioxane
CJ19155 6.4 ug/L
CJ19161 6.8 ug/L

PCE, Cis-1,2-DCE
CJ19155 1.3 ug/L, 3.6 ug/L
CJ19161 1.2 ug/L, 3.8 ug/L

PHOENIX
Environmental Laboratories, Inc.

Friday, September 24, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.25**
SDG ID: **GCJ20182**
Sample ID#s: CJ20182 - CJ20191

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

September 24, 2021

SDG I.D.: GCJ20182

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver. 2:
This report has been revised to correct the method reference for MA VPH.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

September 24, 2021

SDG I.D.: GCJ20182

Project ID: LOCKHEED WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-AE25S-090321-1	CJ20182	GROUND WATER
21A-AE25D-090321-1	CJ20183	GROUND WATER
21A-AE25R-090321-1	CJ20184	GROUND WATER
21A-AE27R-090321-1	CJ20185	GROUND WATER
21A-AE23S-090321-1	CJ20186	GROUND WATER
21A-AE23R-090321-1	CJ20187	GROUND WATER
21A-AE24-090321-1	CJ20188	GROUND WATER
21A-AE26S-090321-1	CJ20189	GROUND WATER
21A-AE26D-090321-1	CJ20190	GROUND WATER
21A-TB-01-090321-1	CJ20191	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/03/21	11:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/03/21	14:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ20182
Phoenix ID: CJ20182

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE25S-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/11/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20182

Client ID: 21A-AE25S-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/11/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromodichloromethane	0.87	0.50	ug/L	1	09/11/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloroform	1.1	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Tetrachloroethene	2.8	1.0	ug/L	1	09/11/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/11/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/11/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/11/21	MH	70 - 130 %
% Dibromofluoromethane	117		%	1	09/11/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/11/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/11/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20182

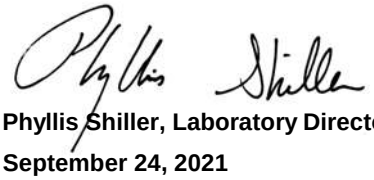
Client ID: 21A-AE25S-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/03/21	11:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/03/21	14:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ20182
Phoenix ID: CJ20183

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE25D-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/11/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/11/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromodichloromethane	1.2	0.50	ug/L	1	09/11/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloroform	1.5	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Dibromochloromethane	0.55	0.50	ug/L	1	09/11/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Tetrachloroethene	1.0	1.0	ug/L	1	09/11/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/11/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/11/21	MH	70 - 130 %
% Bromofluorobenzene	92		%	1	09/11/21	MH	70 - 130 %
% Dibromofluoromethane	117		%	1	09/11/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/11/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/11/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20183

Client ID: 21A-AE25D-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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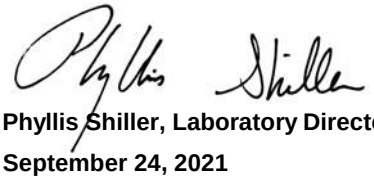


Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/03/21	12:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/03/21	14:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ20182
Phoenix ID: CJ20184

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE25R-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloroethane	2.3	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/11/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/11/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20184

Client ID: 21A-AE25R-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/11/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
cis-1,2-Dichloroethene	17	1.0	ug/L	1	09/11/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/11/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/11/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Tetrachloroethene	1.6	1.0	ug/L	1	09/11/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/11/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/11/21	MH	SW8260C
Trichloroethene	13	1.0	ug/L	1	09/11/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/11/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/11/21	MH	70 - 130 %
% Bromofluorobenzene	92		%	1	09/11/21	MH	70 - 130 %
% Dibromofluoromethane	114		%	1	09/11/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/11/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/11/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20184

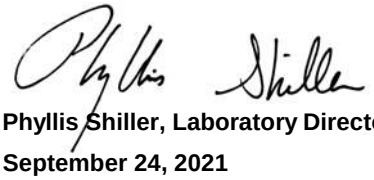
Client ID: 21A-AE25R-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/11/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/03/21	10:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/03/21	14:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ20182
Phoenix ID: CJ20185

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE27R-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	09/14/21	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	09/14/21	MH	SW8260C
Acetone	ND	50	ug/L	2	09/14/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20185

Client ID: 21A-AE27R-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	09/14/21	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	09/14/21	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
cis-1,2-Dichloroethene	500	100	ug/L	100	09/11/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	09/14/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Styrene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Tetrachloroethene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	09/14/21	MH	SW8260C
Toluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
trans-1,2-Dichloroethene	3.2	2.0	ug/L	2	09/14/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Trichloroethene	2.8	2.0	ug/L	2	09/14/21	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	107		%	2	09/14/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	95		%	2	09/14/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	109		%	2	09/14/21	MH	70 - 130 %
% Toluene-d8 (2x)	102		%	2	09/14/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	106		%	100	09/11/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	93		%	100	09/11/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	118		%	100	09/11/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	102		%	100	09/11/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	2	09/14/21	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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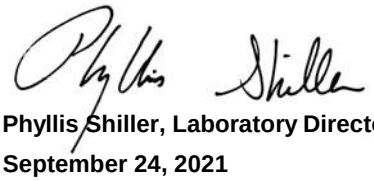


Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/03/21	10:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/03/21	14:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ20182
Phoenix ID: CJ20186

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE23S-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20186

Client ID: 21A-AE23S-090321-1

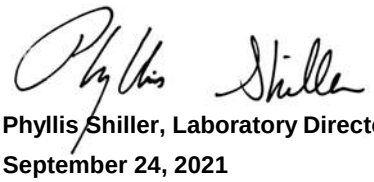
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/14/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
cis-1,2-Dichloroethene	2.1	1.0	ug/L	1	09/14/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Tetrachloroethene	260	20	ug/L	20	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/21	MH	SW8260C
Trichloroethene	17	1.0	ug/L	1	09/14/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	107		%	1	09/14/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/14/21	MH	70 - 130 %
% Dibromofluoromethane	111		%	1	09/14/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/14/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	107		%	20	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	09/13/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	122		%	20	09/13/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	103		%	20	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/03/21	11:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/03/21	14:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ20182
Phoenix ID: CJ20187

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE23R-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/08/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/03/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/07/21	P/D	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/07/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	1500	1000	ug/L	1000	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,1-Dichloroethane	900	500	ug/L	1000	09/13/21	MH	SW8260C
1,1-Dichloroethene	660	500	ug/L	1000	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1000	ug/L	1000	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	600	ug/L	1000	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1000	ug/L	1000	09/13/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
2-Hexanone	ND	5000	ug/L	1000	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5000	ug/L	1000	09/13/21	MH	SW8260C
Acetone	ND	6300	ug/L	1000	09/13/21	MH	SW8260C
Benzene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Bromobenzene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Bromochloromethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Bromodichloromethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Bromoform	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Bromomethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Carbon Disulfide	ND	810	ug/L	1000	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Chlorobenzene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Chloroethane	ND	1000	ug/L	1000	09/13/21	MH	SW8260C
Chloroform	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Chloromethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Dibromochloromethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Dibromomethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Ethylbenzene	ND	700	ug/L	1000	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Isopropylbenzene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
m&p-Xylene	ND	1000	ug/L	1000	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5000	ug/L	1000	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Methylene chloride	ND	5000	ug/L	1000	09/13/21	MH	SW8260C
Naphthalene	ND	1000	ug/L	1000	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1000	ug/L	1000	09/13/21	MH	SW8260C
n-Propylbenzene	ND	660	ug/L	1000	09/13/21	MH	SW8260C
o-Xylene	ND	1000	ug/L	1000	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1000	ug/L	1000	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1000	ug/L	1000	09/13/21	MH	SW8260C
Styrene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	690	ug/L	1000	09/13/21	MH	SW8260C
Tetrachloroethene	56000	1000	ug/L	1000	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2500	ug/L	1000	09/13/21	MH	SW8260C
Toluene	3600	1000	ug/L	1000	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	500	ug/L	1000	09/13/21	MH	SW8260C
Trichloroethene	150000	10000	ug/L	10000	09/14/21	MH	SW8260C
Trichlorofluoromethane	ND	1000	ug/L	1000	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1000	ug/L	1000	09/13/21	MH	SW8260C
Vinyl chloride	ND	500	ug/L	1000	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (1000x)	106		%	1000	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (1000x)	93		%	1000	09/13/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (1000x)	124		%	1000	09/13/21	MH	70 - 130 %
% Toluene-d8 (1000x)	94		%	1000	09/13/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10000x)	108		%	10000	09/14/21	MH	70 - 130 %
% Bromofluorobenzene (10000x)	93		%	10000	09/14/21	MH	70 - 130 %
% Dibromofluoromethane (10000x)	113		%	10000	09/14/21	MH	70 - 130 %
% Toluene-d8 (10000x)	101		%	10000	09/14/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100000	ug/L	1000	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1000	ug/L	1000	09/13/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1000	ug/L	1000	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1000	ug/L	1000	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1000	ug/L	1000	09/13/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/08/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/08/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/08/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/08/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/08/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Naphthalene	1.0	0.47	ug/L	1	09/08/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/08/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/08/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	57		%	1	09/08/21	WB	40 - 140 %
% Nitrobenzene-d5	112		%	1	09/08/21	WB	40 - 140 %
% Terphenyl-d14	77		%	1	09/08/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	12	0.40	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	44		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20187
Client ID: 21A-AE23R-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	85		%	1	09/09/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	112		%	1	09/09/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	104		%	1	09/09/21	AW	40 - 140 %
% o-terphenyl (aromatic)	101		%	1	09/09/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	68000	2000	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	2000	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	64000	2000	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	2000	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	2000	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
Benzene	ND	20	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
Ethyl Benzene	36	20	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
MTBE	ND	20	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
Naphthalene	ND	100	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
Toluene	3800	100	ug/L	100	09/08/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	40	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
o-Xylene	ND	20	ug/L	20	09/07/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	88		%	20	09/07/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	87		%	20	09/07/21	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

VPH diluted run
Elevated reporting limits for VPH due to the presence of target and/or non-target compounds.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Ver 2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/03/21	11:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/03/21	14:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ20182
Phoenix ID: CJ20188

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE24-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				09/14/21		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	09/14/21	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	09/14/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20188

Client ID: 21A-AE24-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	50	ug/L	2	09/14/21	MH	SW8260C
Benzene	ND	1.4	ug/L	2	09/14/21	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	09/14/21	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	09/14/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Styrene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Tetrachloroethene	350	20	ug/L	20	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	09/14/21	MH	SW8260C
Toluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Trichloroethene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	106		%	2	09/14/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	94		%	2	09/14/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	114		%	2	09/14/21	MH	70 - 130 %
% Toluene-d8 (2x)	102		%	2	09/14/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	106		%	20	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	91		%	20	09/13/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (20x)	122		%	20	09/13/21	MH	70 - 130 %
% Toluene-d8 (20x)	103		%	20	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	2	09/14/21	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	09/09/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	84		%	1	09/09/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/03/21	12:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/03/21	14:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ20182
Phoenix ID: CJ20189

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE26S-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/08/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/04/21	CPP	SW6010D
Dissolved Metals Preparation	Completed				09/03/21	AG	SW3005A
Total Metals Digestion	Completed				09/07/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20189

Client ID: 21A-AE26S-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/12/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/12/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromodichloromethane	0.73	0.50	ug/L	1	09/12/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,2-Dichloroethene	17	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrachloroethene	22	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/12/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Trichloroethene	7.5	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/12/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/12/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	111		%	1	09/12/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/12/21	MH	70 - 130 %

Oxygenates& Dioxane

1,4-dioxane	ND	100	ug/L	1	09/12/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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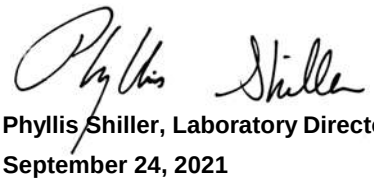

Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/03/21	11:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/03/21	14:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ20182
Phoenix ID: CJ20190

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE26D-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/15/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/15/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromodichloromethane	1.3	0.50	ug/L	1	09/15/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroform	1.6	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Dibromochloromethane	0.58	0.50	ug/L	1	09/15/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrachloroethene	2.6	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/15/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/15/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/15/21	MH	70 - 130 %
% Dibromofluoromethane	119		%	1	09/15/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/15/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/15/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20190

Client ID: 21A-AE26D-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

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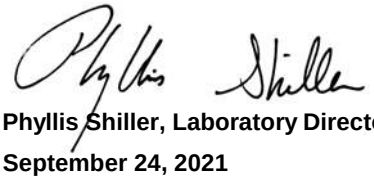


Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/03/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/03/21	14:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ20182
Phoenix ID: CJ20191

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-TB-01-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/12/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20191

Client ID: 21A-TB-01-090321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/12/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/12/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	09/12/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/12/21	MH	70 - 130 %
% Dibromofluoromethane	111		%	1	09/12/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/12/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/12/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ20191

Client ID: 21A-TB-01-090321-1

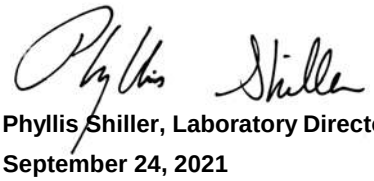
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 24, 2021

QA/QC Data

SDG I.D.: GCJ20182

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 590799 (mg/L), QC Sample No: CJ19847 (CJ20189)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	98.6	100	1.4	99.9			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 590589 (mg/L), QC Sample No: CJ20189 (CJ20189)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	91.1	92.6	1.6	92.8			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 24, 2021

QA/QC Data

SDG I.D.: GCJ20182

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 590938 (ug/l), QC Sample No: CJ20188 (CJ20188)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	91	85	6.8	92			70 - 130	20
% 1,4-dioxane-d8	89	%	94	98	4.2	93			70 - 130	20
QA/QC Batch 590929 (ug/L), QC Sample No: CJ16894 (CJ20187)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	68	71	4.3				40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	102	111	8.5				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	107	104	2.8				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	87	94	7.7				40 - 140	25
C9 - Nonane	ND	10	45	43	4.5				40 - 140	25
C-10 Decane	ND	10	58	59	1.7				40 - 140	25
C12 - Dodecane	ND	10	58	62	6.7				40 - 140	25
C14 - Tetradecane	ND	10	70	75	6.9				40 - 140	25
C16 - Hexadecane	ND	10	78	85	8.6				40 - 140	25
C18 - Octadecane	ND	10	97	104	7.0				40 - 140	25
C19 - Nonadecane	ND	10	96	103	7.0				40 - 140	25
C20 - Eicosane	ND	10	96	103	7.0				40 - 140	25
C22 - Docosane	ND	10	99	106	6.8				40 - 140	25
C24 - Tetracosane	ND	10	103	110	6.6				40 - 140	25
C26 - Hexacosane	ND	10	102	110	7.5				40 - 140	25
C28 - Octacosane	ND	10	105	114	8.2				40 - 140	25
C30 - Tricotane	ND	10	102	112	9.3				40 - 140	25
C36 - Hexatriacontane	ND	10	111	128	14.2				40 - 140	25
% 1-chlorooctadecane (aliphatic)	91	%	94	102	8.2				40 - 140	25
% o-terphenyl (aromatic)	94	%	95	93	2.1				40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	96	%	105	98	6.9				40 - 140	25
% 2-Bromonaphthalene (Fractionati	108	%	116	108	7.1				40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 591391 (ug/l), QC Sample No: CJ21030 (CJ20187)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	71	90	23.6	NC			40 - 140	30
% 1,4-dioxane-d8	82	%	87	90	3.4	81			40 - 140	30
QA/QC Batch 590817 (ug/L), QC Sample No: CJ20187 (CJ20187)										
Semivolatiles by SIM, PAH - Ground Water										
2-Methylnaphthalene	ND	0.50	83	71	15.6				40 - 140	20

QA/QC Data

SDG I.D.: GCJ20182

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Acenaphthene	ND	0.50	76	70	8.2				40 - 140	20	
Acenaphthylene	ND	0.10	30	24	22.2				40 - 140	20	l,r
Anthracene	ND	0.10	73	67	8.6				40 - 140	20	
Benz(a)anthracene	ND	0.05	66	69	4.4				40 - 140	20	
Benzo(a)pyrene	ND	0.20	64	58	9.8				40 - 140	20	
Benzo(b)fluoranthene	ND	0.07	80	87	8.4				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	43	45	4.5				40 - 140	20	
Benzo(k)fluoranthene	ND	0.10	61	76	21.9				40 - 140	20	r
Chrysene	ND	0.05	71	71	0.0				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	75	87	14.8				40 - 140	20	
Fluoranthene	ND	0.50	79	75	5.2				40 - 140	20	
Fluorene	ND	0.10	84	73	14.0				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.10	48	52	8.0				40 - 140	20	
Naphthalene	ND	0.50	87	75	14.8				40 - 140	20	
Phenanthrene	ND	0.06	92	81	12.7				40 - 140	20	
Pyrene	ND	0.07	45	46	2.2				40 - 140	20	
% 2-Fluorobiphenyl	37	%	66	57	14.6				40 - 140	20	s
% Nitrobenzene-d5	55	%	129	107	18.6				40 - 140	20	
% Terphenyl-d14	61	%	67	71	5.8				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 591670 (ug/L), QC Sample No: CJ19174 (CJ20182, CJ20183, CJ20184, CJ20185 (100X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	100	100	0.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	102	102	0.0				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	98	101	3.0				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	105	106	0.9				70 - 130	20	
1,1-Dichloroethane	ND	1.0	102	103	1.0				70 - 130	20	
1,1-Dichloroethene	ND	1.0	94	94	0.0				70 - 130	20	
1,1-Dichloropropene	ND	1.0	106	109	2.8				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	84	88	4.7				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	96	101	5.1				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	92	98	6.3				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	113	116	2.6				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	96	96	0.0				70 - 130	20	
1,2-Dibromoethane	ND	1.0	101	103	2.0				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	97	98	1.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	98	101	3.0				70 - 130	20	
1,2-Dichloropropane	ND	1.0	101	102	1.0				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	112	114	1.8				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	102	104	1.9				70 - 130	20	
1,3-Dichloropropane	ND	1.0	103	103	0.0				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20	
1,4-dioxane	ND	100	99	104	4.9				40 - 160	20	
2,2-Dichloropropane	ND	1.0	108	105	2.8				70 - 130	20	
2-Chlorotoluene	ND	1.0	105	108	2.8				70 - 130	20	
2-Hexanone	ND	5.0	91	92	1.1				40 - 160	20	
4-Chlorotoluene	ND	1.0	104	106	1.9				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	97	101	4.0				40 - 160	20	
Acetone	ND	5.0	97	99	2.0				40 - 160	20	
Benzene	ND	0.70	102	105	2.9				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ20182

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromobenzene	ND	1.0	98	100	2.0				70 - 130	20
Bromochloromethane	ND	1.0	105	105	0.0				70 - 130	20
Bromodichloromethane	ND	0.50	100	102	2.0				70 - 130	20
Bromoform	ND	1.0	98	100	2.0				70 - 130	20
Bromomethane	ND	1.0	96	96	0.0				40 - 160	20
Carbon Disulfide	ND	1.0	91	89	2.2				70 - 130	20
Carbon tetrachloride	ND	1.0	107	105	1.9				70 - 130	20
Chlorobenzene	ND	1.0	99	99	0.0				70 - 130	20
Chloroethane	ND	1.0	97	97	0.0				70 - 130	20
Chloroform	ND	1.0	97	99	2.0				70 - 130	20
Chloromethane	ND	1.0	97	96	1.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	104	101	2.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	108	109	0.9				70 - 130	20
Dibromochloromethane	ND	0.50	99	100	1.0				70 - 130	20
Dibromomethane	ND	1.0	102	105	2.9				70 - 130	20
Dichlorodifluoromethane	ND	1.0	113	111	1.8				40 - 160	20
Di-isopropyl ether	ND	1.0	106	108	1.9				70 - 130	20
Ethyl ether	ND	1.0	89	92	3.3				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	110	112	1.8				70 - 130	20
Ethylbenzene	ND	1.0	102	102	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	90	93	3.3				70 - 130	20
Isopropylbenzene	ND	1.0	111	112	0.9				70 - 130	20
m&p-Xylene	ND	1.0	107	105	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	103	101	2.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	104	106	1.9				70 - 130	20
Methylene chloride	ND	1.0	97	97	0.0				70 - 130	20
Naphthalene	ND	1.0	88	92	4.4				70 - 130	20
n-Butylbenzene	ND	1.0	118	120	1.7				70 - 130	20
n-Propylbenzene	ND	1.0	110	111	0.9				70 - 130	20
o-Xylene	ND	1.0	107	108	0.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	118	120	1.7				70 - 130	20
sec-Butylbenzene	ND	1.0	116	119	2.6				70 - 130	20
Styrene	ND	1.0	114	112	1.8				70 - 130	20
tert-amyl methyl ether	ND	1.0	100	104	3.9				70 - 130	20
tert-Butylbenzene	ND	1.0	114	115	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	102	102	0.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	109	114	4.5				70 - 130	20
Toluene	ND	1.0	101	103	2.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	95	97	2.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	106	110	3.7				70 - 130	20
Trichloroethene	ND	1.0	100	102	2.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	103	104	1.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	91	89	2.2				70 - 130	20
Vinyl chloride	ND	1.0	103	104	1.0				70 - 130	20
% 1,2-dichlorobenzene-d4	103	%	98	99	1.0				70 - 130	20
% Bromofluorobenzene	96	%	101	100	1.0				70 - 130	20
% Dibromofluoromethane	113	%	106	101	4.8				70 - 130	20
% Toluene-d8	102	%	101	103	2.0				70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCJ20182

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 591965 (ug/L), QC Sample No: CJ20188 (CJ20185 (2X) , CJ20186, CJ20187 (10000X) , CJ20188 (2X))										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	97	95	2.1	105	110	4.7	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	102	98	4.0	112	117	4.4	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	100	97	3.0	103	106	2.9	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	101	100	1.0	108	112	3.6	70 - 130	20
1,1-Dichloroethane	ND	1.0	106	102	3.8	115	122	5.9	70 - 130	20
1,1-Dichloroethene	ND	1.0	96	91	5.3	103	109	5.7	70 - 130	20
1,1-Dichloropropene	ND	1.0	104	102	1.9	105	115	9.1	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	89	86	3.4	86	96	11.0	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	97	96	1.0	100	110	9.5	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	91	88	3.4	85	94	10.1	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	111	108	2.7	110	118	7.0	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	90	90	0.0	90	96	6.5	70 - 130	20
1,2-Dibromoethane	ND	1.0	98	98	0.0	105	106	0.9	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	95	94	1.1	98	104	5.9	70 - 130	20
1,2-Dichloroethane	ND	1.0	95	95	0.0	106	108	1.9	70 - 130	20
1,2-Dichloropropane	ND	1.0	99	99	0.0	104	110	5.6	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	108	3.6	110	118	7.0	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	100	97	3.0	101	107	5.8	70 - 130	20
1,3-Dichloropropane	ND	1.0	101	100	1.0	108	112	3.6	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	94	91	3.2	96	101	5.1	70 - 130	20
1,4-dioxane	ND	100	92	101	9.3	91	107	16.2	40 - 160	20
2,2-Dichloropropane	ND	1.0	107	101	5.8	91	96	5.3	70 - 130	20
2-Chlorotoluene	ND	1.0	105	102	2.9	104	111	6.5	70 - 130	20
2-Hexanone	ND	5.0	90	87	3.4	88	93	5.5	40 - 160	20
4-Chlorotoluene	ND	1.0	103	101	2.0	103	112	8.4	70 - 130	20
4-Methyl-2-pentanone	ND	5.0	96	97	1.0	97	99	2.0	40 - 160	20
Acetone	ND	5.0	87	89	2.3	116	111	4.4	40 - 160	20
Benzene	ND	0.70	102	100	2.0	106	114	7.3	70 - 130	20
Bromobenzene	ND	1.0	97	94	3.1	95	104	9.0	70 - 130	20
Bromochloromethane	ND	1.0	103	99	4.0	116	117	0.9	70 - 130	20
Bromodichloromethane	ND	0.50	96	95	1.0	107	110	2.8	70 - 130	20
Bromoform	ND	1.0	94	93	1.1	103	103	0.0	70 - 130	20
Bromomethane	ND	1.0	92	88	4.4	90	100	10.5	40 - 160	20
Carbon Disulfide	ND	1.0	91	87	4.5	95	102	7.1	70 - 130	20
Carbon tetrachloride	ND	1.0	108	103	4.7	116	123	5.9	70 - 130	20
Chlorobenzene	ND	1.0	97	93	4.2	103	108	4.7	70 - 130	20
Chloroethane	ND	1.0	94	93	1.1	105	110	4.7	70 - 130	20
Chloroform	ND	1.0	99	95	4.1	112	114	1.8	70 - 130	20
Chloromethane	ND	1.0	99	97	2.0	102	111	8.5	40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	100	98	2.0	108	115	6.3	70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	105	104	1.0	90	99	9.5	70 - 130	20
Dibromochloromethane	ND	0.50	96	94	2.1	103	106	2.9	70 - 130	20
Dibromomethane	ND	1.0	98	97	1.0	105	110	4.7	70 - 130	20
Dichlorodifluoromethane	ND	1.0	103	98	5.0	99	107	7.8	40 - 160	20
Di-isopropyl ether	ND	1.0	109	107	1.9	111	120	7.8	70 - 130	20
Ethyl ether	ND	1.0	86	86	0.0	97	102	5.0	70 - 130	20
Ethyl tert-butyl ether	ND	1.0	109	107	1.9	110	117	6.2	70 - 130	20
Ethylbenzene	ND	1.0	101	98	3.0	105	112	6.5	70 - 130	20
Hexachlorobutadiene	ND	0.40	87	82	5.9	84	96	13.3	70 - 130	20
Isopropylbenzene	ND	1.0	112	106	5.5	106	116	9.0	70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
m&p-Xylene	ND	1.0	105	102	2.9	111	116	4.4	70 - 130	20
Methyl ethyl ketone	ND	5.0	97	98	1.0	106	111	4.6	40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	99	97	2.0	107	110	2.8	70 - 130	20
Methylene chloride	ND	1.0	95	91	4.3	105	108	2.8	70 - 130	20
Naphthalene	ND	1.0	92	90	2.2	85	97	13.2	70 - 130	20
n-Butylbenzene	ND	1.0	117	111	5.3	114	124	8.4	70 - 130	20
n-Propylbenzene	ND	1.0	108	103	4.7	108	115	6.3	70 - 130	20
o-Xylene	ND	1.0	105	102	2.9	106	113	6.4	70 - 130	20
p-Isopropyltoluene	ND	1.0	115	111	3.5	110	121	9.5	70 - 130	20
sec-Butylbenzene	ND	1.0	117	111	5.3	112	124	10.2	70 - 130	20
Styrene	ND	1.0	110	108	1.8	116	121	4.2	70 - 130	20
tert-amyl methyl ether	ND	1.0	95	96	1.0	96	104	8.0	70 - 130	20
tert-Butylbenzene	ND	1.0	112	109	2.7	108	120	10.5	70 - 130	20
Tetrachloroethene	ND	1.0	99	96	3.1	NC	NC	NC	70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	109	108	0.9	112	117	4.4	70 - 130	20
Toluene	ND	1.0	101	98	3.0	105	112	6.5	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	95	92	3.2	102	109	6.6	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	103	1.0	105	112	6.5	70 - 130	20
Trichloroethene	ND	1.0	98	95	3.1	105	110	4.7	70 - 130	20
Trichlorofluoromethane	ND	1.0	103	99	4.0	114	119	4.3	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	89	86	3.4	96	99	3.1	70 - 130	20
Vinyl chloride	ND	1.0	105	100	4.9	105	117	10.8	70 - 130	20
% 1,2-dichlorobenzene-d4	105	%	99	100	1.0	99	99	0.0	70 - 130	20
% Bromofluorobenzene	95	%	101	100	1.0	103	101	2.0	70 - 130	20
% Dibromofluoromethane	106	%	103	101	2.0	107	107	0.0	70 - 130	20
% Toluene-d8	101	%	101	101	0.0	100	100	0.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 592004 (ug/L), QC Sample No: CJ20190 (CJ20190)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	98	98	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	95	93	2.1				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	105	104	1.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	109	108	0.9				70 - 130	20
1,1-Dichloroethane	ND	1.0	109	110	0.9				70 - 130	20
1,1-Dichloroethene	ND	1.0	85	84	1.2				70 - 130	20
1,1-Dichloropropene	ND	1.0	96	93	3.2				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	90	89	1.1				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	109	99	9.6				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	90	89	1.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	108	108	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	97	95	2.1				70 - 130	20
1,2-Dibromoethane	ND	1.0	103	103	0.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	98	98	0.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	102	101	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	107	107	0.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	106	105	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	102	100	2.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	107	106	0.9				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	96	96	0.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ20182

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,4-dioxane	ND	100	105	102	2.9				40 - 160	20	
2,2-Dichloropropane	ND	1.0	92	89	3.3				70 - 130	20	
2-Chlorotoluene	ND	1.0	102	103	1.0				70 - 130	20	
2-Hexanone	ND	5.0	97	98	1.0				40 - 160	20	
4-Chlorotoluene	ND	1.0	105	103	1.9				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	107	106	0.9				40 - 160	20	
Acetone	ND	5.0	103	103	0.0				40 - 160	20	
Benzene	ND	0.70	105	105	0.0				70 - 130	20	
Bromobenzene	ND	1.0	98	98	0.0				70 - 130	20	
Bromochloromethane	ND	1.0	109	110	0.9				70 - 130	20	
Bromodichloromethane	ND	0.50	103	102	1.0				70 - 130	20	
Bromoform	ND	1.0	100	96	4.1				70 - 130	20	
Bromomethane	ND	1.0	95	94	1.1				40 - 160	20	
Carbon Disulfide	ND	1.0	86	85	1.2				70 - 130	20	
Carbon tetrachloride	ND	1.0	96	93	3.2				70 - 130	20	
Chlorobenzene	ND	1.0	99	98	1.0				70 - 130	20	
Chloroethane	ND	1.0	96	99	3.1				70 - 130	20	
Chloroform	ND	1.0	103	102	1.0				70 - 130	20	
Chloromethane	ND	1.0	108	110	1.8				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	107	108	0.9				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	108	107	0.9				70 - 130	20	
Dibromochloromethane	ND	0.50	101	98	3.0				70 - 130	20	
Dibromomethane	ND	1.0	109	104	4.7				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	98	95	3.1				40 - 160	20	
Di-isopropyl ether	ND	1.0	116	117	0.9				70 - 130	20	
Ethyl ether	ND	1.0	95	96	1.0				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	116	117	0.9				70 - 130	20	
Ethylbenzene	ND	1.0	98	98	0.0				70 - 130	20	
Hexachlorobutadiene	ND	0.40	72	69	4.3				70 - 130	20	I
Isopropylbenzene	ND	1.0	102	101	1.0				70 - 130	20	
m&p-Xylene	ND	1.0	102	104	1.9				70 - 130	20	
Methyl ethyl ketone	ND	5.0	107	112	4.6				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	106	106	0.0				70 - 130	20	
Methylene chloride	ND	1.0	100	101	1.0				70 - 130	20	
Naphthalene	ND	1.0	96	95	1.0				70 - 130	20	
n-Butylbenzene	ND	1.0	104	101	2.9				70 - 130	20	
n-Propylbenzene	ND	1.0	100	100	0.0				70 - 130	20	
o-Xylene	ND	1.0	103	104	1.0				70 - 130	20	
p-Isopropyltoluene	ND	1.0	105	102	2.9				70 - 130	20	
sec-Butylbenzene	ND	1.0	102	101	1.0				70 - 130	20	
Styrene	ND	1.0	113	112	0.9				70 - 130	20	
tert-amyl methyl ether	ND	1.0	102	102	0.0				70 - 130	20	
tert-Butylbenzene	ND	1.0	102	99	3.0				70 - 130	20	
Tetrachloroethene	ND	1.0	91	89	2.2				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	120	124	3.3				70 - 130	20	
Toluene	ND	1.0	102	101	1.0				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	95	93	2.1				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	106	106	0.0				70 - 130	20	
Trichloroethene	ND	1.0	95	96	1.0				70 - 130	20	
Trichlorofluoromethane	ND	1.0	87	83	4.7				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	72	69	4.3				70 - 130	20	I
Vinyl chloride	ND	1.0	100	98	2.0				70 - 130	20	
% 1,2-dichlorobenzene-d4	105	%	101	101	0.0				70 - 130	20	

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% Bromofluorobenzene	96	%		101	102	1.0				70 - 130	20
% Dibromofluoromethane	113	%		106	100	5.8				70 - 130	20
% Toluene-d8	102	%		102	102	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 591692 (ug/L), QC Sample No: CJ20191 (CJ20186 (20X) , CJ20187 (1000X) , CJ20188 (20X) , CJ20189, CJ20191)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0		100	103	3.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0		102	102	0.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50		104	102	1.9				70 - 130	20
1,1,2-Trichloroethane	ND	1.0		102	103	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0		101	104	2.9				70 - 130	20
1,1-Dichloroethene	ND	1.0		93	94	1.1				70 - 130	20
1,1-Dichloropropene	ND	1.0		106	106	0.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0		96	93	3.2				70 - 130	20
1,2,3-Trichloropropane	ND	1.0		105	102	2.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0		99	98	1.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0		114	114	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0		103	104	1.0				70 - 130	20
1,2-Dibromoethane	ND	1.0		103	104	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0		99	97	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0		98	98	0.0				70 - 130	20
1,2-Dichloropropane	ND	1.0		100	100	0.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0		113	112	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0		104	103	1.0				70 - 130	20
1,3-Dichloropropane	ND	1.0		105	105	0.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0		97	96	1.0				70 - 130	20
1,4-dioxane	ND	100		109	100	8.6				40 - 160	20
2,2-Dichloropropane	ND	1.0		105	107	1.9				70 - 130	20
2-Chlorotoluene	ND	1.0		107	105	1.9				70 - 130	20
2-Hexanone	ND	5.0		100	97	3.0				40 - 160	20
4-Chlorotoluene	ND	1.0		108	107	0.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0		106	100	5.8				40 - 160	20
Acetone	ND	5.0		101	97	4.0				40 - 160	20
Benzene	ND	0.70		102	102	0.0				70 - 130	20
Bromobenzene	ND	1.0		101	98	3.0				70 - 130	20
Bromochloromethane	ND	1.0		99	103	4.0				70 - 130	20
Bromodichloromethane	ND	0.50		100	100	0.0				70 - 130	20
Bromoform	ND	1.0		104	101	2.9				70 - 130	20
Bromomethane	ND	1.0		89	94	5.5				40 - 160	20
Carbon Disulfide	ND	1.0		86	89	3.4				70 - 130	20
Carbon tetrachloride	ND	1.0		104	106	1.9				70 - 130	20
Chlorobenzene	ND	1.0		99	100	1.0				70 - 130	20
Chloroethane	ND	1.0		96	96	0.0				70 - 130	20
Chloroform	ND	1.0		96	98	2.1				70 - 130	20
Chloromethane	ND	1.0		91	91	0.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0		101	102	1.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40		107	106	0.9				70 - 130	20
Dibromochloromethane	ND	0.50		101	101	0.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ20182

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dibromomethane	ND	1.0	103	101	2.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	83	83	0.0				40 - 160	20
Di-isopropyl ether	ND	1.0	103	108	4.7				70 - 130	20
Ethyl ether	ND	1.0	83	87	4.7				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	109	113	3.6				70 - 130	20
Ethylbenzene	ND	1.0	102	104	1.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	88	88	0.0				70 - 130	20
Isopropylbenzene	ND	1.0	116	114	1.7				70 - 130	20
m&p-Xylene	ND	1.0	106	108	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	102	102	0.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	105	1.9				70 - 130	20
Methylene chloride	ND	1.0	92	96	4.3				70 - 130	20
Naphthalene	ND	1.0	104	100	3.9				70 - 130	20
n-Butylbenzene	ND	1.0	117	116	0.9				70 - 130	20
n-Propylbenzene	ND	1.0	111	110	0.9				70 - 130	20
o-Xylene	ND	1.0	107	108	0.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	118	118	0.0				70 - 130	20
sec-Butylbenzene	ND	1.0	118	117	0.9				70 - 130	20
Styrene	ND	1.0	112	114	1.8				70 - 130	20
tert-amyl methyl ether	ND	1.0	100	102	2.0				70 - 130	20
tert-Butylbenzene	ND	1.0	117	115	1.7				70 - 130	20
Tetrachloroethene	ND	1.0	102	100	2.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	113	111	1.8				70 - 130	20
Toluene	ND	1.0	101	102	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	94	96	2.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	105	107	1.9				70 - 130	20
Trichloroethene	ND	1.0	102	101	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	95	97	2.1				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	84	85	1.2				70 - 130	20
Vinyl chloride	ND	1.0	97	97	0.0				70 - 130	20
% 1,2-dichlorobenzene-d4	102	%	101	99	2.0				70 - 130	20
% Bromofluorobenzene	96	%	101	101	0.0				70 - 130	20
% Dibromofluoromethane	113	%	100	103	3.0				70 - 130	20
% Toluene-d8	101	%	101	101	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 590926 (ug/L), QC Sample No: CJ17860 (CJ20187 (20X))

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	99	96	3.1				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	84	83	1.2				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	99	96	3.1				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	84	83	1.2				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	84	84	0.0				70 - 130	25
Benzene	ND	1.0	95	96	1.0				70 - 130	25
Ethyl Benzene	ND	1.0	88	88	0.0				70 - 130	25
MTBE	ND	1.0	89	92	3.3				70 - 130	25
Naphthalene	ND	5.0	92	93	1.1				70 - 130	25
m,p-Xylenes	ND	2.0	88	88	0.0				70 - 130	25
o-Xylene	ND	1.0	86	85	1.2				70 - 130	25

QA/QC Data

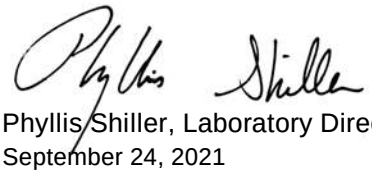
SDG I.D.: GCJ20182

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% 2,5-Dibromotoluene (PID)	83		%	83	84	1.2				70 - 130	25
% 2,5-Dibromotoluene (FID)	83		%	93	83	11.4				70 - 130	25
Comment:											
This batch consists of a Blank, LCS and LCSD.											
QA/QC Batch 591177 (ug/L), QC Sample No: CJ22046 (CJ20187 (100X))											
Volatile Petroleum Hydrocarbons - Ground Water											
Toluene	ND	1.0		89	93	4.4				70 - 130	25
Comment:											
This batch consists of a Blank, LCS and LCSD.											

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.
s = This parameter is outside laboratory Blank Surrogate specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
September 24, 2021

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ20182 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ20182	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ20182	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ20182	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ20182	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ20182	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ20182	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ20182	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ20182	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ20183	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ20183	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ20183	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ20183	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ20183	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ20183	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ20183	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ20183	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ20184	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ20184	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	13	1.0	5	5	ug/L
CJ20184	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ20184	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ20184	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	1.0	5	5	ug/L
CJ20184	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ20184	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	1.0	5	5	ug/L
CJ20184	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	13	1.0	5	5	ug/L
CJ20184	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ20184	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	13	1.0	5	5	ug/L
CJ20184	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ20184	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ20184	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ20185	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.00075	0.00075	ug/L
CJ20185	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.6	0.6	ug/L
CJ20185	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	500	100	20	20	ug/L
CJ20185	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.0075	0.0075	ug/L
CJ20185	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.47	0.47	ug/L
CJ20185	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CJ20185	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.47	0.47	ug/L
CJ20185	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CJ20185	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ20185	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ20185	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	500	100	20	20	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ20182 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ20185	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CJ20185	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	500	100	20	20	ug/L
CJ20185	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	500	100	70	70	ug/L
CJ20185	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CJ20185	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CJ20185	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	500	100	20	20	ug/L
CJ20185	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	200	0.3	0.3	ug/L
CJ20185	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	0.3	0.3	ug/L
CJ20185	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	200	0.3	0.3	ug/L
CJ20186	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ20186	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	17	1.0	5	5	ug/L
CJ20186	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	260	20	5	5	ug/L
CJ20186	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ20186	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ20186	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	260	20	5	5	ug/L
CJ20186	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	17	1.0	5	5	ug/L
CJ20186	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ20186	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	260	20	50	50	ug/L
CJ20186	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	17	1.0	5	5	ug/L
CJ20186	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ20186	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	260	20	5	5	ug/L
CJ20186	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	17	1.0	5	5	ug/L
CJ20186	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	260	20	50	50	ug/L
CJ20186	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	17	1.0	5	5	ug/L
CJ20186	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ20186	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ20186	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ20187	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5000	5	5	ug/L
CJ20187	$8260GWR-WI	1,2,4-Trimethylbenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	56	56	ug/L
CJ20187	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5000	350	350	ug/L
CJ20187	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.0075	0.0075	ug/L
CJ20187	$8260GWR-WI	4-Chlorotoluene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	250	250	ug/L
CJ20187	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	56000	1000	5	5	ug/L
CJ20187	$8260GWR-WI	Chloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	190	190	ug/L
CJ20187	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	20	20	ug/L
CJ20187	$8260GWR-WI	Styrene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	Naphthalene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1000	140	140	ug/L
CJ20187	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5000	38	38	ug/L
CJ20187	$8260GWR-WI	2-Chlorotoluene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	240	240	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ20182 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ20187	$8260GWR-WI	Toluene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3600	1000	1000	1000	ug/L
CJ20187	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.47	0.47	ug/L
CJ20187	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	70	70	ug/L
CJ20187	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5000	38	38	ug/L
CJ20187	$8260GWR-WI	Isopropylbenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	450	450	ug/L
CJ20187	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	60	60	ug/L
CJ20187	$8260GWR-WI	1,3-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.6	0.6	ug/L
CJ20187	$8260GWR-WI	Dichlorodifluoromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	200	200	ug/L
CJ20187	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	8.3	8.3	ug/L
CJ20187	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	3	3	ug/L
CJ20187	$8260GWR-WI	Bromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	83	83	ug/L
CJ20187	$8260GWR-WI	1,3-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	370	370	ug/L
CJ20187	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	7	7	ug/L
CJ20187	$8260GWR-WI	1,1,1-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1500	1000	200	200	ug/L
CJ20187	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	4	4	ug/L
CJ20187	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	3	3	ug/L
CJ20187	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.00033	0.00033	ug/L
CJ20187	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	900	500	70	70	ug/L
CJ20187	$8260GWR-WI	Chloroform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	50	50	ug/L
CJ20187	$8260GWR-WI	Bromobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	62	62	ug/L
CJ20187	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.47	0.47	ug/L
CJ20187	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	80	80	ug/L
CJ20187	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	150000	10000	5	5	ug/L
CJ20187	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	7	7	ug/L
CJ20187	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Chlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	70	70	ug/L
CJ20187	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.00075	0.00075	ug/L
CJ20187	$8260GWR-WI	Chloroform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	50	50	ug/L
CJ20187	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5000	350	350	ug/L
CJ20187	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	7	7	ug/L
CJ20187	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ20182 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ20187	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.5	0.5	ug/L
CJ20187	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	900	500	70	70	ug/L
CJ20187	$8260GWR-WI	2-Hexanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5000	1000	1000	ug/L
CJ20187	$8260GWR-WI	Chlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	20	20	ug/L
CJ20187	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	3	3	ug/L
CJ20187	$8260GWR-WI	Toluene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3600	1000	1000	1000	ug/L
CJ20187	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	1,1,1-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	1500	1000	200	200	ug/L
CJ20187	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	660	500	7	7	ug/L
CJ20187	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	4	4	ug/L
CJ20187	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150000	10000	5	5	ug/L
CJ20187	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.5	0.5	ug/L
CJ20187	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	70	70	ug/L
CJ20187	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	80	80	ug/L
CJ20187	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	3	3	ug/L
CJ20187	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.6	0.6	ug/L
CJ20187	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	Methyl ethyl ketone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5000	4000	4000	ug/L
CJ20187	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	70	70	ug/L
CJ20187	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	56000	1000	5	5	ug/L
CJ20187	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5000	5	5	ug/L
CJ20187	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Styrene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.02	0.02	ug/L
CJ20187	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	200	200	ug/L
CJ20187	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	3	3	ug/L
CJ20187	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	9	9	ug/L
CJ20187	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	660	500	80	80	ug/L
CJ20187	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	6	6	ug/L
CJ20187	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	10	10	ug/L
CJ20187	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	60	60	ug/L
CJ20187	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5000	2000	2000	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ20182 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ20187	$8260GWR-WI	Styrene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	50	50	ug/L
CJ20187	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	56000	1000	50	50	ug/L
CJ20187	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	20	20	ug/L
CJ20187	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	80	80	ug/L
CJ20187	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	20	20	ug/L
CJ20187	$8260GWR-WI	Chloroform	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	50	50	ug/L
CJ20187	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150000	10000	5	5	ug/L
CJ20187	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	Chlorobenzene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	200	200	ug/L
CJ20187	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	7	7	ug/L
CJ20187	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	5000	5	5	ug/L
CJ20187	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	500	4	4	ug/L
CJ20187	$8260GWR-WI	1,1,1-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	1500	1000	200	200	ug/L
CJ20187	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.02	0.02	ug/L
CJ20187	$8260GWR-WI	Styrene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	56000	1000	5	5	ug/L
CJ20187	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150000	10000	5	5	ug/L
CJ20187	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	70	70	ug/L
CJ20187	$8260GWR-WI	Toluene	MA / GROUNDWATER STANDARDS / GW-1	3600	1000	1000	1000	ug/L
CJ20187	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / GROUNDWATER STANDARDS / GW-1	ND	500	70	70	ug/L
CJ20187	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	900	500	70	70	ug/L
CJ20187	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	660	500	7	7	ug/L
CJ20187	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Methyl ethyl ketone	MA / GROUNDWATER STANDARDS / GW-1	ND	5000	4000	4000	ug/L
CJ20187	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	70	70	ug/L
CJ20187	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	5000	350	350	ug/L
CJ20187	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Chlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	Chloroform	MA / GROUNDWATER STANDARDS / GW-1	ND	500	70	70	ug/L
CJ20187	$8260GWR-WI	1,3-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.6	0.6	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ20182 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ20187	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	10	10	ug/L
CJ20187	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	3	3	ug/L
CJ20187	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	7	7	ug/L
CJ20187	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	9	9	ug/L
CJ20187	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	660	500	80	80	ug/L
CJ20187	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150000	10000	5	5	ug/L
CJ20187	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	6	6	ug/L
CJ20187	$8260GWR-WI	Chlorobenzene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	200	200	ug/L
CJ20187	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	Styrene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	100	100	ug/L
CJ20187	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	10	10	ug/L
CJ20187	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	3	3	ug/L
CJ20187	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	50	50	ug/L
CJ20187	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5000	2000	2000	ug/L
CJ20187	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	80	80	ug/L
CJ20187	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	20	20	ug/L
CJ20187	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	5	5	ug/L
CJ20187	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	20	20	ug/L
CJ20187	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	56000	1000	50	50	ug/L
CJ20187	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	200	200	ug/L
CJ20187	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	60	60	ug/L
CJ20187	$8260GWR-WI	Chloroform	MA / GROUNDWATER STANDARDS / GW-2	ND	500	50	50	ug/L
CJ20187	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	2	2	ug/L
CJ20187	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	150000	10000	5000	5000	ug/L
CJ20187	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-3	56000	1000	30000	30000	ug/L
CJ20187	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	12	0.40	0.3	0.3	ug/l
CJ20187	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	0.40	0.3	0.3	ug/l
CJ20187	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	12	0.40	0.3	0.3	ug/l
CJ20187	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100000	0.3	0.3	ug/L
CJ20187	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100000	0.3	0.3	ug/L
CJ20187	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100000	0.3	0.3	ug/L
CJ20187	$VPHRANGE-	C9-C12 Aliphatic Hydrocarbons *1,3	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	700	700	ug/L
CJ20187	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED WILMINGTO	64000	2000	300	300	ug/L
CJ20187	$VPHRANGE-	C9-C12 Aliphatic Hydrocarbons *1,3	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	700	700	ug/L
CJ20187	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	64000	2000	300	300	ug/L
CJ20187	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-2 (mg/l)	64000	2000	3000	3000	ug/L
CJ20187	$VPHRANGE-	C9-C12 Aliphatic Hydrocarbons *1,3	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	700	700	ug/L
CJ20187	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	64000	2000	300	300	ug/L
CJ20187	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-2	64000	2000	3000	3000	ug/L
CJ20187	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-3	64000	2000	50000	50000	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ20182 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ20187	$VPHRANGE-	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CJ20187	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	200	200	ug/L
CJ20187	$VPHRANGE-	Toluene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3800	100	1000	1000	ug/L
CJ20187	$VPHRANGE-	Toluene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3800	100	1000	1000	ug/L
CJ20187	$VPHRANGE-	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ20187	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	200	200	ug/L
CJ20187	$VPHRANGE-	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ20187	$VPHRANGE-	Toluene	MA / GROUNDWATER STANDARDS / GW-1	3800	100	1000	1000	ug/L
CJ20187	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	200	200	ug/L
CJ20188	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.00075	0.00075	ug/L
CJ20188	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.47	0.47	ug/L
CJ20188	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.6	0.6	ug/L
CJ20188	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	350	20	5	5	ug/L
CJ20188	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CJ20188	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.47	0.47	ug/L
CJ20188	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.0075	0.0075	ug/L
CJ20188	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ20188	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CJ20188	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ20188	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CJ20188	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	350	20	5	5	ug/L
CJ20188	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	350	20	50	50	ug/L
CJ20188	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	350	20	5	5	ug/L
CJ20188	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CJ20188	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CJ20188	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	350	20	50	50	ug/L
CJ20188	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	200	0.3	0.3	ug/L
CJ20189	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	22	1.0	5	5	ug/L
CJ20189	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ20189	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ20189	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ20189	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	7.5	1.0	5	5	ug/L
CJ20189	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.5	1.0	5	5	ug/L
CJ20189	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	22	1.0	5	5	ug/L
CJ20189	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ20189	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.5	1.0	5	5	ug/L
CJ20189	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	22	1.0	5	5	ug/L
CJ20189	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.5	1.0	5	5	ug/L
CJ20189	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ20189	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	7.5	1.0	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ20182 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ20189	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ20189	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ20189	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ20190	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ20190	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ20190	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ20190	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ20190	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ20190	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ20190	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ20190	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ20191	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ20191	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ20191	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ20191	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ20191	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ20191	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ20191	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ20191	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ20182, CJ20183, CJ20184, CJ20185, CJ20186, CJ20187, CJ20188, CJ20189, CJ20190, CJ20191

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: SVOASIM Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Friday, September 24, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ20182

SDG Comments

CJ20189 - The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GWP. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/09/21-1 Adam Werner, Chemist 09/09/21

CJ20188 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0909_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Site Specific):

Batch 590938 (CJ20188)

CJ20188

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

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MCP Certification Report

September 24, 2021

SDG I.D.: GCJ20182

EPH Narration

Instrument:

AU-FID4 09/08/21-1 Adam Werner, Chemist 09/08/21

CJ20187 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 590929 (CJ16894)

CJ20187

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/08/21 08:07 Emily Kolominskaya, Chemist 09/08/21

CJ20189

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/04/21 08:26 Cindy Pearce, Chemist 09/04/21

CJ20189

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

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NY # 11301

Certification Report

September 24, 2021

SDG I.D.: GCJ20182

ICP Metals Narration

Batch 590589 (CJ20189)

CJ20189

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 590799 (CJ19847)

CJ20189

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/13/21-1 Adam Werner, Chemist 09/13/21

CJ20187 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0913_05-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 591391 (CJ21030)

CJ20187

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Environmental Laboratories, Inc.
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NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ20182

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 590817 (Samples: CJ20187): -----

One or more analytes is below the method criteria. A low bias for these analytes is possible. (Acenaphthylene)

The blank surrogate was below criteria. (% 2-Fluorobiphenyl(CJ20187))

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (Acenaphthylene, Benzo(k)fluoranthene)

Instrument:

CHEM33 09/08/21-1 Wes Bryon, Chemist 09/08/21

CJ20187 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0701):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0908_05-33_PAHSIM_0701) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: % Nitrobenzene-d5 41%H (20%)
The following compounds did not meet maximum % deviations: % Nitrobenzene-d5 41%H (40%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 590817 (CJ20187)

CJ20187

All LCS recoveries were within 40 - 140 with the following exceptions: Acenaphthylene(30%)
All LCSD recoveries were within 40 - 140 with the following exceptions: Acenaphthylene(24%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: Acenaphthylene(22.2%), Benzo(k)fluoranthene(21.9%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/11/21-1 Michael Hahn, Chemist 09/11/21

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NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ20182

VOA Narration

CJ20182 (1X), CJ20183 (1X), CJ20184 (1X), CJ20185 (100X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0911_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2,3-Trichlorobenzene 22%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.180 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/12/21-1 Michael Hahn, Chemist 09/12/21

CJ20186 (20X), CJ20187 (1000X), CJ20188 (20X), CJ20189 (1X), CJ20191 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0912_02-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.190 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/14/21-1 Michael Hahn, Chemist 09/14/21

CJ20185 (2X), CJ20186 (1X), CJ20187 (10000X), CJ20188 (1X, 2X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0914_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.184 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

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NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ20182

VOA Narration

CHEM23 09/14/21-2 Harry Mullin, Chemist 09/14/21

CJ20190 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0914_37-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.193 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 591670 (CJ19174) CHEM23 9/11/2021-1

CJ20182(1X), CJ20183(1X), CJ20184(1X), CJ20185(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 591692 (CJ20191) CHEM23 9/12/2021-1

CJ20186(20X), CJ20187(1000X), CJ20188(20X), CJ20189(1X), CJ20191(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 592004 (CJ20190) CHEM23 9/14/2021-2

CJ20190(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Hexachlorobutadiene(69%), Trichlorotrifluoroethane(69%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ20182

VOA Narration

Batch 591965 (CJ20188) CHEM23 9/14/2021-1

CJ20185(2X), CJ20186(1X), CJ20187(10000X), CJ20188(2X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/07/21-1 Raman Makol, Chemist 09/07/21

CJ20187 (20X)

Initial Calibration Evaluation (PIDFID/VPH_090221_T):
The following compounds exceeded %RSD criteria: None.

PIDFID 09/08/21-1 Raman Makol, Chemist 09/08/21

CJ20187 (20X, 100X)

Initial Calibration Evaluation (PIDFID/VPH_090221_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 590926 (CJ17860)

CJ20187(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

Batch 591177 (CJ22046)

CJ20187(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ20182

VPH Narration

obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]
Temp: 5°C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX
Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Samplers Signature: [signature] Date: 9/3/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Pb (6010C) - HNO3	Dissolved As, Pb (6010C) - HNO3 F/F	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
20182	21A-AE25S-090321-1	GW	9/3/21	1100	3							X									
20183	21A-AE25D-090321-1	GW	9/3/21	1135	3							X									
20184	21A-AE23R-090321-1	GW	9/3/21	1220	3							X									
20185	21A-AE27R-090321-1	GW	9/3/21	1040	3							X									
20186	21A-AE23S-090321-1	GW	9/3/21	1030	3							X									
20187	21A-AE23R-090321-1	GW	9/3/21	1150	5	4						X	X	X	X						
20188	21A-AE24-090321-1	GW	9/3/21	1145	9	3						X	X								MS/MSD
20189	21A-AE26S-090321-1	GW	9/3/21	1235	3			2				X				X	X				
20190	21A-AE26D-090321-1	GW	9/3/21	1145	3							X									
20191	21A-TB01-090321-1	GW	9/3/21	0800	2							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-3-21	14:55

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- [ ] Direct Exposure (Residential)
- [ ] GW
- [ ] Other

CT
- [ ] RCP Cert
- [ ] GW Protection
- [ ] SW Protection
- [ ] GA Mobility
- [ ] GB Mobility
- [ ] Residential DEC
- [ ] I/C DEC
- [ ] Other

MA
- [X] MCP (CAM Rpt)
- [X] GW-1
- [X] GW-2
- [X] GW-3
- [ ] S-1
- [ ] S-2
- [ ] S-3
- [ ] MWRA eSMART
- [ ] Other

Data Format
- [X] PDF
- [X] AECOM EQuIS 4-File EDD format

Data Package
- [ ] Tier II Checklist
- [ ] Full Data Package*
- [ ] Phoenix Std Report
- [ ] Other

State where samples were collected: MA

* SURCHARGE APPLIES

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]
Temp 1.5 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aeom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/3/21

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3	Dissolved As, Fe, Mn (6010C) - HNO3 F/K	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
20182	21A-AE25S-090321-1	GW	9/3/21	1100	3							X									
20183	21A-AE25D-090321-1	GW	9/3/21	1135	3							X									
20184	21A-AE25R-090321-1	GW	9/3/21	1220	3							X									
20185	21A-AE27R-090321-1	GW	9/3/21	1040	3							X									
20180	21A-AE23S-090321-1	GW	9/3/21	1030	3							X									
20187	21A-AE23R-090321-1	GW	9/3/21	1150	5	4						X	X	X	X						
20188	21A-AE24-090321-1	GW	9/3/21	1145	9	3						X	X								MS/MSD
20189	21A-AE26S-090321-1	GW	9/3/21	1235	3			2				X				X	X				
20190	21A-AE26D-090321-1	GW	9/3/21	1145	3							X									
20191	21A-TB01-090321-1	GW	9/3/21	0800	2							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-3-21	14:55
[signature]	[signature] Williams	9/3/21	17:03

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- [ ] Direct Exposure (Residential)
- [ ] GW
- [ ] Other

CT
- [ ] RCP Cert
- [ ] GW Protection
- [ ] SW Protection
- [ ] GA Mobility
- [ ] GB Mobility
- [ ] Residential DEC
- [ ] I/C DEC
- [ ] Other

MA
- [X] MCP (CAM Rpt)
- [X] GW-1
- [X] GW-2
- [X] GW-3
- [ ] S-1
- [ ] S-2
- [ ] S-3
- [ ] MWRA eSMART
- [ ] Other

State where samples were collected: MA

Data Format
- [X] PDF
- [X] AECOM EQuIS 4-File EDD format

Data Package
- [ ] Tier II Checklist
- [ ] Full Data Package*
- [ ] Phoenix Std Report
- [ ] Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Friday, October 01, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60552044.25**
SDG ID: **GCJ21023**
Sample ID#s: CJ21023 - CJ21041

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 01, 2021

SDG I.D.: GCJ21023

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver. 2:
This report has been revised to correct the method reference for MA VPH.

Version 3:
CJ21030 dioxane MSD has been corrected.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 01, 2021

SDG I.D.: GCJ21023

Project ID: LOCKHEED-WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-TB01-090721-1	CJ21023	GROUND WATER
21A-AE101S-090721-1	CJ21024	GROUND WATER
21A-AE101D-090721-1	CJ21025	GROUND WATER
21A-AE109D-090721-1	CJ21026	GROUND WATER
21A-AE102RR1-090721-1	CJ21027	GROUND WATER
21A-AE102RR2-090721-1	CJ21028	GROUND WATER
21A-AE102RR3-090721-1	CJ21029	GROUND WATER
21A-AE102RR4-090721-1	CJ21030	GROUND WATER
21A-AE102RR5-090721-1	CJ21031	GROUND WATER
21A-AE102RR6-090721-1	CJ21032	GROUND WATER
21A-AE111R1-090721-1	CJ21033	GROUND WATER
21A-AE111R2-090721-1	CJ21034	GROUND WATER
21A-AE111R3-090721-1	CJ21035	GROUND WATER
21A-AE111R4-090721-1	CJ21036	GROUND WATER
21A-AE111R5-090721-1	CJ21037	GROUND WATER
21A-AE111R6-090721-1	CJ21038	GROUND WATER
21A-AE111R7-090721-1	CJ21039	GROUND WATER
21A-AE111R1-090721-2	CJ21040	GROUND WATER
21A-TRC102-090721-1	CJ21041	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21023

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-TB01-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/12/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21023

Client ID: 21A-TB01-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/12/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/12/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/12/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/12/21	MH	70 - 130 %
% Dibromofluoromethane	113		%	1	09/12/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/12/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/12/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21023

Client ID: 21A-TB01-090721-1

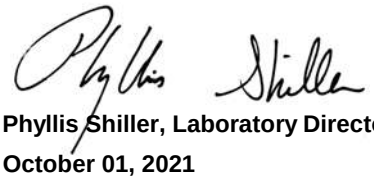
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 01, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	9:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21024

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE101S-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/12/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/12/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,2-Dichloroethene	19	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
tert-Butylbenzene	1.4	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrachloroethene	2.7	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/12/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Trichloroethene	21	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Vinyl chloride	1.4	1.0	ug/L	1	09/12/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	09/12/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/12/21	MH	70 - 130 %
% Dibromofluoromethane	110		%	1	09/12/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/12/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/12/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21024
Client ID: 21A-AE101S-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.38	0.20	ug/l	1	09/10/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	93		%	1	09/10/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	10:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21025

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE101D-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethane	1.0	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/12/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21025

Client ID: 21A-AE101D-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/12/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,2-Dichloroethene	32	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
tert-Butylbenzene	1.4	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrachloroethene	2.5	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/12/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Trichloroethene	25	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Vinyl chloride	1.8	1.0	ug/L	1	09/12/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/12/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/12/21	MH	70 - 130 %
% Dibromofluoromethane	113		%	1	09/12/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/12/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/12/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)

Ver 3

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.30	ug/l	1	09/10/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	99		%	1	09/10/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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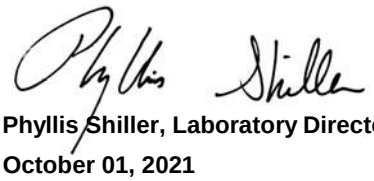


Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21026

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE109D-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/09/21	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/08/21	EK	SW6010D
Dissolved Metals Preparation	Completed				09/07/21	AG	SW3005A
Total Metals Digestion	Completed				09/08/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/12/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21026

Client ID: 21A-AE109D-090721-1

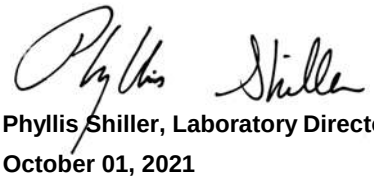
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/12/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/12/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/12/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/12/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/12/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/12/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/12/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/12/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/12/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	115		%	1	09/12/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/12/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/12/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/12/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.55	0.20	ug/l	1	09/10/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	96		%	1	09/10/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21027

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE102RR1-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	8.0	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	1.8	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21027

Client ID: 21A-AE102RR1-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	150	20	ug/L	20	09/12/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	4.4	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	1.4	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	200	20	ug/L	20	09/12/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	16	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	110		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/13/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	105		%	20	09/12/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	09/12/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	114		%	20	09/12/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	99		%	20	09/12/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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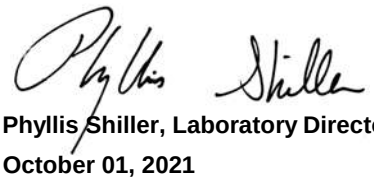

Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21028

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE102RR2-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloroethane	12	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloroethene	3.1	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	09/14/21	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	09/14/21	MH	SW8260C
Acetone	ND	50	ug/L	2	09/14/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21028

Client ID: 21A-AE102RR2-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	09/14/21	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	09/14/21	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
cis-1,2-Dichloroethene	150	2.0	ug/L	2	09/14/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	09/14/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Styrene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Tetrachloroethene	120	2.0	ug/L	2	09/14/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	09/14/21	MH	SW8260C
Toluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Trichloroethene	420	5.0	ug/L	5	09/12/21	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Vinyl chloride	9.0	2.0	ug/L	2	09/14/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	107		%	2	09/14/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	93		%	2	09/14/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	112		%	2	09/14/21	MH	70 - 130 %
% Toluene-d8 (2x)	96		%	2	09/14/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	106		%	5	09/12/21	MH	70 - 130 %
% Bromofluorobenzene (5x)	94		%	5	09/12/21	MH	70 - 130 %
% Dibromofluoromethane (5x)	114		%	5	09/12/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (5x)	97		%	5	09/12/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	2	09/14/21	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	5.9	0.20	ug/l	1	09/10/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	100		%	1	09/10/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/08/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	13:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21029

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE102RR3-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloroethane	13	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloroethene	2.2	2.0	ug/L	2	09/14/21	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	09/14/21	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	09/14/21	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	09/14/21	MH	SW8260C
Acetone	ND	50	ug/L	2	09/14/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21029

Client ID: 21A-AE102RR3-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	09/14/21	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	09/14/21	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
cis-1,2-Dichloroethene	170	2.0	ug/L	2	09/14/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	09/14/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Styrene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Tetrachloroethene	110	2.0	ug/L	2	09/14/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	09/14/21	MH	SW8260C
Toluene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	09/14/21	MH	SW8260C
Trichloroethene	370	20	ug/L	20	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	09/14/21	MH	SW8260C
Vinyl chloride	5.5	2.0	ug/L	2	09/14/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	108		%	2	09/14/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	93		%	2	09/14/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	116		%	2	09/14/21	MH	70 - 130 %
% Toluene-d8 (2x)	95		%	2	09/14/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	106		%	20	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	09/13/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	116		%	20	09/13/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21029
Client ID: 21A-AE102RR3-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	99		%	20	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	2	09/14/21	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	09/14/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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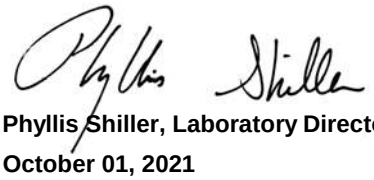

Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	13:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21030

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE102RR4-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,1-Dichloroethane	26	5.0	ug/L	5	09/13/21	MH	SW8260C
1,1-Dichloroethene	6.1	5.0	ug/L	5	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/13/21	MH	SW8260C
Acetone	ND	130	ug/L	5	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21030

Client ID: 21A-AE102RR4-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	09/13/21	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/13/21	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	100	5.0	ug/L	5	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Tetrachloroethene	650	50	ug/L	50	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/13/21	MH	SW8260C
Toluene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
Trichloroethene	1100	50	ug/L	50	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/13/21	MH	SW8260C
Vinyl chloride	ND	2.5	ug/L	5	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	107		%	5	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (5x)	92		%	5	09/13/21	MH	70 - 130 %
% Dibromofluoromethane (5x)	116		%	5	09/13/21	MH	70 - 130 %
% Toluene-d8 (5x)	96		%	5	09/13/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	104		%	50	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (50x)	94		%	50	09/13/21	MH	70 - 130 %
% Dibromofluoromethane (50x)	113		%	50	09/13/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (50x)	99		%	50	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/13/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/13/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	8.1	0.20	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	82		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	13:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21031

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE102RR5-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/14/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
1,1-Dichloroethane	58	10	ug/L	10	09/14/21	MH	SW8260C
1,1-Dichloroethene	14	10	ug/L	10	09/14/21	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/14/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/14/21	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/14/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/14/21	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/14/21	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/14/21	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/14/21	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/14/21	MH	SW8260C
Acetone	ND	250	ug/L	10	09/14/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21031

Client ID: 21A-AE102RR5-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/14/21	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/14/21	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/14/21	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/14/21	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/14/21	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/14/21	MH	SW8260C
cis-1,2-Dichloroethene	160	10	ug/L	10	09/14/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/14/21	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/14/21	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/14/21	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/14/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/14/21	MH	SW8260C
Methylene chloride	ND	50	ug/L	10	09/14/21	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/14/21	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/14/21	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/14/21	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
Styrene	ND	10	ug/L	10	09/14/21	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/14/21	MH	SW8260C
Tetrachloroethene	1800	100	ug/L	100	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/14/21	MH	SW8260C
Toluene	ND	10	ug/L	10	09/14/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	09/14/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
Trichloroethene	2700	100	ug/L	100	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/14/21	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/14/21	MH	SW8260C
Vinyl chloride	ND	5.0	ug/L	10	09/14/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	108		%	10	09/14/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	93		%	10	09/14/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	119		%	10	09/14/21	MH	70 - 130 %
% Toluene-d8 (10x)	94		%	10	09/14/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	106		%	100	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	93		%	100	09/13/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	121		%	100	09/13/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21031
Client ID: 21A-AE102RR5-090721-1

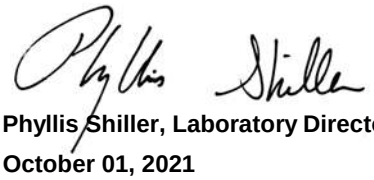
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	99		%	100	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1000	ug/L	10	09/14/21	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/14/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/14/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/14/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/14/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	13:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21032

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE102RR6-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/09/21	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/08/21	EK	SW6010D
EPH Extraction	Completed				09/08/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/07/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/07/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/07/21	AG	SW3005A
Total Metals Digestion	Completed				09/08/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/07/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/14/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/14/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/14/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/14/21	MH	SW8260C
1,1-Dichloroethane	83	20	ug/L	20	09/14/21	MH	SW8260C
1,1-Dichloroethene	22	20	ug/L	20	09/14/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/14/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/14/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/14/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/14/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/14/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/14/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/14/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21032

Client ID: 21A-AE102RR6-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/14/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/14/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/14/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/14/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/14/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/14/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/14/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/14/21	MH	SW8260C
Benzene	ND	10	ug/L	20	09/14/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/14/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/14/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/14/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/14/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/14/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/14/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/14/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/14/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/14/21	MH	SW8260C
cis-1,2-Dichloroethene	120	20	ug/L	20	09/14/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/14/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/14/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/14/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/14/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/14/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/14/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/14/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/14/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/14/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/14/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/14/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/14/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/14/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/14/21	MH	SW8260C
Tetrachloroethene	4000	100	ug/L	100	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/14/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/14/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/14/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/14/21	MH	SW8260C
Trichloroethene	4700	100	ug/L	100	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/14/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/14/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	ND	10	ug/L	20	09/14/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	107		%	20	09/14/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	94		%	20	09/14/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	122		%	20	09/14/21	MH	70 - 130 %
% Toluene-d8 (20x)	94		%	20	09/14/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	106		%	100	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	94		%	100	09/13/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	121		%	100	09/13/21	MH	70 - 130 %
% Toluene-d8 (100x)	97		%	100	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/14/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/14/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/14/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/14/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/14/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.49	ug/L	1	09/08/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.49	ug/L	1	09/08/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/08/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.20	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/08/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/08/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/08/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.49	ug/L	1	09/08/21	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/08/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/08/21	WB	SW8270D (SIM)
Naphthalene	ND	0.49	ug/L	1	09/08/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.49	ug/L	1	09/08/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/08/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	55		%	1	09/08/21	WB	40 - 140 %
% Nitrobenzene-d5	100		%	1	09/08/21	WB	40 - 140 %
% Terphenyl-d14	56		%	1	09/08/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	25	0.20	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	81		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	100		%	1	09/09/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	111		%	1	09/09/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	98		%	1	09/09/21	AW	40 - 140 %
% o-terphenyl (aromatic)	105		%	1	09/09/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	2500	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	2500	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Ethyl Benzene	1.2	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	89		%	1	09/07/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	85		%	1	09/07/21	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

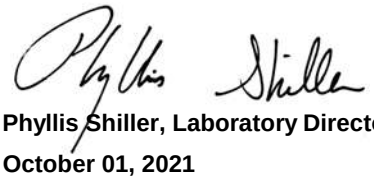
Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 01, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21033

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE111R1-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21033

Client ID: 21A-AE111R1-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	2.2	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	123		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	104		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21033

Client ID: 21A-AE111R1-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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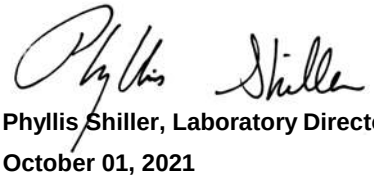

Phyllis Shiller, Laboratory Director

October 01, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21034

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE111R2-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	2.5	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	1.9	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	113		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21034
Client ID: 21A-AE111R2-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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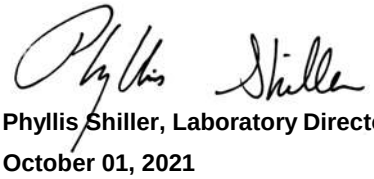


Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21035

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE111R3-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21035

Client ID: 21A-AE111R3-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	1.5	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	107		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	125		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21035

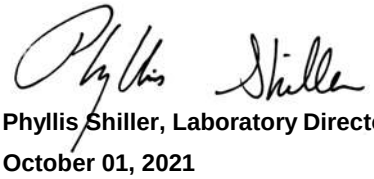
Client ID: 21A-AE111R3-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 01, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21036

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE111R4-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/15/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21036

Client ID: 21A-AE111R4-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/15/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/15/21	MH	SW8260C
Toluene	1.0	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/15/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/15/21	MH	70 - 130 %
% Dibromofluoromethane	116		%	1	09/15/21	MH	70 - 130 %
% Toluene-d8	104		%	1	09/15/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/15/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21036
Client ID: 21A-AE111R4-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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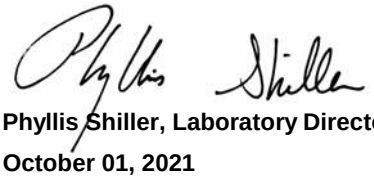

Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21037

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE111R5-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	107		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	113		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21037

Client ID: 21A-AE111R5-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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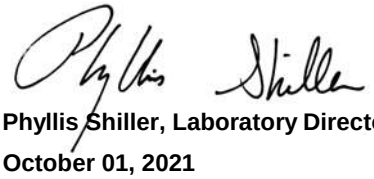

Phyllis Shiller, Laboratory Director

October 01, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21038

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE111R6-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	108		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	113		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21038

Client ID: 21A-AE111R6-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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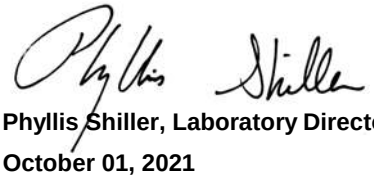

Phyllis Shiller, Laboratory Director

October 01, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21039

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE111R7-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/15/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21039

Client ID: 21A-AE111R7-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/15/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/15/21	MH	SW8260C
Toluene	5.0	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	107		%	1	09/15/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/15/21	MH	70 - 130 %
% Dibromofluoromethane	121		%	1	09/15/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/15/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/15/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21039

Client ID: 21A-AE111R7-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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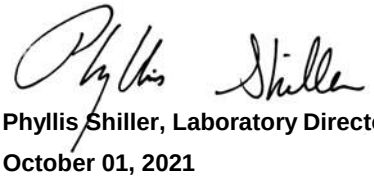


Phyllis Shiller, Laboratory Director

October 01, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	12:12
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21040

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE111R1-090721-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	2.3	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	115		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21040

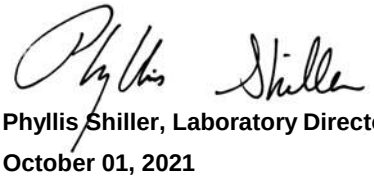
Client ID: 21A-AE111R1-090721-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 01, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 01, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	14:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/07/21	17:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ21023
Phoenix ID: CJ21041

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-TRC102-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.043	0.004	mg/L	1	09/10/21	EK	SW6010D
Arsenic (Dissolved)	0.038	0.004	mg/L	1	09/08/21	EK	SW6010D
EPH Extraction	Completed				09/08/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/07/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/07/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/07/21	AG	SW3005A
Total Metals Digestion	Completed				09/09/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/07/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21041

Client ID: 21A-TRC102-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	2.3	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	122		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	104		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/08/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/08/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/08/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/08/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/08/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/08/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/08/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/08/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/08/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/08/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	49		%	1	09/08/21	WB	40 - 140 %
% Nitrobenzene-d5	104		%	1	09/08/21	WB	40 - 140 %
% Terphenyl-d14	65		%	1	09/08/21	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	190	ug/L	1	09/09/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	64		%	1	09/09/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	98		%	1	09/09/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	96		%	1	09/09/21	AW	40 - 140 %
% o-terphenyl (aromatic)	85		%	1	09/09/21	AW	40 - 140 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ21041
Client ID: 21A-TRC102-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/07/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	91		%	1	09/07/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	89		%	1	09/07/21	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 01, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 01, 2021

QA/QC Data

SDG I.D.: GCJ21023

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 591058 (mg/L), QC Sample No: CJ20564 (CJ21026, CJ21032)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	97.6	97.2	0.4	100			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 590851 (mg/L), QC Sample No: CJ21026 (CJ21026, CJ21032, CJ21041)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	92.7	92.7	0.0	97.8			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 591228 (mg/L), QC Sample No: CJ21041 (CJ21041)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.043	0.045	4.50	99.0	99.7	0.7	103			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 01, 2021

QA/QC Data

SDG I.D.: GCJ21023

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 590939 (ug/l), QC Sample No: CJ19155 (CJ21024, CJ21025, CJ21026, CJ21028)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	88	94	6.6	96			70 - 130	20
% 1,4-dioxane-d8	87	%	98	97	1.0	101			70 - 130	20
QA/QC Batch 590929 (ug/L), QC Sample No: CJ16894 (CJ21032, CJ21041)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	68	71	4.3				40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	102	111	8.5				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	107	104	2.8				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	87	94	7.7				40 - 140	25
C9 - Nonane	ND	10	45	43	4.5				40 - 140	25
C-10 Decane	ND	10	58	59	1.7				40 - 140	25
C12 - Dodecane	ND	10	58	62	6.7				40 - 140	25
C14 - Tetradecane	ND	10	70	75	6.9				40 - 140	25
C16 - Hexadecane	ND	10	78	85	8.6				40 - 140	25
C18 - Octadecane	ND	10	97	104	7.0				40 - 140	25
C19 - Nonadecane	ND	10	96	103	7.0				40 - 140	25
C20 - Eicosane	ND	10	96	103	7.0				40 - 140	25
C22 - Docosane	ND	10	99	106	6.8				40 - 140	25
C24 - Tetracosane	ND	10	103	110	6.6				40 - 140	25
C26 - Hexacosane	ND	10	102	110	7.5				40 - 140	25
C28 - Octacosane	ND	10	105	114	8.2				40 - 140	25
C30 - Tricotane	ND	10	102	112	9.3				40 - 140	25
C36 - Hexatriacontane	ND	10	111	128	14.2				40 - 140	25
% 1-chlorooctadecane (aliphatic)	91	%	94	102	8.2				40 - 140	25
% o-terphenyl (aromatic)	94	%	95	93	2.1				40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	96	%	105	98	6.9				40 - 140	25
% 2-Bromonaphthalene (Fractionati	108	%	116	108	7.1				40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 591391 (ug/l), QC Sample No: CJ21030 (CJ21030, CJ21032)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	71	90	23.6	72			40 - 140	30
% 1,4-dioxane-d8	82	%	87	90	3.4	81			40 - 140	30
QA/QC Batch 590817 (ug/L), QC Sample No: CJ20187 (CJ21032, CJ21041)										
Semivolatiles by SIM, PAH - Ground Water										
2-Methylnaphthalene	ND	0.50	83	71	15.6				40 - 140	20

QA/QC Data

SDG I.D.: GCJ21023

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Acenaphthene	ND	0.50	76	70	8.2				40 - 140	20	
Acenaphthylene	ND	0.10	30	24	22.2				40 - 140	20	l,r
Anthracene	ND	0.10	73	67	8.6				40 - 140	20	
Benz(a)anthracene	ND	0.05	66	69	4.4				40 - 140	20	
Benzo(a)pyrene	ND	0.20	64	58	9.8				40 - 140	20	
Benzo(b)fluoranthene	ND	0.07	80	87	8.4				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	43	45	4.5				40 - 140	20	
Benzo(k)fluoranthene	ND	0.10	61	76	21.9				40 - 140	20	r
Chrysene	ND	0.05	71	71	0.0				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	75	87	14.8				40 - 140	20	
Fluoranthene	ND	0.50	79	75	5.2				40 - 140	20	
Fluorene	ND	0.10	84	73	14.0				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.10	48	52	8.0				40 - 140	20	
Naphthalene	ND	0.50	87	75	14.8				40 - 140	20	
Phenanthrene	ND	0.06	92	81	12.7				40 - 140	20	
Pyrene	ND	0.07	45	46	2.2				40 - 140	20	
% 2-Fluorobiphenyl	37	%	66	57	14.6				40 - 140	20	s
% Nitrobenzene-d5	55	%	129	107	18.6				40 - 140	20	
% Terphenyl-d14	61	%	67	71	5.8				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 591965 (ug/L), QC Sample No: CJ20188 (CJ21028 (2X) , CJ21029 (2X) , CJ21031 (10X) , CJ21032 (20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	97	95	2.1	105	110	4.7	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	102	98	4.0	112	117	4.4	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	100	97	3.0	103	106	2.9	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	101	100	1.0	108	112	3.6	70 - 130	20
1,1-Dichloroethane	ND	1.0	106	102	3.8	115	122	5.9	70 - 130	20
1,1-Dichloroethene	ND	1.0	96	91	5.3	103	109	5.7	70 - 130	20
1,1-Dichloropropene	ND	1.0	104	102	1.9	105	115	9.1	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	89	86	3.4	86	96	11.0	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	97	96	1.0	100	110	9.5	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	91	88	3.4	85	94	10.1	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	111	108	2.7	110	118	7.0	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	90	90	0.0	90	96	6.5	70 - 130	20
1,2-Dibromoethane	ND	1.0	98	98	0.0	105	106	0.9	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	95	94	1.1	98	104	5.9	70 - 130	20
1,2-Dichloroethane	ND	1.0	95	95	0.0	106	108	1.9	70 - 130	20
1,2-Dichloropropane	ND	1.0	99	99	0.0	104	110	5.6	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	108	3.6	110	118	7.0	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	100	97	3.0	101	107	5.8	70 - 130	20
1,3-Dichloropropane	ND	1.0	101	100	1.0	108	112	3.6	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	94	91	3.2	96	101	5.1	70 - 130	20
1,4-dioxane	ND	100	92	101	9.3	91	107	16.2	40 - 160	20
2,2-Dichloropropane	ND	1.0	107	101	5.8	91	96	5.3	70 - 130	20
2-Chlorotoluene	ND	1.0	105	102	2.9	104	111	6.5	70 - 130	20
2-Hexanone	ND	5.0	90	87	3.4	88	93	5.5	40 - 160	20
4-Chlorotoluene	ND	1.0	103	101	2.0	103	112	8.4	70 - 130	20
4-Methyl-2-pentanone	ND	5.0	96	97	1.0	97	99	2.0	40 - 160	20
Acetone	ND	5.0	87	89	2.3	116	111	4.4	40 - 160	20
Benzene	ND	0.70	102	100	2.0	106	114	7.3	70 - 130	20

QA/QC Data

SDG I.D.: GCJ21023

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromobenzene	ND	1.0	97	94	3.1	95	104	9.0	70 - 130	20
Bromochloromethane	ND	1.0	103	99	4.0	116	117	0.9	70 - 130	20
Bromodichloromethane	ND	0.50	96	95	1.0	107	110	2.8	70 - 130	20
Bromoform	ND	1.0	94	93	1.1	103	103	0.0	70 - 130	20
Bromomethane	ND	1.0	92	88	4.4	90	100	10.5	40 - 160	20
Carbon Disulfide	ND	1.0	91	87	4.5	95	102	7.1	70 - 130	20
Carbon tetrachloride	ND	1.0	108	103	4.7	116	123	5.9	70 - 130	20
Chlorobenzene	ND	1.0	97	93	4.2	103	108	4.7	70 - 130	20
Chloroethane	ND	1.0	94	93	1.1	105	110	4.7	70 - 130	20
Chloroform	ND	1.0	99	95	4.1	112	114	1.8	70 - 130	20
Chloromethane	ND	1.0	99	97	2.0	102	111	8.5	40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	100	98	2.0	108	115	6.3	70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	105	104	1.0	90	99	9.5	70 - 130	20
Dibromochloromethane	ND	0.50	96	94	2.1	103	106	2.9	70 - 130	20
Dibromomethane	ND	1.0	98	97	1.0	105	110	4.7	70 - 130	20
Dichlorodifluoromethane	ND	1.0	103	98	5.0	99	107	7.8	40 - 160	20
Di-isopropyl ether	ND	1.0	109	107	1.9	111	120	7.8	70 - 130	20
Ethyl ether	ND	1.0	86	86	0.0	97	102	5.0	70 - 130	20
Ethyl tert-butyl ether	ND	1.0	109	107	1.9	110	117	6.2	70 - 130	20
Ethylbenzene	ND	1.0	101	98	3.0	105	112	6.5	70 - 130	20
Hexachlorobutadiene	ND	0.40	87	82	5.9	84	96	13.3	70 - 130	20
Isopropylbenzene	ND	1.0	112	106	5.5	106	116	9.0	70 - 130	20
m&p-Xylene	ND	1.0	105	102	2.9	111	116	4.4	70 - 130	20
Methyl ethyl ketone	ND	5.0	97	98	1.0	106	111	4.6	40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	99	97	2.0	107	110	2.8	70 - 130	20
Methylene chloride	ND	1.0	95	91	4.3	105	108	2.8	70 - 130	20
Naphthalene	ND	1.0	92	90	2.2	85	97	13.2	70 - 130	20
n-Butylbenzene	ND	1.0	117	111	5.3	114	124	8.4	70 - 130	20
n-Propylbenzene	ND	1.0	108	103	4.7	108	115	6.3	70 - 130	20
o-Xylene	ND	1.0	105	102	2.9	106	113	6.4	70 - 130	20
p-Isopropyltoluene	ND	1.0	115	111	3.5	110	121	9.5	70 - 130	20
sec-Butylbenzene	ND	1.0	117	111	5.3	112	124	10.2	70 - 130	20
Styrene	ND	1.0	110	108	1.8	116	121	4.2	70 - 130	20
tert-amyl methyl ether	ND	1.0	95	96	1.0	96	104	8.0	70 - 130	20
tert-Butylbenzene	ND	1.0	112	109	2.7	108	120	10.5	70 - 130	20
Tetrachloroethene	ND	1.0	99	96	3.1	NC	NC	NC	70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	109	108	0.9	112	117	4.4	70 - 130	20
Toluene	ND	1.0	101	98	3.0	105	112	6.5	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	95	92	3.2	102	109	6.6	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	103	1.0	105	112	6.5	70 - 130	20
Trichlorofluoromethane	ND	1.0	103	99	4.0	114	119	4.3	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	89	86	3.4	96	99	3.1	70 - 130	20
Vinyl chloride	ND	1.0	105	100	4.9	105	117	10.8	70 - 130	20
% 1,2-dichlorobenzene-d4	105	%	99	100	1.0	99	99	0.0	70 - 130	20
% Bromofluorobenzene	95	%	101	100	1.0	103	101	2.0	70 - 130	20
% Dibromofluoromethane	106	%	103	101	2.0	107	107	0.0	70 - 130	20
% Toluene-d8	101	%	101	101	0.0	100	100	0.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCJ21023

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 592004 (ug/L), QC Sample No: CJ20190 (CJ21036, CJ21039)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	98	98	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	95	93	2.1				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	105	104	1.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	109	108	0.9				70 - 130	20
1,1-Dichloroethane	ND	1.0	109	110	0.9				70 - 130	20
1,1-Dichloroethene	ND	1.0	85	84	1.2				70 - 130	20
1,1-Dichloropropene	ND	1.0	96	93	3.2				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	90	89	1.1				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	109	99	9.6				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	90	89	1.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	108	108	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	97	95	2.1				70 - 130	20
1,2-Dibromoethane	ND	1.0	103	103	0.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	98	98	0.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	102	101	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	107	107	0.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	106	105	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	102	100	2.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	107	106	0.9				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	96	96	0.0				70 - 130	20
1,4-dioxane	ND	100	105	102	2.9				40 - 160	20
2,2-Dichloropropane	ND	1.0	92	89	3.3				70 - 130	20
2-Chlorotoluene	ND	1.0	102	103	1.0				70 - 130	20
2-Hexanone	ND	5.0	97	98	1.0				40 - 160	20
4-Chlorotoluene	ND	1.0	105	103	1.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	107	106	0.9				40 - 160	20
Acetone	ND	5.0	103	103	0.0				40 - 160	20
Benzene	ND	0.70	105	105	0.0				70 - 130	20
Bromobenzene	ND	1.0	98	98	0.0				70 - 130	20
Bromochloromethane	ND	1.0	109	110	0.9				70 - 130	20
Bromodichloromethane	ND	0.50	103	102	1.0				70 - 130	20
Bromoform	ND	1.0	100	96	4.1				70 - 130	20
Bromomethane	ND	1.0	95	94	1.1				40 - 160	20
Carbon Disulfide	ND	1.0	86	85	1.2				70 - 130	20
Carbon tetrachloride	ND	1.0	96	93	3.2				70 - 130	20
Chlorobenzene	ND	1.0	99	98	1.0				70 - 130	20
Chloroethane	ND	1.0	96	99	3.1				70 - 130	20
Chloroform	ND	1.0	103	102	1.0				70 - 130	20
Chloromethane	ND	1.0	108	110	1.8				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	107	108	0.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	108	107	0.9				70 - 130	20
Dibromochloromethane	ND	0.50	101	98	3.0				70 - 130	20
Dibromomethane	ND	1.0	109	104	4.7				70 - 130	20
Dichlorodifluoromethane	ND	1.0	98	95	3.1				40 - 160	20
Di-isopropyl ether	ND	1.0	116	117	0.9				70 - 130	20
Ethyl ether	ND	1.0	95	96	1.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	116	117	0.9				70 - 130	20
Ethylbenzene	ND	1.0	98	98	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	72	69	4.3				70 - 130	20
Isopropylbenzene	ND	1.0	102	101	1.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
m&p-Xylene	ND	1.0	102	104	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	107	112	4.6				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	106	106	0.0				70 - 130	20
Methylene chloride	ND	1.0	100	101	1.0				70 - 130	20
Naphthalene	ND	1.0	96	95	1.0				70 - 130	20
n-Butylbenzene	ND	1.0	104	101	2.9				70 - 130	20
n-Propylbenzene	ND	1.0	100	100	0.0				70 - 130	20
o-Xylene	ND	1.0	103	104	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	105	102	2.9				70 - 130	20
sec-Butylbenzene	ND	1.0	102	101	1.0				70 - 130	20
Styrene	ND	1.0	113	112	0.9				70 - 130	20
tert-amyl methyl ether	ND	1.0	102	102	0.0				70 - 130	20
tert-Butylbenzene	ND	1.0	102	99	3.0				70 - 130	20
Tetrachloroethene	ND	1.0	91	89	2.2				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	120	124	3.3				70 - 130	20
Toluene	ND	1.0	102	101	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	95	93	2.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	106	106	0.0				70 - 130	20
Trichloroethene	ND	1.0	95	96	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	87	83	4.7				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	72	69	4.3				70 - 130	20
Vinyl chloride	ND	1.0	100	98	2.0				70 - 130	20
% 1,2-dichlorobenzene-d4	105	%	101	101	0.0				70 - 130	20
% Bromofluorobenzene	96	%	101	102	1.0				70 - 130	20
% Dibromofluoromethane	113	%	106	100	5.8				70 - 130	20
% Toluene-d8	102	%	102	102	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 591692 (ug/L), QC Sample No: CJ20191 (CJ21023, CJ21024, CJ21025, CJ21026, CJ21027 (20X) , CJ21028 (5X) , CJ21029 (20X) , CJ21030 (5X) , CJ21031 (100X) , CJ21032 (100X) , CJ21033, CJ21035)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	100	103	3.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	102	102	0.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	104	102	1.9				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	102	103	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	101	104	2.9				70 - 130	20
1,1-Dichloroethene	ND	1.0	93	94	1.1				70 - 130	20
1,1-Dichloropropene	ND	1.0	106	106	0.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	96	93	3.2				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	105	102	2.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	99	98	1.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	114	114	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	103	104	1.0				70 - 130	20
1,2-Dibromoethane	ND	1.0	103	104	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	98	98	0.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	100	100	0.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	113	112	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	104	103	1.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ21023

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,3-Dichloropropane	ND	1.0	105	105	0.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	97	96	1.0				70 - 130	20
1,4-dioxane	ND	100	109	100	8.6				40 - 160	20
2,2-Dichloropropane	ND	1.0	105	107	1.9				70 - 130	20
2-Chlorotoluene	ND	1.0	107	105	1.9				70 - 130	20
2-Hexanone	ND	5.0	100	97	3.0				40 - 160	20
4-Chlorotoluene	ND	1.0	108	107	0.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	106	100	5.8				40 - 160	20
Acetone	ND	5.0	101	97	4.0				40 - 160	20
Benzene	ND	0.70	102	102	0.0				70 - 130	20
Bromobenzene	ND	1.0	101	98	3.0				70 - 130	20
Bromochloromethane	ND	1.0	99	103	4.0				70 - 130	20
Bromodichloromethane	ND	0.50	100	100	0.0				70 - 130	20
Bromoform	ND	1.0	104	101	2.9				70 - 130	20
Bromomethane	ND	1.0	89	94	5.5				40 - 160	20
Carbon Disulfide	ND	1.0	86	89	3.4				70 - 130	20
Carbon tetrachloride	ND	1.0	104	106	1.9				70 - 130	20
Chlorobenzene	ND	1.0	99	100	1.0				70 - 130	20
Chloroethane	ND	1.0	96	96	0.0				70 - 130	20
Chloroform	ND	1.0	96	98	2.1				70 - 130	20
Chloromethane	ND	1.0	91	91	0.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	102	1.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	107	106	0.9				70 - 130	20
Dibromochloromethane	ND	0.50	101	101	0.0				70 - 130	20
Dibromomethane	ND	1.0	103	101	2.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	83	83	0.0				40 - 160	20
Di-isopropyl ether	ND	1.0	103	108	4.7				70 - 130	20
Ethyl ether	ND	1.0	83	87	4.7				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	109	113	3.6				70 - 130	20
Ethylbenzene	ND	1.0	102	104	1.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	88	88	0.0				70 - 130	20
Isopropylbenzene	ND	1.0	116	114	1.7				70 - 130	20
m&p-Xylene	ND	1.0	106	108	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	102	102	0.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	105	1.9				70 - 130	20
Methylene chloride	ND	1.0	92	96	4.3				70 - 130	20
Naphthalene	ND	1.0	104	100	3.9				70 - 130	20
n-Butylbenzene	ND	1.0	117	116	0.9				70 - 130	20
n-Propylbenzene	ND	1.0	111	110	0.9				70 - 130	20
o-Xylene	ND	1.0	107	108	0.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	118	118	0.0				70 - 130	20
sec-Butylbenzene	ND	1.0	118	117	0.9				70 - 130	20
Styrene	ND	1.0	112	114	1.8				70 - 130	20
tert-amyl methyl ether	ND	1.0	100	102	2.0				70 - 130	20
tert-Butylbenzene	ND	1.0	117	115	1.7				70 - 130	20
Tetrachloroethene	ND	1.0	102	100	2.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	113	111	1.8				70 - 130	20
Toluene	ND	1.0	101	102	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	94	96	2.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	105	107	1.9				70 - 130	20
Trichloroethene	ND	1.0	102	101	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	95	97	2.1				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	84	85	1.2				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Vinyl chloride	ND	1.0	97	97	0.0				70 - 130	20
% 1,2-dichlorobenzene-d4	102	%	101	99	2.0				70 - 130	20
% Bromofluorobenzene	96	%	101	101	0.0				70 - 130	20
% Dibromofluoromethane	113	%	100	103	3.0				70 - 130	20
% Toluene-d8	101	%	101	101	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 591823 (ug/L), QC Sample No: CJ22041 (CJ21027, CJ21030 (50X) , CJ21034, CJ21037, CJ21038, CJ21040, CJ21041)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	99	97	2.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	103	100	3.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	100	102	2.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	103	104	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	103	100	3.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	96	95	1.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	107	104	2.8				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	93	94	1.1				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	102	102	0.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	94	96	2.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	111	111	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	96	99	3.1				70 - 130	20
1,2-Dibromoethane	ND	1.0	102	101	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	97	96	1.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	96	96	0.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	99	98	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	111	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	100	99	1.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	102	103	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	95	95	0.0				70 - 130	20
1,4-dioxane	ND	100	91	100	9.4				40 - 160	20
2,2-Dichloropropane	ND	1.0	106	103	2.9				70 - 130	20
2-Chlorotoluene	ND	1.0	105	104	1.0				70 - 130	20
2-Hexanone	ND	5.0	90	92	2.2				40 - 160	20
4-Chlorotoluene	ND	1.0	105	104	1.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	95	100	5.1				40 - 160	20
Acetone	ND	5.0	85	89	4.6				40 - 160	20
Benzene	ND	0.70	102	100	2.0				70 - 130	20
Bromobenzene	ND	1.0	97	97	0.0				70 - 130	20
Bromochloromethane	ND	1.0	103	101	2.0				70 - 130	20
Bromodichloromethane	ND	0.50	98	97	1.0				70 - 130	20
Bromoform	ND	1.0	97	101	4.0				70 - 130	20
Bromomethane	ND	1.0	95	93	2.1				40 - 160	20
Carbon Disulfide	ND	1.0	94	89	5.5				70 - 130	20
Carbon tetrachloride	ND	1.0	109	105	3.7				70 - 130	20
Chlorobenzene	ND	1.0	99	97	2.0				70 - 130	20
Chloroethane	ND	1.0	98	96	2.1				70 - 130	20
Chloroform	ND	1.0	98	94	4.2				70 - 130	20
Chloromethane	ND	1.0	102	102	0.0				40 - 160	20

QA/QC Data

SDG I.D.: GCJ21023

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
cis-1,2-Dichloroethene	ND	1.0	99	98	1.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	105	104	1.0				70 - 130	20
Dibromochloromethane	ND	0.50	97	99	2.0				70 - 130	20
Dibromomethane	ND	1.0	100	101	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	128	122	4.8				40 - 160	20
Di-isopropyl ether	ND	1.0	105	105	0.0				70 - 130	20
Ethyl ether	ND	1.0	89	86	3.4				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	107	106	0.9				70 - 130	20
Ethylbenzene	ND	1.0	102	102	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	91	92	1.1				70 - 130	20
Isopropylbenzene	ND	1.0	113	112	0.9				70 - 130	20
m&p-Xylene	ND	1.0	107	106	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	97	99	2.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	99	100	1.0				70 - 130	20
Methylene chloride	ND	1.0	94	91	3.2				70 - 130	20
Naphthalene	ND	1.0	97	101	4.0				70 - 130	20
n-Butylbenzene	ND	1.0	117	117	0.0				70 - 130	20
n-Propylbenzene	ND	1.0	108	109	0.9				70 - 130	20
o-Xylene	ND	1.0	105	104	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	117	115	1.7				70 - 130	20
sec-Butylbenzene	ND	1.0	118	116	1.7				70 - 130	20
Styrene	ND	1.0	111	115	3.5				70 - 130	20
tert-amyl methyl ether	ND	1.0	97	98	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	114	113	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	103	99	4.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	104	110	5.6				70 - 130	20
Toluene	ND	1.0	101	100	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	97	94	3.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	103	104	1.0				70 - 130	20
Trichloroethene	ND	1.0	102	100	2.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	109	104	4.7				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	96	93	3.2				70 - 130	20
Vinyl chloride	ND	1.0	111	105	5.6				70 - 130	20
% 1,2-dichlorobenzene-d4	103	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	94	%	100	101	1.0				70 - 130	20
% Dibromofluoromethane	107	%	100	99	1.0				70 - 130	20
% Toluene-d8	102	%	100	102	2.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 590926 (ug/L), QC Sample No: CJ17860 (CJ21032, CJ21041)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	99	96	3.1				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	84	83	1.2				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	99	96	3.1				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	84	83	1.2				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	84	84	0.0				70 - 130	25
Benzene	ND	1.0	95	96	1.0				70 - 130	25
Ethyl Benzene	ND	1.0	88	88	0.0				70 - 130	25
MTBE	ND	1.0	89	92	3.3				70 - 130	25

QA/QC Data

SDG I.D.: GCJ21023

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Naphthalene	ND	5.0	92	93	1.1				70 - 130	25
Toluene	ND	1.0	91	92	1.1				70 - 130	25
m,p-Xylenes	ND	2.0	88	88	0.0				70 - 130	25
o-Xylene	ND	1.0	86	85	1.2				70 - 130	25
% 2,5-Dibromotoluene (PID)	83	%	83	84	1.2				70 - 130	25
% 2,5-Dibromotoluene (FID)	83	%	93	83	11.4				70 - 130	25

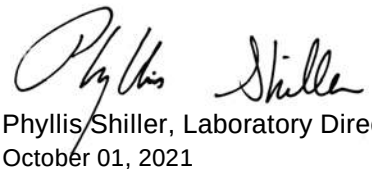
Comment:

This batch consists of a Blank, LCS and LCSD.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.
s = This parameter is outside laboratory Blank Surrogate specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
October 01, 2021

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21023	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21023	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21023	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21023	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21023	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21023	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21023	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ21023	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ21024	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	21	1.0	5	5	ug/L
CJ21024	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21024	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21024	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21024	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21024	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	1.0	5	5	ug/L
CJ21024	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	21	1.0	5	5	ug/L
CJ21024	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21024	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	21	1.0	5	5	ug/L
CJ21024	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	21	1.0	5	5	ug/L
CJ21024	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.38	0.20	0.3	0.3	ug/l
CJ21024	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.38	0.20	0.3	0.3	ug/l
CJ21024	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.38	0.20	0.3	0.3	ug/l
CJ21024	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21025	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	25	1.0	5	5	ug/L
CJ21025	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	32	1.0	20	20	ug/L
CJ21025	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21025	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21025	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21025	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	25	1.0	5	5	ug/L
CJ21025	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	32	1.0	20	20	ug/L
CJ21025	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21025	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	32	1.0	20	20	ug/L
CJ21025	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	25	1.0	5	5	ug/L
CJ21025	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	25	1.0	5	5	ug/L
CJ21025	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21025	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	32	1.0	20	20	ug/L
CJ21025	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	25	1.0	5	5	ug/L
CJ21025	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21026	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21026	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21026	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21026	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21026	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21026	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.55	0.20	0.3	0.3	ug/l
CJ21026	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.55	0.20	0.3	0.3	ug/l
CJ21026	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.55	0.20	0.3	0.3	ug/l
CJ21026	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21027	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	200	20	5	5	ug/L
CJ21027	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21027	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21027	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21027	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	16	1.0	2	2	ug/L
CJ21027	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	150	20	20	20	ug/L
CJ21027	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	1.0	2	2	ug/L
CJ21027	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	200	20	5	5	ug/L
CJ21027	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	20	20	20	ug/L
CJ21027	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21027	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	20	20	20	ug/L
CJ21027	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	200	20	5	5	ug/L
CJ21027	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	16	1.0	2	2	ug/L
CJ21027	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	200	20	5	5	ug/L
CJ21027	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21027	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150	20	70	70	ug/L
CJ21027	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	16	1.0	2	2	ug/L
CJ21027	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150	20	20	20	ug/L
CJ21027	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	200	20	5	5	ug/L
CJ21027	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	16	1.0	2	2	ug/L
CJ21027	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21027	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ21027	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ21028	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	120	2.0	5	5	ug/L
CJ21028	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00033	0.00033	ug/L
CJ21028	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.0075	0.0075	ug/L
CJ21028	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	9.0	2.0	2	2	ug/L
CJ21028	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	150	2.0	20	20	ug/L
CJ21028	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	420	5.0	5	5	ug/L
CJ21028	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ21028	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ21028	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.6	0.6	ug/L
CJ21028	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00075	0.00075	ug/L
CJ21028	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	420	5.0	5	5	ug/L

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21028	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ21028	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.0	2.0	2	2	ug/L
CJ21028	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	2.0	5	5	ug/L
CJ21028	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CJ21028	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ21028	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CJ21028	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	2.0	20	20	ug/L
CJ21028	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	420	5.0	5	5	ug/L
CJ21028	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	2.0	50	50	ug/L
CJ21028	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	9.0	2.0	2	2	ug/L
CJ21028	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	2.0	20	20	ug/L
CJ21028	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	9.0	2.0	2	2	ug/L
CJ21028	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CJ21028	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CJ21028	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150	2.0	70	70	ug/L
CJ21028	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	120	2.0	5	5	ug/L
CJ21028	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	420	5.0	5	5	ug/L
CJ21028	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	420	5.0	5	5	ug/L
CJ21028	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	120	2.0	50	50	ug/L
CJ21028	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150	2.0	20	20	ug/L
CJ21028	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	9.0	2.0	2	2	ug/L
CJ21028	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5.9	0.20	0.3	0.3	ug/l
CJ21028	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.9	0.20	0.3	0.3	ug/l
CJ21028	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	5.9	0.20	0.3	0.3	ug/l
CJ21028	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	0.3	0.3	ug/L
CJ21029	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5.5	2.0	2	2	ug/L
CJ21029	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	370	20	5	5	ug/L
CJ21029	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	110	2.0	5	5	ug/L
CJ21029	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.6	0.6	ug/L
CJ21029	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00075	0.00075	ug/L
CJ21029	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ21029	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	170	2.0	20	20	ug/L
CJ21029	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.0075	0.0075	ug/L
CJ21029	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00033	0.00033	ug/L
CJ21029	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ21029	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.5	2.0	2	2	ug/L
CJ21029	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	170	2.0	20	20	ug/L
CJ21029	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CJ21029	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ21029	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CJ21029	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	370	20	5	5	ug/L

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21029	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	2.0	5	5	ug/L
CJ21029	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ21029	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.5	2.0	2	2	ug/L
CJ21029	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	370	20	5	5	ug/L
CJ21029	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	110	2.0	50	50	ug/L
CJ21029	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	170	2.0	20	20	ug/L
CJ21029	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	5.5	2.0	2	2	ug/L
CJ21029	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	110	2.0	5	5	ug/L
CJ21029	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CJ21029	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	370	20	5	5	ug/L
CJ21029	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CJ21029	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	170	2.0	70	70	ug/L
CJ21029	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	110	2.0	50	50	ug/L
CJ21029	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	5.5	2.0	2	2	ug/L
CJ21029	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	370	20	5	5	ug/L
CJ21029	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	170	2.0	20	20	ug/L
CJ21029	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	0.3	0.3	ug/L
CJ21029	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	0.3	0.3	ug/L
CJ21029	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	200	0.3	0.3	ug/L
CJ21030	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.6	0.6	ug/L
CJ21030	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	100	5.0	20	20	ug/L
CJ21030	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	650	50	5	5	ug/L
CJ21030	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CJ21030	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.0075	0.0075	ug/L
CJ21030	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00033	0.00033	ug/L
CJ21030	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CJ21030	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1100	50	5	5	ug/L
CJ21030	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00075	0.00075	ug/L
CJ21030	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1100	50	5	5	ug/L
CJ21030	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ21030	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	650	50	5	5	ug/L
CJ21030	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CJ21030	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ21030	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21030	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	100	5.0	20	20	ug/L
CJ21030	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1100	50	5	5	ug/L
CJ21030	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	650	50	50	50	ug/L
CJ21030	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	100	5.0	20	20	ug/L
CJ21030	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	100	5.0	70	70	ug/L
CJ21030	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1100	50	5	5	ug/L
CJ21030	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CJ21030	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	650	50	5	5	ug/L
CJ21030	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CJ21030	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ21030	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	100	5.0	20	20	ug/L
CJ21030	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	650	50	50	50	ug/L
CJ21030	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1100	50	5	5	ug/L
CJ21030	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	8.1	0.20	0.3	0.3	ug/l
CJ21030	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.1	0.20	0.3	0.3	ug/l
CJ21030	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	8.1	0.20	0.3	0.3	ug/l
CJ21030	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	0.3	0.3	ug/L
CJ21031	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00033	0.00033	ug/L
CJ21031	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.6	0.6	ug/L
CJ21031	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ21031	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00075	0.00075	ug/L
CJ21031	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.0075	0.0075	ug/L
CJ21031	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ21031	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ21031	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ21031	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	4	4	ug/L
CJ21031	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ21031	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	160	10	20	20	ug/L
CJ21031	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1800	100	5	5	ug/L
CJ21031	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21031	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ21031	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ21031	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2700	100	5	5	ug/L
CJ21031	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CJ21031	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ21031	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CJ21031	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2700	100	5	5	ug/L
CJ21031	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ21031	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ21031	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	160	10	20	20	ug/L
CJ21031	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ21031	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1800	100	5	5	ug/L
CJ21031	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CJ21031	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	10	7	7	ug/L
CJ21031	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ21031	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CJ21031	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2700	100	5	5	ug/L
CJ21031	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	160	10	20	20	ug/L
CJ21031	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1800	100	50	50	ug/L
CJ21031	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CJ21031	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2700	100	5	5	ug/L
CJ21031	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1800	100	5	5	ug/L
CJ21031	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ21031	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	14	10	7	7	ug/L
CJ21031	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	160	10	70	70	ug/L
CJ21031	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CJ21031	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CJ21031	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CJ21031	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	160	10	20	20	ug/L
CJ21031	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1800	100	50	50	ug/L

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21031	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CJ21031	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ21031	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2700	100	5	5	ug/L
CJ21031	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1000	0.3	0.3	ug/L
CJ21031	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1000	0.3	0.3	ug/L
CJ21031	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	1000	0.3	0.3	ug/L
CJ21032	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ21032	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ21032	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ21032	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ21032	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ21032	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	120	20	20	20	ug/L
CJ21032	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ21032	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ21032	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ21032	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ21032	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ21032	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ21032	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	4700	100	5	5	ug/L
CJ21032	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	4000	100	5	5	ug/L
CJ21032	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ21032	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ21032	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ21032	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ21032	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	83	20	70	70	ug/L
CJ21032	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ21032	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ21032	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4700	100	5	5	ug/L
CJ21032	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	20	20	20	ug/L
CJ21032	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21032	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ21032	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4000	100	5	5	ug/L
CJ21032	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ21032	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ21032	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	83	20	70	70	ug/L
CJ21032	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ21032	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	22	20	7	7	ug/L
CJ21032	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ21032	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ21032	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ21032	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ21032	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4700	100	5	5	ug/L
CJ21032	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ21032	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4000	100	50	50	ug/L
CJ21032	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ21032	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	20	20	20	ug/L
CJ21032	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	4000	100	5	5	ug/L
CJ21032	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4700	100	5	5	ug/L
CJ21032	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ21032	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ21032	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	83	20	70	70	ug/L
CJ21032	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21032	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	120	20	70	70	ug/L
CJ21032	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ21032	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	22	20	7	7	ug/L
CJ21032	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ21032	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ21032	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ21032	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	120	20	20	20	ug/L
CJ21032	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ21032	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ21032	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ21032	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4700	100	5	5	ug/L
CJ21032	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ21032	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ21032	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	4000	100	50	50	ug/L
CJ21032	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ21032	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	25	0.20	0.3	0.3	ug/l
CJ21032	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	25	0.20	0.3	0.3	ug/l
CJ21032	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	25	0.20	0.3	0.3	ug/l
CJ21032	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ21032	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2500	100	300	300	ug/L
CJ21032	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	2500	100	300	300	ug/L
CJ21032	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	2500	100	300	300	ug/L
CJ21033	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21033	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21033	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21033	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21033	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21033	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21033	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ21033	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ21034	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21034	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21034	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21034	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21034	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21034	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21034	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ21034	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21035	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21035	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21035	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21035	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21035	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21035	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21035	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ21035	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ21036	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21036	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21036	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21036	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21036	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21036	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21036	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ21036	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ21037	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21037	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21037	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21037	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21037	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21037	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21037	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ21037	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ21038	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21038	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21038	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21038	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21038	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21038	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21038	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ21038	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ21039	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21039	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21039	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21039	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21039	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21039	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21039	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L

Friday, October 01, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ21023 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ21039	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ21040	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21040	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21040	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21040	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21040	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21040	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21040	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ21040	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ21041	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ21041	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ21041	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ21041	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ21041	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ21041	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ21041	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ21041	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ21041	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.043	0.004	0.01	0.01	mg/L
CJ21041	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.043	0.004	0.01	0.01	mg/L
CJ21041	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.043	0.004	0.01	0.01	mg/L
CJ21041	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.038	0.004	0.01	0.01	mg/L
CJ21041	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.038	0.004	0.01	0.01	mg/L
CJ21041	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.038	0.004	0.01	0.01	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ21023, CJ21024, CJ21025, CJ21026, CJ21027, CJ21028, CJ21029, CJ21030, CJ21031, CJ21032, CJ21033, CJ21034, CJ21035, CJ21036, CJ21037, CJ21038, CJ21039, CJ21040, CJ21041

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: SVOASIM Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Friday, October 01, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 01, 2021

SDG I.D.: GCJ21023

SDG Comments

CJ21026, CJ21032, CJ21041 - The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GWP. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/10/21-1 Adam Werner, Chemist 09/10/21

CJ21024 (1X), CJ21025 (1X), CJ21026 (1X), CJ21028 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0910_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 590939 (CJ19155)

CJ21024, CJ21025, CJ21026, CJ21028

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

October 01, 2021

SDG I.D.: GCJ21023

EPH Narration

AU-FID4 09/08/21-1 Adam Werner, Chemist 09/08/21

CJ21032 (1X), CJ21041 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 590929 (CJ16894)

CJ21032, CJ21041

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/08/21 08:07 Emily Kolominskaya, Tina Hall, Chemist 09/08/21

CJ21026, CJ21032, CJ21041

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS 09/09/21 08:35 Emily Kolominskaya, Tina Hall, Chemist 09/09/21

CJ21026, CJ21032

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/10/21 08:16 Emily Kolominskaya, Chemist 09/10/21

CJ21041

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily

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Certification Report

October 01, 2021

SDG I.D.: GCJ21023

ICP Metals Narration

by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 590851 (CJ21026)

CJ21026, CJ21032, CJ21041

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 591058 (CJ20564)

CJ21026, CJ21032

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 591228 (CJ21041)

CJ21041

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/13/21-1 Adam Werner, Chemist 09/13/21

CJ21030 (1X), CJ21032 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0913_05-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

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MCP Certification Report

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SDG I.D.: GCJ21023

SVOA-Dioxane

QC (Batch Specific):

Batch 591391 (CJ21030)

CJ21030, CJ21032

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 590817 (Samples: CJ21032, CJ21041): -----

One or more analytes is below the method criteria. A low bias for these analytes is possible. (Acenaphthylene)

The blank surrogate was below criteria. (% 2-Fluorobiphenyl(CJ20187))

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (Acenaphthylene, Benzo(k)fluoranthene)

Instrument:

CHEM33 09/08/21-1 Wes Bryon, Chemist 09/08/21

CJ21032 (1X), CJ21041 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0701):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0908_05-33_PAHSIM_0701) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: % Nitrobenzene-d5 41%H (20%)
The following compounds did not meet maximum % deviations: % Nitrobenzene-d5 41%H (40%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 590817 (CJ20187)

CJ21032, CJ21041

All LCS recoveries were within 40 - 140 with the following exceptions: Acenaphthylene(30%)
All LCSD recoveries were within 40 - 140 with the following exceptions: Acenaphthylene(24%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: Acenaphthylene(22.2%), Benzo(k)fluoranthene(21.9%)

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MCP Certification Report

October 01, 2021

SDG I.D.: GCJ21023

SVOASIM Narration

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/12/21-1 Michael Hahn, Chemist 09/12/21

CJ21023 (1X), CJ21024 (1X), CJ21025 (1X), CJ21026 (1X), CJ21027 (20X), CJ21028 (5X), CJ21029 (20X), CJ21030 (5X), CJ21031 (100X), CJ21032 (100X), CJ21033 (1X), CJ21035 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0912_02-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.190 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/13/21-1 Michael Hahn, Chemist 09/13/21

CJ21027 (1X), CJ21030 (50X), CJ21034 (1X), CJ21037 (1X), CJ21038 (1X), CJ21040 (1X), CJ21041 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0913_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.095 (0.1), Tetrachloroethene 0.193 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/14/21-1 Michael Hahn, Chemist 09/14/21

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NY # 11301

MCP Certification Report

October 01, 2021

SDG I.D.: GCJ21023

VOA Narration

CJ21028 (2X), CJ21029 (2X), CJ21031 (10X), CJ21032 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0914_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.184 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/14/21-2 Harry Mullin, Chemist 09/14/21

CJ21036 (1X), CJ21039 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0914_37-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.193 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 591692 (CJ20191) CHEM23 9/12/2021-1

CJ21023(1X), CJ21024(1X), CJ21025(1X), CJ21026(1X), CJ21027(20X), CJ21028(5X), CJ21029(20X), CJ21030(5X), CJ21031(100X), CJ21032(100X), CJ21033(1X), CJ21035(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 591823 (CJ22041) CHEM23 9/13/2021-1

CJ21027(1X), CJ21030(50X), CJ21034(1X), CJ21037(1X), CJ21038(1X), CJ21040(1X), CJ21041(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.

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NY # 11301

MCP Certification Report

October 01, 2021

SDG I.D.: GCJ21023

VOA Narration

All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 591965 (CJ20188) CHEM23 9/14/2021-1

CJ21028(2X), CJ21029(2X), CJ21031(10X), CJ21032(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 592004 (CJ20190) CHEM23 9/14/2021-2

CJ21036(1X), CJ21039(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Hexachlorobutadiene(69%), Trichlorotrifluoroethane(69%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/07/21-1 Raman Makol, Chemist 09/07/21

CJ21032 (1X), CJ21041 (1X)

Initial Calibration Evaluation (PIDFID/VPH_090221_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 590926 (CJ17860)

CJ21032(1X), CJ21041(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

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MCP Certification Report

October 01, 2021

SDG I.D.: GCJ21023

VPH Narration

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp: 1.5 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
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scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/7/21

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
21023	21A-TB01-090721-1	GW	9/7/21	0800	2							X									
21024	21A-AE101S-090721-1	GW	9/7/21	0950	3	1						X	X								
21025	21A-AE101D-090721-1	GW	9/7/21	1035	3	1						X	X								
21026	21A-AE109D-090721-1	GW	9/7/21	1245	3	1		2				X	X			X					
21027	21A-AE102RR1-090721-1	GW	9/7/21	1250	3							X									
21028	21A-AE102RR2-090721-1	GW	9/7/21	1255	3	1						X	X								
21029	21A-AE102RR3-090721-1	GW	9/7/21	1300	3							X									
21030	21A-AE102RR4-090721-1	GW	9/7/21	1305	3	1						X	X								
21031	21A-AE102RR5-090721-1	GW	9/7/21	1310	3							X									
21032	21A-AE102RR6-090721-1	GW	9/7/21	1320	5	4		2				X	X	X	X	X					
21033	21A-AE111R1-090721-1	GW	9/7/21	1210	3							X									
21034	21A-AE111R2-090721-1	GW	9/7/21	1215	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-7-21	15:05
[signature]	[signature]	9/7/21	17:00

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 3 °C Pg of

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nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/7/21

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
21035	21A-AE111R3-090721-1	GW	9/7/21	1220	3							X									
21036	21A-AE111R4-090721-1	GW	9/7/21	1235	3							X									
21037	21A-AE111R5-090721-1	GW	9/7/21	1230	3							X									
21038	21A-AE111R6-090721-1	GW	9/7/21	1235	3							X									
21039	21A-AE111R7-090721-1	GW	9/7/21	1240	3							X									
21040	21A-AE111R1-090721-2	GW	9/7/21	1212	3							X									
	~~21A-AE~~										(10)	9/07/21									
21041	21A-TRC102-090721-1	GW	9/7/21	1425	5	3		2				X		X	X	X					

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-7-21	15:05
[signature]	[signature]	9/7/21	17:00

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- ☐ Direct Exposure (Residential)
- ☐ GW
- ☐ Other

CT
- ☐ RCP Cert
- ☐ GW Protection
- ☐ SW Protection
- ☐ GA Mobility
- ☐ GB Mobility
- ☐ Residential DEC
- ☐ I/C DEC
- ☐ Other

MA
- X MCP (CAM Rpt)
- X GW-1
- X GW-2
- X GW-3
- ☐ S-1
- ☐ S-2
- ☐ S-3
- ☐ MWRA eSMART
- ☐ Other

State where samples were collected: MA

Data Format
- x PDF
- x AECOM EQuIS 4-File EDD format

Data Package
- ☐ Tier II Checklist
- ☐ Full Data Package*
- ☐ Phoenix Std Report
- ☐ Other

* SURCHARGE APPLIES

Thursday, October 07, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60552044.25**
SDG ID: **GCJ22041**
Sample ID#s: CJ22041 - CJ22052

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 07, 2021

SDG I.D.: GCJ22041

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver. 2:
This report has been revised to correct the method reference for MA VPH.

Ver. 3:
This report has been revised to include a MS/MSD on CJ22045 for method SW846 8260.
The source sample (21A-EMW11R1-090821-1) was analyzed within method hold time, however, the MS/MSD was analyzed outside method hold time.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 07, 2021

SDG I.D.: GCJ22041

Project ID: LOCKHEED-WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-TB02-090721-1	CJ22041	GROUND WATER
21A-TRC103-090721-1	CJ22042	GROUND WATER
21A-EMW10R-090821-1	CJ22043	GROUND WATER
21A-EMW10D-090821-1	CJ22044	GROUND WATER
21A-EMW11R1-090821-1	CJ22045	GROUND WATER
21A-EMW11R2-090821-1	CJ22046	GROUND WATER
21A-STM8D-090821-1	CJ22047	GROUND WATER
21A-STM8S-090821-1	CJ22048	GROUND WATER
21A-STM8M-090821-1	CJ22049	GROUND WATER
21A-EMW11R3-090821-1	CJ22050	GROUND WATER
21A-STM8R-090821-1	CJ22051	GROUND WATER
21A-EMW11D-090821-1	CJ22052	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	13:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22041

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-TB02-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22041

Client ID: 21A-TB02-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	112		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22041

Client ID: 21A-TB02-090721-1

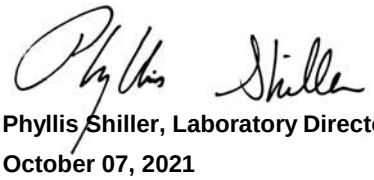
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 07, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/07/21	15:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22042

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-TRC103-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/13/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/08/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/08/21	P/D	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/08/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22042

Client ID: 21A-TRC103-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	1.7	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	1.1	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	1.6	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	104		%	1	09/13/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	112		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/09/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/09/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/09/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/09/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/09/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/09/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/09/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/09/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/09/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/09/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	52		%	1	09/09/21	WB	40 - 140 %
% Nitrobenzene-d5	121		%	1	09/09/21	WB	40 - 140 %
% Terphenyl-d14	23		%	1	09/09/21	WB	40 - 140 % 3
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/13/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/13/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/13/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/13/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/13/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	73		%	1	09/13/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	88		%	1	09/13/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	95		%	1	09/13/21	AW	40 - 140 %
% o-terphenyl (aromatic)	80		%	1	09/13/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	120	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22042
Client ID: 21A-TRC103-090721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Ethyl Benzene	1.7	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	94		%	1	09/08/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	89		%	1	09/08/21	RM	70 - 130 %

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Semi-Volatile Comment:
Poor surrogate recovery was observed for one surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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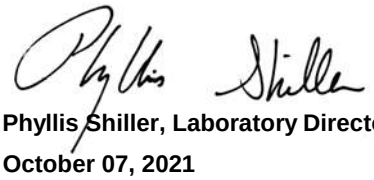

Phyllis Shiller, Laboratory Director

October 07, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	9:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22043

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-EMW10R-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.024	0.011	mg/L	1	09/09/21	CPP	SW6010D
Manganese (Dissolved)	0.006	0.001	mg/L	1	09/09/21	CPP	SW6010D
Iron	0.223	0.010	mg/L	1	09/10/21	EK	SW6010D
Manganese	0.024	0.001	mg/L	1	09/10/21	EK	SW6010D
Chloride	180	15.0	mg/L	5	09/14/21	ER	SM4500CLE-11
Nitrite-N	< 0.010	0.010	mg/L	1	09/09/21 18:53	ER	E353.2
Nitrate-N	0.74	0.02	mg/L	1	09/09/21 18:53	ER	E353.2
Sulfate	11.7	5.0	mg/L	1	09/10/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/14/21	GD	SM4500S-D-11
Total Organic Carbon	1.1	1.0	mg/L	1	09/09/21	ARG	SM5310B-11
Dissolved Metals Preparation	Completed				09/08/21	AG	SW3005A
Total Metals Digestion	Completed				09/09/21	AG	

Volatiles

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	3.3	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22043

Client ID: 21A-EMW10R-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	6.7	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	3.2	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	11	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	107		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	112		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	11:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22044

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-EMW10D-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethane	1.4	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/15/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/15/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,2-Dichloroethene	19	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrachloroethene	130	10	ug/L	10	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/15/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Trichloroethene	33	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Vinyl chloride	2.9	1.0	ug/L	1	09/15/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/15/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/15/21	MH	70 - 130 %
% Dibromofluoromethane	118		%	1	09/15/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/15/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	108		%	10	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	93		%	10	09/13/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	112		%	10	09/13/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10x)	103		%	10	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/15/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	11:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22045

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-EMW11R1-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				10/05/21		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/15/21	PS	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/15/21	PS	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/15/21	PS	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/15/21	PS	SW8260C
1,1-Dichloroethane	97	20	ug/L	20	09/15/21	PS	SW8260C
1,1-Dichloroethene	25	20	ug/L	20	09/15/21	PS	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/15/21	PS	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/15/21	PS	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/15/21	PS	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/15/21	PS	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/15/21	PS	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/15/21	PS	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/15/21	PS	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/15/21	PS	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/15/21	PS	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/15/21	PS	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/15/21	PS	SW8260C
2-Hexanone	ND	100	ug/L	20	09/15/21	PS	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/15/21	PS	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/15/21	PS	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22045

Client ID: 21A-EMW11R1-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	500	ug/L	20	09/15/21	PS	SW8260C
Benzene	ND	10	ug/L	20	09/15/21	PS	SW8260C
Bromobenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/15/21	PS	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/15/21	PS	SW8260C
Bromoform	ND	10	ug/L	20	09/15/21	PS	SW8260C
Bromomethane	ND	10	ug/L	20	09/15/21	PS	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/15/21	PS	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/15/21	PS	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
Chloroethane	ND	20	ug/L	20	09/15/21	PS	SW8260C
Chloroform	ND	20	ug/L	20	09/15/21	PS	SW8260C
Chloromethane	ND	20	ug/L	20	09/15/21	PS	SW8260C
cis-1,2-Dichloroethene	280	20	ug/L	20	09/15/21	PS	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/15/21	PS	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/15/21	PS	SW8260C
Dibromomethane	ND	10	ug/L	20	09/15/21	PS	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/15/21	PS	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/15/21	PS	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/15/21	PS	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/15/21	PS	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/15/21	PS	SW8260C
Methylene chloride	ND	100	ug/L	20	09/15/21	PS	SW8260C
Naphthalene	ND	20	ug/L	20	09/15/21	PS	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
o-Xylene	ND	20	ug/L	20	09/15/21	PS	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/15/21	PS	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
Styrene	ND	20	ug/L	20	09/15/21	PS	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/15/21	PS	SW8260C
Tetrachloroethene	2700	200	ug/L	200	09/13/21	PS	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/15/21	PS	SW8260C
Toluene	ND	20	ug/L	20	09/15/21	PS	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/15/21	PS	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/15/21	PS	SW8260C
Trichloroethene	5100	200	ug/L	200	09/13/21	PS	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/15/21	PS	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/15/21	PS	SW8260C
Vinyl chloride	31	20	ug/L	20	09/15/21	PS	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	108		%	20	09/15/21	PS	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	09/15/21	PS	70 - 130 %
% Dibromofluoromethane (20x)	122		%	20	09/15/21	PS	70 - 130 %
% Toluene-d8 (20x)	95		%	20	09/15/21	PS	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	106		%	200	09/13/21	PS	70 - 130 %
% Bromofluorobenzene (200x)	93		%	200	09/13/21	PS	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (200x)	112		%	200	09/13/21	PS	70 - 130 %
% Toluene-d8 (200x)	99		%	200	09/13/21	PS	70 - 130 %

Oxygenates& Dioxane

1,4-dioxane	ND	2000	ug/L	20	09/15/21	PS	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/15/21	PS	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/15/21	PS	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/15/21	PS	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/15/21	PS	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	9:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22046

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-EMW11R2-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.006	0.004	mg/L	1	09/10/21	EK	SW6010D
Arsenic (Dissolved)	0.005	0.004	mg/L	1	09/09/21	CPP	SW6010D
Iron (Dissolved)	0.604	0.011	mg/L	1	09/09/21	CPP	SW6010D
Manganese (Dissolved)	0.612	0.001	mg/L	1	09/09/21	CPP	SW6010D
Iron	1.18	0.010	mg/L	1	09/10/21	EK	SW6010D
Manganese	0.658	0.001	mg/L	1	09/10/21	EK	SW6010D
Chloride	239	15.0	mg/L	5	09/14/21	ER	SM4500CLE-11
Nitrite-N	< 0.010	0.010	mg/L	1	09/09/21 18:54	ER	E353.2
Nitrate-N	< 0.02	0.02	mg/L	1	09/09/21 18:54	ER	E353.2
Sulfate	35.5	5.0	mg/L	1	09/10/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/14/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/09/21	ARG	SM5310B-11
EPH Extraction	Completed				09/13/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/08/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/08/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/08/21	AG	SW3005A
Total Metals Digestion	Completed				09/09/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/08/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	20	ug/L	40	09/15/21	MH	SW8260C
1,1,1-Trichloroethane	ND	40	ug/L	40	09/15/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	20	ug/L	40	09/15/21	MH	SW8260C
1,1,2-Trichloroethane	ND	20	ug/L	40	09/15/21	MH	SW8260C
1,1-Dichloroethane	110	40	ug/L	40	09/15/21	MH	SW8260C
1,1-Dichloroethene	26	20	ug/L	40	09/15/21	MH	SW8260C
1,1-Dichloropropene	ND	40	ug/L	40	09/15/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22046

Client ID: 21A-EMW11R2-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,3-Trichlorobenzene	ND	20	ug/L	40	09/15/21	MH	SW8260C
1,2,3-Trichloropropane	ND	20	ug/L	40	09/15/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	20	ug/L	40	09/15/21	MH	SW8260C
1,2-Dibromoethane	ND	20	ug/L	40	09/15/21	MH	SW8260C
1,2-Dichlorobenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
1,2-Dichloroethane	ND	20	ug/L	40	09/15/21	MH	SW8260C
1,2-Dichloropropane	ND	20	ug/L	40	09/15/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
1,3-Dichloropropane	ND	40	ug/L	40	09/15/21	MH	SW8260C
1,4-Dichlorobenzene	ND	20	ug/L	40	09/15/21	MH	SW8260C
2,2-Dichloropropane	ND	40	ug/L	40	09/15/21	MH	SW8260C
2-Chlorotoluene	ND	40	ug/L	40	09/15/21	MH	SW8260C
2-Hexanone	ND	200	ug/L	40	09/15/21	MH	SW8260C
4-Chlorotoluene	ND	40	ug/L	40	09/15/21	MH	SW8260C
4-Methyl-2-pentanone	ND	200	ug/L	40	09/15/21	MH	SW8260C
Acetone	ND	1000	ug/L	40	09/15/21	MH	SW8260C
Benzene	ND	20	ug/L	40	09/15/21	MH	SW8260C
Bromobenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
Bromochloromethane	ND	40	ug/L	40	09/15/21	MH	SW8260C
Bromodichloromethane	ND	20	ug/L	40	09/15/21	MH	SW8260C
Bromoform	ND	20	ug/L	40	09/15/21	MH	SW8260C
Bromomethane	ND	20	ug/L	40	09/15/21	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	40	09/15/21	MH	SW8260C
Carbon tetrachloride	ND	20	ug/L	40	09/15/21	MH	SW8260C
Chlorobenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
Chloroethane	ND	40	ug/L	40	09/15/21	MH	SW8260C
Chloroform	ND	40	ug/L	40	09/15/21	MH	SW8260C
Chloromethane	ND	40	ug/L	40	09/15/21	MH	SW8260C
cis-1,2-Dichloroethene	420	40	ug/L	40	09/15/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	20	ug/L	40	09/15/21	MH	SW8260C
Dibromochloromethane	ND	20	ug/L	40	09/15/21	MH	SW8260C
Dibromomethane	ND	20	ug/L	40	09/15/21	MH	SW8260C
Dichlorodifluoromethane	ND	40	ug/L	40	09/15/21	MH	SW8260C
Ethylbenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
Hexachlorobutadiene	ND	20	ug/L	40	09/15/21	MH	SW8260C
Isopropylbenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
m&p-Xylene	ND	40	ug/L	40	09/15/21	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	40	09/15/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	40	ug/L	40	09/15/21	MH	SW8260C
Methylene chloride	ND	200	ug/L	40	09/15/21	MH	SW8260C
Naphthalene	ND	40	ug/L	40	09/15/21	MH	SW8260C
n-Butylbenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
n-Propylbenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
o-Xylene	ND	40	ug/L	40	09/15/21	MH	SW8260C
p-Isopropyltoluene	ND	40	ug/L	40	09/15/21	MH	SW8260C
sec-Butylbenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Styrene	ND	40	ug/L	40	09/15/21	MH	SW8260C
tert-Butylbenzene	ND	40	ug/L	40	09/15/21	MH	SW8260C
Tetrachloroethene	3600	40	ug/L	40	09/15/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	100	ug/L	40	09/15/21	MH	SW8260C
Toluene	ND	40	ug/L	40	09/15/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	40	ug/L	40	09/15/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	20	ug/L	40	09/15/21	MH	SW8260C
Trichloroethene	6300	100	ug/L	100	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	40	ug/L	40	09/15/21	MH	SW8260C
Trichlorotrifluoroethane	ND	40	ug/L	40	09/15/21	MH	SW8260C
Vinyl chloride	36	20	ug/L	40	09/15/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (40x)	107		%	40	09/15/21	MH	70 - 130 %
% Bromofluorobenzene (40x)	92		%	40	09/15/21	MH	70 - 130 %
% Dibromofluoromethane (40x)	121		%	40	09/15/21	MH	70 - 130 %
% Toluene-d8 (40x)	96		%	40	09/15/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	108		%	100	09/13/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	94		%	100	09/13/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	118		%	100	09/13/21	MH	70 - 130 %
% Toluene-d8 (100x)	96		%	100	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	4000	ug/L	40	09/15/21	MH	SW8260C (OXY)
Diethyl ether	ND	40	ug/L	40	09/15/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	40	ug/L	40	09/15/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	40	ug/L	40	09/15/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	40	ug/L	40	09/15/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/09/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/09/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/09/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	0.14	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	0.10	0.02	ug/L	1	09/09/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	0.12	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Chrysene	0.11	0.05	ug/L	1	09/09/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/09/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/09/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	0.13	0.09	ug/L	1	09/09/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/09/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/09/21	WB	SW8270D (SIM)
Pyrene	0.15	0.07	ug/L	1	09/09/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	56		%	1	09/09/21	WB	40 - 140 %
% Nitrobenzene-d5	119		%	1	09/09/21	WB	40 - 140 %
% Terphenyl-d14	74		%	1	09/09/21	WB	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	09/13/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	09/13/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/13/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/13/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	190	ug/L	1	09/13/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	85		%	1	09/13/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	104		%	1	09/13/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	101		%	1	09/13/21	AW	40 - 140 %
% o-terphenyl (aromatic)	94		%	1	09/13/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	3100	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	3100	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Ethyl Benzene	1.7	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/08/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	87		%	1	09/08/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	86		%	1	09/08/21	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

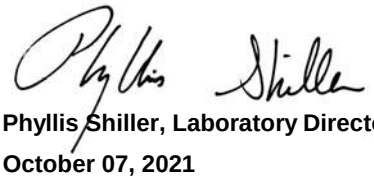
Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 07, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	10:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22047

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-STM8D-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.365	0.011	mg/L	1	09/09/21	CPP	SW6010D
Manganese (Dissolved)	3.19	0.011	mg/L	10	09/13/21	TH	SW6010D
Iron	0.407	0.010	mg/L	1	09/10/21	EK	SW6010D
Manganese	3.22	0.010	mg/L	10	09/13/21	TH	SW6010D
Chloride	262	15.0	mg/L	5	09/15/21	ER	SM4500CLE-11
Nitrite-N	< 0.010	0.010	mg/L	1	09/09/21 03:38	ER	E353.2
Nitrate-N	< 0.02	0.02	mg/L	1	09/09/21 03:38	ER	E353.2
Sulfate	26.0	5.0	mg/L	1	09/09/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/14/21	GD	SM4500S-D-11
Total Organic Carbon	1.1	1.0	mg/L	1	09/09/21	ARG	SM5310B-11
Dissolved Metals Preparation	Completed				09/08/21	AG	SW3005A
Total Metals Digestion	Completed				09/09/21	AG	

Volatiles

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22047

Client ID: 21A-STM8D-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/13/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/13/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/13/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,2-Dichloroethene	3.9	1.0	ug/L	1	09/13/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/13/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/13/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.2	1.0	ug/L	1	09/13/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/13/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22047
Client ID: 21A-STM8D-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/13/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/13/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	107		%	1	09/13/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/13/21	MH	70 - 130 %
% Dibromofluoromethane	119		%	1	09/13/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/13/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/13/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/13/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.41	0.20	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	81		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	9:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22048

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-STM8S-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/15/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22048

Client ID: 21A-STM8S-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/15/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/15/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/15/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/15/21	MH	70 - 130 %
% Dibromofluoromethane	107		%	1	09/15/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/15/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/15/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22048

Client ID: 21A-STM8S-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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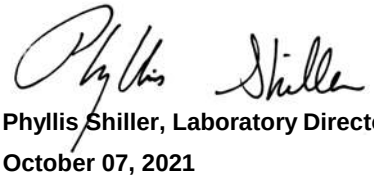

Phyllis Shiller, Laboratory Director

October 07, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	10:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22049

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-STM8M-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/15/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/15/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22049

Client ID: 21A-STM8M-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/15/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,2-Dichloroethene	2.5	1.0	ug/L	1	09/15/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/15/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/15/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/15/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/15/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/15/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/15/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/15/21	MH	70 - 130 %
% Dibromofluoromethane	107		%	1	09/15/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/15/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/15/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22049

Client ID: 21A-STM8M-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/15/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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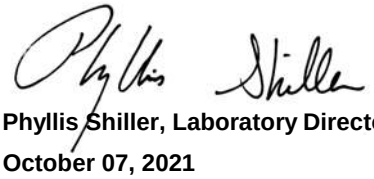

Phyllis Shiller, Laboratory Director

October 07, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	13:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22050

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-EMW11R3-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/15/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/15/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/15/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/15/21	MH	SW8260C
1,1-Dichloroethane	85	20	ug/L	20	09/15/21	MH	SW8260C
1,1-Dichloroethene	21	20	ug/L	20	09/15/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/15/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/15/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/15/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/15/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/15/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/15/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/15/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/15/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/15/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/15/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/15/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/15/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/15/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/15/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/15/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22050

Client ID: 21A-EMW11R3-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/15/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/15/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/15/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/15/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/15/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/15/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/15/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/15/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/15/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/15/21	MH	SW8260C
cis-1,2-Dichloroethene	370	20	ug/L	20	09/15/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/15/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/15/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/15/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/15/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/15/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/15/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/15/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/15/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/15/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/15/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/15/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/15/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/15/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/15/21	MH	SW8260C
Tetrachloroethene	2900	200	ug/L	200	09/15/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/15/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/15/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/15/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/15/21	MH	SW8260C
Trichloroethene	4400	200	ug/L	200	09/15/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/15/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/15/21	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	09/15/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	107		%	20	09/15/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	09/15/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	107		%	20	09/15/21	MH	70 - 130 %
% Toluene-d8 (20x)	97		%	20	09/15/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	107		%	200	09/15/21	MH	70 - 130 %
% Bromofluorobenzene (200x)	94		%	200	09/15/21	MH	70 - 130 %
% Dibromofluoromethane (200x)	123		%	200	09/15/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	99		%	200	09/15/21	MH	70 - 130 %

Oxygenates& Dioxane

1,4-dioxane	ND	2000	ug/L	20	09/15/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/15/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/15/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/15/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/15/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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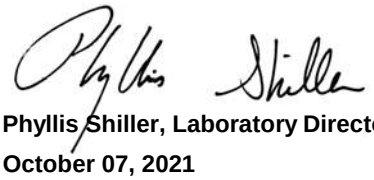


Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	13:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22051

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-STM8R-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/17/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/17/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/17/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/17/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/17/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/17/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/17/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/17/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22051

Client ID: 21A-STM8R-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/17/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/17/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/17/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
cis-1,2-Dichloroethene	6.6	1.0	ug/L	1	09/17/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/17/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/17/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/17/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/17/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.4	1.0	ug/L	1	09/17/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Tetrachloroethene	2.0	1.0	ug/L	1	09/17/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/17/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/17/21	MH	SW8260C
Trichloroethene	8.9	1.0	ug/L	1	09/17/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/17/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/17/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/17/21	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	09/17/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/17/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/17/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/17/21	MH	SW8260C (OXY)

Ver 3

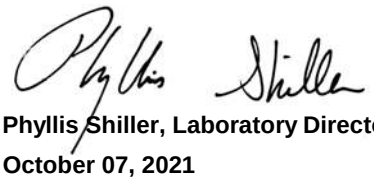
Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22051
Client ID: 21A-STM8R-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/17/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/17/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/17/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.53	0.20	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	79		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/08/21	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ22041
Phoenix ID: CJ22052

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-EMW11D-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/18/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22052

Client ID: 21A-EMW11D-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/18/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
cis-1,2-Dichloroethene	5.2	1.0	ug/L	1	09/18/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Tetrachloroethene	1.8	1.0	ug/L	1	09/18/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/18/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Trichloroethene	7.2	1.0	ug/L	1	09/18/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Vinyl chloride	1.7	1.0	ug/L	1	09/18/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/18/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/18/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/18/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/18/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/18/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ22052

Client ID: 21A-EMW11D-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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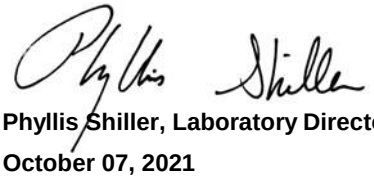

Phyllis Shiller, Laboratory Director

October 07, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 07, 2021

QA/QC Data

SDG I.D.: GCJ22041

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 591228 (mg/L), QC Sample No: CJ21041 (CJ22043, CJ22046, CJ22047)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.043	0.045	4.50	99.0	99.7	0.7	103			80 - 120	20
Iron	BRL	0.010	21.0	21.5	2.40	100	102	2.0	NC			80 - 120	20
Manganese	BRL	0.001	3.12	3.17	1.60	101	101	0.0	100			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 591014 (mg/L), QC Sample No: CJ22295 (CJ22043, CJ22046, CJ22047)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	93.2	92.5	0.8	91.4			80 - 120	20
Iron	BRL	0.011	0.257	0.250	2.80	94.8	94.0	0.8	91.7			80 - 120	20
Manganese	BRL	0.001	0.043	0.042	2.40	95.6	94.9	0.7	93.8			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 07, 2021

QA/QC Data

SDG I.D.: GCJ22041

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 591878 (mg/L), QC Sample No: CJ22043 (CJ22043, CJ22046, CJ22047)														
Sulfide	BRL	0.05	<0.05	<0.05	NC	93.9			90.1			90 - 110	20	
Comment:														
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.														
QA/QC Batch 591368 (mg/L), QC Sample No: CJ22061 (CJ22043, CJ22046, CJ22047)														
Total Organic Carbon	BRL	1.0	<1.0	<1.0	NC	91.0			94.0			85 - 115	20	
Comment:														
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.														
QA/QC Batch 591444 (mg/L), QC Sample No: CJ24705 (CJ22043, CJ22046, CJ22047)														
Sulfate	BRL	5.0	6.0	5.5	NC	96.1			94.9			90 - 110	20	
QA/QC Batch 591940 (mg/L), QC Sample No: CJ18533 (CJ22047)														
Chloride	BRL	3.0	<3.0	<3.0	NC	101			102			90 - 110	20	
QA/QC Batch 591145 (mg/L), QC Sample No: CJ24440 (CJ22047)														
Nitrate-N	BRL	0.02	0.37	0.37	0	104			111			90 - 110	20	m
Nitrite-N	BRL	0.01	<0.010	<0.01	NC	97.2			115			90 - 110	20	m
QA/QC Batch 591332 (mg/L), QC Sample No: CJ24441 (CJ22043, CJ22046)														
Nitrate-N	BRL	0.02	<0.02	<0.02	NC	101			106			90 - 110	20	
Nitrite-N	BRL	0.01	<0.010	<0.01	NC	96.4			114			90 - 110	20	m
QA/QC Batch 591775 (mg/L), QC Sample No: CJ26797 (CJ22043, CJ22046)														
Chloride	BRL	3.0	4.4	4.3	NC	105			101			90 - 110	20	

m = This parameter is outside laboratory MS/MSD specified recovery limits.

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QA/QC Report

October 07, 2021

QA/QC Data

SDG I.D.: GCJ22041

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 591606 (ug/L), QC Sample No: CJ22042 (CJ22042, CJ22046)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	64	65	1.6				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	94	93	1.1				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	88	84	4.7				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	81	81	0.0				40 - 140	25	
C9 - Nonane	ND	10	41	41	0.0				40 - 140	25	
C-10 Decane	ND	10	54	55	1.8				40 - 140	25	
C12 - Dodecane	ND	10	55	55	0.0				40 - 140	25	
C14 - Tetradecane	ND	10	68	67	1.5				40 - 140	25	
C16 - Hexadecane	ND	10	75	77	2.6				40 - 140	25	
C18 - Octadecane	ND	10	92	93	1.1				40 - 140	25	
C19 - Nonadecane	ND	10	90	90	0.0				40 - 140	25	
C20 - Eicosane	ND	10	89	90	1.1				40 - 140	25	
C22 - Docosane	ND	10	92	93	1.1				40 - 140	25	
C24 - Tetracosane	ND	10	95	96	1.0				40 - 140	25	
C26 - Hexacosane	ND	10	95	96	1.0				40 - 140	25	
C28 - Octacosane	ND	10	98	98	0.0				40 - 140	25	
C30 - Tricotane	ND	10	95	92	3.2				40 - 140	25	
C36 - Hexatriacontane	ND	10	102	90	12.5				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	92	%	94	69	30.7				40 - 140	25	r
% o-terphenyl (aromatic)	85	%	81	58	33.1				40 - 140	25	r
% 2-Fluorobiphenyl (Fractionation)	85	%	90	88	2.2				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	92	%	94	93	1.1				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 591391 (ug/l), QC Sample No: CJ21030 (CJ22047, CJ22051)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	71	90	23.6	72			40 - 140	30	
% 1,4-dioxane-d8	82	%	87	90	3.4	81			40 - 140	30	
QA/QC Batch 591048 (ug/L), QC Sample No: CJ21562 (CJ22042, CJ22046)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	74	63	16.1				40 - 140	20	
Acenaphthene	ND	0.50	81	74	9.0				40 - 140	20	
Acenaphthylene	ND	0.10	47	68	36.5				40 - 140	20	r
Anthracene	ND	0.10	73	76	4.0				40 - 140	20	
Benz(a)anthracene	ND	0.02	96	85	12.2				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(a)pyrene	ND	0.02	47	83	55.4				40 - 140	20	r
Benzo(b)fluoranthene	ND	0.02	108	91	17.1				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	50	74	38.7				40 - 140	20	r
Benzo(k)fluoranthene	ND	0.02	81	88	8.3				40 - 140	20	
Chrysene	ND	0.02	98	77	24.0				40 - 140	20	r
Dibenz(a,h)anthracene	ND	0.02	98	89	9.6				40 - 140	20	
Fluoranthene	ND	0.50	81	84	3.6				40 - 140	20	
Fluorene	ND	0.10	92	75	20.4				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	52	93	56.6				40 - 140	20	r
Naphthalene	ND	0.50	74	62	17.6				40 - 140	20	
Phenanthrene	ND	0.06	87	82	5.9				40 - 140	20	
Pyrene	ND	0.07	64	85	28.2				40 - 140	20	r
% 2-Fluorobiphenyl	84	%	79	59	29.0				40 - 140	20	r
% Nitrobenzene-d5	89	%	116	120	3.4				40 - 140	20	
% Terphenyl-d14	78	%	78	77	1.3				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 592004 (ug/L), QC Sample No: CJ20190 (CJ22044, CJ22045 (20X) , CJ22046 (40X) , CJ22050 (200X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	98	98	0.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	95	93	2.1				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	105	104	1.0				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	109	108	0.9				70 - 130	20	
1,1-Dichloroethane	ND	1.0	109	110	0.9				70 - 130	20	
1,1-Dichloroethene	ND	1.0	85	84	1.2				70 - 130	20	
1,1-Dichloropropene	ND	1.0	96	93	3.2				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	90	89	1.1				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	109	99	9.6				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	90	89	1.1				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	108	108	0.0				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	97	95	2.1				70 - 130	20	
1,2-Dibromoethane	ND	1.0	103	103	0.0				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	98	98	0.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	102	101	1.0				70 - 130	20	
1,2-Dichloropropane	ND	1.0	107	107	0.0				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	106	105	0.9				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	102	100	2.0				70 - 130	20	
1,3-Dichloropropane	ND	1.0	107	106	0.9				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	96	96	0.0				70 - 130	20	
1,4-dioxane	ND	100	105	102	2.9				40 - 160	20	
2,2-Dichloropropane	ND	1.0	92	89	3.3				70 - 130	20	
2-Chlorotoluene	ND	1.0	102	103	1.0				70 - 130	20	
2-Hexanone	ND	5.0	97	98	1.0				40 - 160	20	
4-Chlorotoluene	ND	1.0	105	103	1.9				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	107	106	0.9				40 - 160	20	
Acetone	ND	5.0	103	103	0.0				40 - 160	20	
Benzene	ND	0.70	105	105	0.0				70 - 130	20	
Bromobenzene	ND	1.0	98	98	0.0				70 - 130	20	
Bromochloromethane	ND	1.0	109	110	0.9				70 - 130	20	
Bromodichloromethane	ND	0.50	103	102	1.0				70 - 130	20	
Bromoform	ND	1.0	100	96	4.1				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ22041

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Bromomethane	ND	1.0	95	94	1.1				40 - 160	20	
Carbon Disulfide	ND	1.0	86	85	1.2				70 - 130	20	
Carbon tetrachloride	ND	1.0	96	93	3.2				70 - 130	20	
Chlorobenzene	ND	1.0	99	98	1.0				70 - 130	20	
Chloroethane	ND	1.0	96	99	3.1				70 - 130	20	
Chloroform	ND	1.0	103	102	1.0				70 - 130	20	
Chloromethane	ND	1.0	108	110	1.8				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	107	108	0.9				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	108	107	0.9				70 - 130	20	
Dibromochloromethane	ND	0.50	101	98	3.0				70 - 130	20	
Dibromomethane	ND	1.0	109	104	4.7				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	98	95	3.1				40 - 160	20	
Di-isopropyl ether	ND	1.0	116	117	0.9				70 - 130	20	
Ethyl ether	ND	1.0	95	96	1.0				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	116	117	0.9				70 - 130	20	
Ethylbenzene	ND	1.0	98	98	0.0				70 - 130	20	
Hexachlorobutadiene	ND	0.40	72	69	4.3				70 - 130	20	I
Isopropylbenzene	ND	1.0	102	101	1.0				70 - 130	20	
m&p-Xylene	ND	1.0	102	104	1.9				70 - 130	20	
Methyl ethyl ketone	ND	5.0	107	112	4.6				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	106	106	0.0				70 - 130	20	
Methylene chloride	ND	1.0	100	101	1.0				70 - 130	20	
Naphthalene	ND	1.0	96	95	1.0				70 - 130	20	
n-Butylbenzene	ND	1.0	104	101	2.9				70 - 130	20	
n-Propylbenzene	ND	1.0	100	100	0.0				70 - 130	20	
o-Xylene	ND	1.0	103	104	1.0				70 - 130	20	
p-Isopropyltoluene	ND	1.0	105	102	2.9				70 - 130	20	
sec-Butylbenzene	ND	1.0	102	101	1.0				70 - 130	20	
Styrene	ND	1.0	113	112	0.9				70 - 130	20	
tert-amyl methyl ether	ND	1.0	102	102	0.0				70 - 130	20	
tert-Butylbenzene	ND	1.0	102	99	3.0				70 - 130	20	
Tetrachloroethene	ND	1.0	91	89	2.2				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	120	124	3.3				70 - 130	20	
Toluene	ND	1.0	102	101	1.0				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	95	93	2.1				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	106	106	0.0				70 - 130	20	
Trichloroethene	ND	1.0	95	96	1.0				70 - 130	20	
Trichlorofluoromethane	ND	1.0	87	83	4.7				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	72	69	4.3				70 - 130	20	I
Vinyl chloride	ND	1.0	100	98	2.0				70 - 130	20	
% 1,2-dichlorobenzene-d4	105	%	101	101	0.0				70 - 130	20	
% Bromofluorobenzene	96	%	101	102	1.0				70 - 130	20	
% Dibromofluoromethane	113	%	106	100	5.8				70 - 130	20	
% Toluene-d8	102	%	102	102	0.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 591823 (ug/L), QC Sample No: CJ22041 (CJ22041, CJ22042, CJ22043, CJ22044 (10X) , CJ22045 (200X) , CJ22046 (100X) , CJ22047)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	99	97	2.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	103	100	3.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	100	102	2.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	103	104	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	103	100	3.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	96	95	1.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	107	104	2.8				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	93	94	1.1				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	102	102	0.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	94	96	2.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	111	111	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	96	99	3.1				70 - 130	20
1,2-Dibromoethane	ND	1.0	102	101	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	97	96	1.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	96	96	0.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	99	98	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	111	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	100	99	1.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	102	103	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	95	95	0.0				70 - 130	20
1,4-dioxane	ND	100	91	100	9.4				40 - 160	20
2,2-Dichloropropane	ND	1.0	106	103	2.9				70 - 130	20
2-Chlorotoluene	ND	1.0	105	104	1.0				70 - 130	20
2-Hexanone	ND	5.0	90	92	2.2				40 - 160	20
4-Chlorotoluene	ND	1.0	105	104	1.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	95	100	5.1				40 - 160	20
Acetone	ND	5.0	85	89	4.6				40 - 160	20
Benzene	ND	0.70	102	100	2.0				70 - 130	20
Bromobenzene	ND	1.0	97	97	0.0				70 - 130	20
Bromochloromethane	ND	1.0	103	101	2.0				70 - 130	20
Bromodichloromethane	ND	0.50	98	97	1.0				70 - 130	20
Bromoform	ND	1.0	97	101	4.0				70 - 130	20
Bromomethane	ND	1.0	95	93	2.1				40 - 160	20
Carbon Disulfide	ND	1.0	94	89	5.5				70 - 130	20
Carbon tetrachloride	ND	1.0	109	105	3.7				70 - 130	20
Chlorobenzene	ND	1.0	99	97	2.0				70 - 130	20
Chloroethane	ND	1.0	98	96	2.1				70 - 130	20
Chloroform	ND	1.0	98	94	4.2				70 - 130	20
Chloromethane	ND	1.0	102	102	0.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	99	98	1.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	105	104	1.0				70 - 130	20
Dibromochloromethane	ND	0.50	97	99	2.0				70 - 130	20
Dibromomethane	ND	1.0	100	101	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	128	122	4.8				40 - 160	20
Di-isopropyl ether	ND	1.0	105	105	0.0				70 - 130	20
Ethyl ether	ND	1.0	89	86	3.4				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	107	106	0.9				70 - 130	20
Ethylbenzene	ND	1.0	102	102	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	91	92	1.1				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Isopropylbenzene	ND	1.0	113	112	0.9				70 - 130	20
m&p-Xylene	ND	1.0	107	106	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	97	99	2.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	99	100	1.0				70 - 130	20
Methylene chloride	ND	1.0	94	91	3.2				70 - 130	20
Naphthalene	ND	1.0	97	101	4.0				70 - 130	20
n-Butylbenzene	ND	1.0	117	117	0.0				70 - 130	20
n-Propylbenzene	ND	1.0	108	109	0.9				70 - 130	20
o-Xylene	ND	1.0	105	104	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	117	115	1.7				70 - 130	20
sec-Butylbenzene	ND	1.0	118	116	1.7				70 - 130	20
Styrene	ND	1.0	111	115	3.5				70 - 130	20
tert-amyl methyl ether	ND	1.0	97	98	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	114	113	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	103	99	4.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	104	110	5.6				70 - 130	20
Toluene	ND	1.0	101	100	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	97	94	3.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	103	104	1.0				70 - 130	20
Trichloroethene	ND	1.0	102	100	2.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	109	104	4.7				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	96	93	3.2				70 - 130	20
Vinyl chloride	ND	1.0	111	105	5.6				70 - 130	20
% 1,2-dichlorobenzene-d4	103	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	94	%	100	101	1.0				70 - 130	20
% Dibromofluoromethane	107	%	100	99	1.0				70 - 130	20
% Toluene-d8	102	%	100	102	2.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 594809 (ug/L), QC Sample No: CJ22045 (CJ22045 (20X, 200X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	107	103	3.8	116	112	3.5	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	103	98	5.0	120	117	2.5	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	104	101	2.9	100	101	1.0	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	102	100	2.0	103	98	5.0	70 - 130	20
1,1-Dichloroethane	ND	1.0	102	97	5.0	114	110	3.6	70 - 130	20
1,1-Dichloroethene	ND	1.0	99	99	0.0	128	124	3.2	70 - 130	20
1,1-Dichloropropene	ND	1.0	102	97	5.0	116	115	0.9	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	106	103	2.9	103	105	1.9	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	105	101	3.9	105	98	6.9	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	106	102	3.8	106	105	0.9	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	108	102	5.7	113	113	0.0	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	107	105	1.9	95	98	3.1	70 - 130	20
1,2-Dibromoethane	ND	1.0	109	104	4.7	105	101	3.9	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	103	98	5.0	107	107	0.0	70 - 130	20
1,2-Dichloroethane	ND	1.0	101	97	4.0	104	98	5.9	70 - 130	20
1,2-Dichloropropane	ND	1.0	103	98	5.0	108	104	3.8	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	106	102	3.8	114	115	0.9	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	103	99	4.0	110	108	1.8	70 - 130	20

QA/QC Data

SDG I.D.: GCJ22041

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,3-Dichloropropane	ND	1.0	107	102	4.8	108	104	3.8	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	102	98	4.0	107	107	0.0	70 - 130	20	
1,4-dioxane	ND	100	93	111	17.6	86	118	31.4	40 - 160	20	r
2,2-Dichloropropane	ND	1.0	102	96	6.1	125	125	0.0	70 - 130	20	
2-Chlorotoluene	ND	1.0	105	100	4.9	109	111	1.8	70 - 130	20	
2-Hexanone	ND	5.0	103	101	2.0	91	90	1.1	40 - 160	20	
4-Chlorotoluene	ND	1.0	103	98	5.0	111	109	1.8	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	103	100	3.0	93	92	1.1	40 - 160	20	
Acetone	ND	5.0	96	97	1.0	108	99	8.7	40 - 160	20	
Benzene	ND	0.70	104	100	3.9	111	107	3.7	70 - 130	20	
Bromobenzene	ND	1.0	104	99	4.9	108	105	2.8	70 - 130	20	
Bromochloromethane	ND	1.0	102	98	4.0	110	103	6.6	70 - 130	20	
Bromodichloromethane	ND	0.50	104	101	2.9	111	106	4.6	70 - 130	20	
Bromoform	ND	1.0	108	106	1.9	108	106	1.9	70 - 130	20	
Bromomethane	ND	1.0	102	103	1.0	126	123	2.4	40 - 160	20	
Carbon Disulfide	ND	1.0	97	100	3.0	125	121	3.3	70 - 130	20	
Carbon tetrachloride	ND	1.0	96	91	5.3	116	114	1.7	70 - 130	20	
Chlorobenzene	ND	1.0	104	99	4.9	110	107	2.8	70 - 130	20	
Chloroethane	ND	1.0	98	105	6.9	132	126	4.7	70 - 130	20	m
Chloroform	ND	1.0	103	96	7.0	115	107	7.2	70 - 130	20	
Chloromethane	ND	1.0	101	97	4.0	121	118	2.5	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	105	98	6.9	109	110	0.9	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	105	101	3.9	111	105	5.6	70 - 130	20	
Dibromochloromethane	ND	0.50	110	105	4.7	111	108	2.7	70 - 130	20	
Dibromomethane	ND	1.0	105	101	3.9	106	103	2.9	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	100	97	3.0	122	122	0.0	40 - 160	20	
Di-isopropyl ether	ND	1.0	101	75	29.5	109	103	5.7	70 - 130	20	r
Ethyl ether	ND	1.0	91	98	7.4	105	99	5.9	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	105	99	5.9	107	103	3.8	70 - 130	20	
Ethylbenzene	ND	1.0	108	101	6.7	116	113	2.6	70 - 130	20	
Hexachlorobutadiene	ND	0.40	103	95	8.1	108	113	4.5	70 - 130	20	
Isopropylbenzene	ND	1.0	104	99	4.9	114	115	0.9	70 - 130	20	
m&p-Xylene	ND	1.0	107	101	5.8	116	113	2.6	70 - 130	20	
Methyl ethyl ketone	ND	5.0	98	98	0.0	96	91	5.3	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	103	101	2.0	111	106	4.6	70 - 130	20	
Methylene chloride	ND	1.0	100	102	2.0	120	112	6.9	70 - 130	20	
Naphthalene	ND	1.0	109	107	1.9	99	102	3.0	70 - 130	20	
n-Butylbenzene	ND	1.0	106	100	5.8	120	120	0.0	70 - 130	20	
n-Propylbenzene	ND	1.0	103	96	7.0	113	112	0.9	70 - 130	20	
o-Xylene	ND	1.0	107	100	6.8	112	109	2.7	70 - 130	20	
p-Isopropyltoluene	ND	1.0	106	101	4.8	117	117	0.0	70 - 130	20	
sec-Butylbenzene	ND	1.0	105	100	4.9	118	119	0.8	70 - 130	20	
Styrene	ND	1.0	110	104	5.6	117	111	5.3	70 - 130	20	
tert-amyl methyl ether	ND	1.0	102	100	2.0	100	96	4.1	70 - 130	20	
tert-Butylbenzene	ND	1.0	104	99	4.9	114	115	0.9	70 - 130	20	
Tetrachloroethene	ND	1.0	102	95	7.1	86	80	7.2	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	97	95	2.1	92	91	1.1	70 - 130	20	
Toluene	ND	1.0	104	100	3.9	112	108	3.6	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	100	99	1.0	122	116	5.0	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	107	104	2.8	110	107	2.8	70 - 130	20	
Trichloroethene	ND	1.0	102	96	6.1	102	85	18.2	70 - 130	20	
Trichlorofluoromethane	ND	1.0	96	96	0.0	142	137	3.6	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	85	87	2.3	117	114	2.6	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Vinyl chloride	ND	1.0	103	99	4.0	131	129	1.5	70 - 130	20	m
% 1,2-dichlorobenzene-d4	100	%	99	99	0.0	100	101	1.0	70 - 130	20	
% Bromofluorobenzene	98	%	100	100	0.0	102	100	2.0	70 - 130	20	
% Dibromofluoromethane	98	%	101	98	3.0	98	102	4.0	70 - 130	20	
% Toluene-d8	99	%	100	100	0.0	99	99	0.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 592877 (ug/L), QC Sample No: CJ22048 (CJ22048, CJ22049, CJ22050 (20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	102	98	4.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	107	106	0.9				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	112	110	1.8				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	109	108	0.9				70 - 130	20	
1,1-Dichloroethane	ND	1.0	113	113	0.0				70 - 130	20	
1,1-Dichloroethene	ND	1.0	98	97	1.0				70 - 130	20	
1,1-Dichloropropene	ND	1.0	116	110	5.3				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	98	97	1.0				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	112	107	4.6				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	98	96	2.1				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	118	113	4.3				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	103	100	3.0				70 - 130	20	
1,2-Dibromoethane	ND	1.0	107	105	1.9				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	101	98	3.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	100	100	0.0				70 - 130	20	
1,2-Dichloropropane	ND	1.0	110	110	0.0				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	118	113	4.3				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	104	102	1.9				70 - 130	20	
1,3-Dichloropropane	ND	1.0	110	109	0.9				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	20	
1,4-dioxane	ND	100	119	108	9.7				40 - 160	20	
2,2-Dichloropropane	ND	1.0	103	100	3.0				70 - 130	20	
2-Chlorotoluene	ND	1.0	113	108	4.5				70 - 130	20	
2-Hexanone	ND	5.0	109	107	1.9				40 - 160	20	
4-Chlorotoluene	ND	1.0	112	105	6.5				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	114	110	3.6				40 - 160	20	
Acetone	ND	5.0	107	108	0.9				40 - 160	20	
Benzene	ND	0.70	111	107	3.7				70 - 130	20	
Bromobenzene	ND	1.0	102	98	4.0				70 - 130	20	
Bromochloromethane	ND	1.0	106	109	2.8				70 - 130	20	
Bromodichloromethane	ND	0.50	103	101	2.0				70 - 130	20	
Bromoform	ND	1.0	98	99	1.0				70 - 130	20	
Bromomethane	ND	1.0	94	94	0.0				40 - 160	20	
Carbon Disulfide	ND	1.0	97	92	5.3				70 - 130	20	
Carbon tetrachloride	ND	1.0	112	110	1.8				70 - 130	20	
Chlorobenzene	ND	1.0	103	99	4.0				70 - 130	20	
Chloroethane	ND	1.0	101	102	1.0				70 - 130	20	
Chloroform	ND	1.0	102	103	1.0				70 - 130	20	
Chloromethane	ND	1.0	114	110	3.6				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	106	108	1.9				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	111	110	0.9				70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dibromochloromethane	ND	0.50	102	100	2.0				70 - 130	20
Dibromomethane	ND	1.0	107	104	2.8				70 - 130	20
Dichlorodifluoromethane	ND	1.0	121	116	4.2				40 - 160	20
Di-isopropyl ether	ND	1.0	122	126	3.2				70 - 130	20
Ethyl ether	ND	1.0	92	94	2.2				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	116	119	2.6				70 - 130	20
Ethylbenzene	ND	1.0	107	103	3.8				70 - 130	20
Hexachlorobutadiene	ND	0.40	82	81	1.2				70 - 130	20
Isopropylbenzene	ND	1.0	120	114	5.1				70 - 130	20
m&p-Xylene	ND	1.0	111	108	2.7				70 - 130	20
Methyl ethyl ketone	ND	5.0	117	121	3.4				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	104	106	1.9				70 - 130	20
Methylene chloride	ND	1.0	96	98	2.1				70 - 130	20
Naphthalene	ND	1.0	108	107	0.9				70 - 130	20
n-Butylbenzene	ND	1.0	121	117	3.4				70 - 130	20
n-Propylbenzene	ND	1.0	118	111	6.1				70 - 130	20
o-Xylene	ND	1.0	111	110	0.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	120	116	3.4				70 - 130	20
sec-Butylbenzene	ND	1.0	123	118	4.1				70 - 130	20
Styrene	ND	1.0	116	115	0.9				70 - 130	20
tert-amyl methyl ether	ND	1.0	104	103	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	119	113	5.2				70 - 130	20
Tetrachloroethene	ND	1.0	104	97	7.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	130	136	4.5				70 - 130	20
Toluene	ND	1.0	108	104	3.8				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	98	97	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	108	107	0.9				70 - 130	20
Trichloroethene	ND	1.0	105	100	4.9				70 - 130	20
Trichlorofluoromethane	ND	1.0	111	107	3.7				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	95	90	5.4				70 - 130	20
Vinyl chloride	ND	1.0	117	114	2.6				70 - 130	20
% 1,2-dichlorobenzene-d4	103	%	101	100	1.0				70 - 130	20
% Bromofluorobenzene	97	%	102	103	1.0				70 - 130	20
% Dibromofluoromethane	107	%	97	98	1.0				70 - 130	20
% Toluene-d8	103	%	103	101	2.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 592876 (ug/L), QC Sample No: CJ22051 (CJ22051, CJ22052)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	97	98	1.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	91	91	0.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	103	102	1.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	101	101	0.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	100	101	1.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	84	85	1.2				70 - 130	20
1,1-Dichloropropene	ND	1.0	93	92	1.1				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	108	110	1.8				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	105	105	0.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	102	102	0.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ22041

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,4-Trimethylbenzene	ND	1.0	108	108	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	107	108	0.9				70 - 130	20
1,2-Dibromoethane	ND	1.0	102	103	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	97	98	1.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	99	99	0.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	101	100	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	106	105	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	98	101	3.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	102	103	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	96	97	1.0				70 - 130	20
1,4-dioxane	ND	100	104	108	3.8				40 - 160	20
2,2-Dichloropropane	ND	1.0	92	88	4.4				70 - 130	20
2-Chlorotoluene	ND	1.0	100	100	0.0				70 - 130	20
2-Hexanone	ND	5.0	103	105	1.9				40 - 160	20
4-Chlorotoluene	ND	1.0	101	102	1.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	111	108	2.7				40 - 160	20
Acetone	ND	5.0	109	106	2.8				40 - 160	20
Benzene	ND	0.70	102	100	2.0				70 - 130	20
Bromobenzene	ND	1.0	97	99	2.0				70 - 130	20
Bromochloromethane	ND	1.0	102	101	1.0				70 - 130	20
Bromodichloromethane	ND	0.50	101	100	1.0				70 - 130	20
Bromoform	ND	1.0	98	101	3.0				70 - 130	20
Bromomethane	ND	1.0	97	98	1.0				40 - 160	20
Carbon Disulfide	ND	1.0	78	76	2.6				70 - 130	20
Carbon tetrachloride	ND	1.0	94	94	0.0				70 - 130	20
Chlorobenzene	ND	1.0	97	98	1.0				70 - 130	20
Chloroethane	ND	1.0	96	94	2.1				70 - 130	20
Chloroform	ND	1.0	99	99	0.0				70 - 130	20
Chloromethane	ND	1.0	109	110	0.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	101	0.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	103	103	0.0				70 - 130	20
Dibromochloromethane	ND	0.50	99	100	1.0				70 - 130	20
Dibromomethane	ND	1.0	102	102	0.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	96	98	2.1				40 - 160	20
Di-isopropyl ether	ND	1.0	105	105	0.0				70 - 130	20
Ethyl ether	ND	1.0	93	96	3.2				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	107	110	2.8				70 - 130	20
Ethylbenzene	ND	1.0	99	98	1.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	79	80	1.3				70 - 130	20
Isopropylbenzene	ND	1.0	102	102	0.0				70 - 130	20
m&p-Xylene	ND	1.0	105	103	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	110	111	0.9				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	102	103	1.0				70 - 130	20
Methylene chloride	ND	1.0	101	101	0.0				70 - 130	20
Naphthalene	ND	1.0	119	119	0.0				70 - 130	20
n-Butylbenzene	ND	1.0	104	104	0.0				70 - 130	20
n-Propylbenzene	ND	1.0	97	98	1.0				70 - 130	20
o-Xylene	ND	1.0	105	106	0.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	104	106	1.9				70 - 130	20
sec-Butylbenzene	ND	1.0	102	102	0.0				70 - 130	20
Styrene	ND	1.0	112	111	0.9				70 - 130	20
tert-amyl methyl ether	ND	1.0	101	102	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	104	103	1.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ22041

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Tetrachloroethene	ND	1.0	92	87	5.6				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	108	112	3.6				70 - 130	20	
Toluene	ND	1.0	100	99	1.0				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	94	95	1.1				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	105	106	0.9				70 - 130	20	
Trichloroethene	ND	1.0	95	94	1.1				70 - 130	20	
Trichlorofluoromethane	ND	1.0	89	87	2.3				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	68	71	4.3				70 - 130	20	l
Vinyl chloride	ND	1.0	101	98	3.0				70 - 130	20	
% 1,2-dichlorobenzene-d4	104	%	100	100	0.0				70 - 130	20	
% Bromofluorobenzene	94	%	100	100	0.0				70 - 130	20	
% Dibromofluoromethane	111	%	98	101	3.0				70 - 130	20	
% Toluene-d8	102	%	101	100	1.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 591177 (ug/L), QC Sample No: CJ22046 (CJ22042, CJ22046)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	96	97	1.0				70 - 130	25	
Unadjusted C9-C12 Aliphatics (*1)	ND	100	72	73	1.4				70 - 130	25	
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	96	97	1.0				70 - 130	25	
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	72	73	1.4				70 - 130	25	
C9-C10 Aromatic Hydrocarbons *1	ND	100	83	85	2.4				70 - 130	25	
Benzene	ND	1.0	93	98	5.2				70 - 130	25	
Ethyl Benzene	ND	1.0	86	90	4.5				70 - 130	25	
MTBE	ND	1.0	101	101	0.0				70 - 130	25	
Naphthalene	ND	5.0	96	96	0.0				70 - 130	25	
Toluene	ND	1.0	89	93	4.4				70 - 130	25	
m,p-Xylenes	ND	2.0	86	90	4.5				70 - 130	25	
o-Xylene	ND	1.0	84	87	3.5				70 - 130	25	
% 2,5-Dibromotoluene (PID)	83	%	81	81	0.0				70 - 130	25	
% 2,5-Dibromotoluene (FID)	84	%	84	87	3.5				70 - 130	25	

Comment:

This batch consists of a Blank, LCS and LCSD.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
October 07, 2021

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ22041	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ22041	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ22041	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ22041	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ22041	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ22041	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ22041	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ22041	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ22042	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ22042	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ22042	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ22042	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ22042	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ22042	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ22042	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ22042	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ22043	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	11	1.0	5	5	ug/L
CJ22043	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ22043	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ22043	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ22043	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	5	5	ug/L
CJ22043	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ22043	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	1.0	5	5	ug/L
CJ22043	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	11	1.0	5	5	ug/L
CJ22043	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ22043	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	11	1.0	5	5	ug/L
CJ22043	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ22043	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ22043	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ22044	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ22044	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	33	1.0	5	5	ug/L
CJ22044	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2.9	1.0	2	2	ug/L
CJ22044	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	130	10	5	5	ug/L
CJ22044	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ22044	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ22044	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.9	1.0	2	2	ug/L
CJ22044	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	10	5	5	ug/L
CJ22044	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	1.0	5	5	ug/L
CJ22044	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ22044	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.9	1.0	2	2	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ22044	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	1.0	5	5	ug/L
CJ22044	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	10	50	50	ug/L
CJ22044	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	33	1.0	5	5	ug/L
CJ22044	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	130	10	5	5	ug/L
CJ22044	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.9	1.0	2	2	ug/L
CJ22044	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ22044	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	33	1.0	5	5	ug/L
CJ22044	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	130	10	50	50	ug/L
CJ22044	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.9	1.0	2	2	ug/L
CJ22044	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ22044	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ22044	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ22045	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ22045	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ22045	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ22045	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ22045	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ22045	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ22045	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ22045	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ22045	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ22045	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ22045	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ22045	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ22045	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ22045	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	31	20	2	2	ug/L
CJ22045	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5100	200	5	5	ug/L
CJ22045	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ22045	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ22045	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	280	20	20	20	ug/L
CJ22045	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	97	20	70	70	ug/L
CJ22045	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2700	200	5	5	ug/L
CJ22045	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	31	20	2	2	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ22045	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ22045	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ22045	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ22045	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	280	20	20	20	ug/L
CJ22045	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ22045	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ22045	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2700	200	5	5	ug/L
CJ22045	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ22045	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ22045	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5100	200	5	5	ug/L
CJ22045	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ22045	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	25	20	7	7	ug/L
CJ22045	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	97	20	70	70	ug/L
CJ22045	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ22045	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	280	20	20	20	ug/L
CJ22045	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2700	200	50	50	ug/L
CJ22045	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5100	200	5	5	ug/L
CJ22045	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ22045	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ22045	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ22045	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ22045	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	31	20	2	2	ug/L
CJ22045	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	31	20	2	2	ug/L
CJ22045	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	97	20	70	70	ug/L
CJ22045	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ22045	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5100	200	5	5	ug/L
CJ22045	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ22045	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2700	200	5	5	ug/L
CJ22045	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ22045	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ22045	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ22045	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	280	20	70	70	ug/L
CJ22045	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ22045	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	25	20	7	7	ug/L
CJ22045	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ22045	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5100	200	5	5	ug/L
CJ22045	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ22045	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ22045	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ22045	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ22045	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2700	200	50	50	ug/L
CJ22045	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	280	20	20	20	ug/L
CJ22045	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	31	20	2	2	ug/L
CJ22045	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ22045	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	5100	200	5000	5000	ug/L
CJ22045	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ22045	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ22045	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CJ22046	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	8.3	8.3	ug/L
CJ22046	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	4	4	ug/L
CJ22046	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	7	7	ug/L
CJ22046	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3600	40	5	5	ug/L
CJ22046	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.00033	0.00033	ug/L
CJ22046	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	5	5	ug/L
CJ22046	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	38	38	ug/L
CJ22046	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6300	100	5	5	ug/L
CJ22046	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.6	0.6	ug/L
CJ22046	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.47	0.47	ug/L
CJ22046	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	3	3	ug/L
CJ22046	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.47	0.47	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ22046	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	7	7	ug/L
CJ22046	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	420	40	20	20	ug/L
CJ22046	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.0075	0.0075	ug/L
CJ22046	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	38	38	ug/L
CJ22046	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.00075	0.00075	ug/L
CJ22046	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	3	3	ug/L
CJ22046	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	110	40	70	70	ug/L
CJ22046	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	36	20	2	2	ug/L
CJ22046	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	3	3	ug/L
CJ22046	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	420	40	20	20	ug/L
CJ22046	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	7	7	ug/L
CJ22046	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6300	100	5	5	ug/L
CJ22046	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.5	0.5	ug/L
CJ22046	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.6	0.6	ug/L
CJ22046	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	4	4	ug/L
CJ22046	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.02	0.02	ug/L
CJ22046	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.5	0.5	ug/L
CJ22046	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	36	20	2	2	ug/L
CJ22046	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	5	5	ug/L
CJ22046	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	3	3	ug/L
CJ22046	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	40	70	70	ug/L
CJ22046	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3600	40	5	5	ug/L
CJ22046	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	20	7	7	ug/L
CJ22046	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	6	6	ug/L
CJ22046	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	3	3	ug/L
CJ22046	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	7	7	ug/L
CJ22046	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	10	10	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ22046	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	9	9	ug/L
CJ22046	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	36	20	2	2	ug/L
CJ22046	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6300	100	5	5	ug/L
CJ22046	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3600	40	50	50	ug/L
CJ22046	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	420	40	20	20	ug/L
CJ22046	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	0.02	0.02	ug/L
CJ22046	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	110	40	70	70	ug/L
CJ22046	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	26	20	7	7	ug/L
CJ22046	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	0.6	0.6	ug/L
CJ22046	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	36	20	2	2	ug/L
CJ22046	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6300	100	5	5	ug/L
CJ22046	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	200	5	5	ug/L
CJ22046	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	420	40	70	70	ug/L
CJ22046	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	3	3	ug/L
CJ22046	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	10	10	ug/L
CJ22046	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	20	4	4	ug/L
CJ22046	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3600	40	5	5	ug/L
CJ22046	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	10	10	ug/L
CJ22046	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	9	9	ug/L
CJ22046	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	36	20	2	2	ug/L
CJ22046	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3600	40	50	50	ug/L
CJ22046	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	7	7	ug/L
CJ22046	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	3	3	ug/L
CJ22046	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	6	6	ug/L
CJ22046	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	420	40	20	20	ug/L
CJ22046	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	5	5	ug/L
CJ22046	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CJ22046	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6300	100	5	5	ug/L
CJ22046	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	6300	100	5000	5000	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ22046	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	4000	0.3	0.3	ug/L
CJ22046	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	4000	0.3	0.3	ug/L
CJ22046	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	4000	0.3	0.3	ug/L
CJ22046	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3100	100	300	300	ug/L
CJ22046	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	3100	100	300	300	ug/L
CJ22046	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-2 (mg/l)	3100	100	3000	3000	ug/L
CJ22046	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	3100	100	300	300	ug/L
CJ22046	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-2	3100	100	3000	3000	ug/L
CJ22046	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.612	0.001	0.43	0.43	mg/L
CJ22046	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.658	0.001	0.43	0.43	mg/L
CJ22047	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ22047	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ22047	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ22047	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ22047	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ22047	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.41	0.20	0.3	0.3	ug/l
CJ22047	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.41	0.20	0.3	0.3	ug/l
CJ22047	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.41	0.20	0.3	0.3	ug/l
CJ22047	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ22047	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3.19	0.011	0.43	0.43	mg/L
CJ22047	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3.22	0.010	0.43	0.43	mg/L
CJ22048	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ22048	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ22048	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ22048	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ22048	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ22048	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ22048	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ22048	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ22049	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ22049	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ22049	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ22049	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ22049	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ22049	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ22049	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ22049	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ22050	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ22050	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ22050	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ22050	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ22050	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ22050	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ22050	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2900	200	5	5	ug/L
CJ22050	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ22050	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ22050	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ22050	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ22050	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ22050	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ22050	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	85	20	70	70	ug/L
CJ22050	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ22050	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ22050	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ22050	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	370	20	20	20	ug/L
CJ22050	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	4400	200	5	5	ug/L
CJ22050	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ22050	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ22050	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ22050	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	370	20	20	20	ug/L
CJ22050	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ22050	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	85	20	70	70	ug/L
CJ22050	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ22050	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2900	200	5	5	ug/L
CJ22050	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ22050	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ22050	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	20	7	7	ug/L
CJ22050	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ22050	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ22050	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ22050	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4400	200	5	5	ug/L
CJ22050	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4400	200	5	5	ug/L
CJ22050	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	370	20	20	20	ug/L
CJ22050	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2900	200	50	50	ug/L
CJ22050	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ22050	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ22050	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ22050	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ22050	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ22050	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2900	200	5	5	ug/L
CJ22050	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	21	20	7	7	ug/L
CJ22050	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ22050	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4400	200	5	5	ug/L
CJ22050	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	85	20	70	70	ug/L
CJ22050	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ22050	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ22050	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	370	20	70	70	ug/L
CJ22050	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ22050	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ22050	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4400	200	5	5	ug/L
CJ22050	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ22050	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ22050	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2900	200	50	50	ug/L
CJ22050	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ22050	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ22050	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ22050	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	370	20	20	20	ug/L
CJ22050	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ22050	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ22050	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CJ22051	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ22051	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	8.9	1.0	5	5	ug/L
CJ22051	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ22051	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ22051	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.9	1.0	5	5	ug/L
CJ22051	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ22051	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	8.9	1.0	5	5	ug/L
CJ22051	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ22051	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	8.9	1.0	5	5	ug/L
CJ22051	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	8.9	1.0	5	5	ug/L
CJ22051	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.53	0.20	0.3	0.3	ug/l
CJ22051	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.53	0.20	0.3	0.3	ug/l
CJ22051	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.53	0.20	0.3	0.3	ug/l
CJ22051	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ22052	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	7.2	1.0	5	5	ug/L
CJ22052	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ22052	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ22052	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ22052	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ22052	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.2	1.0	5	5	ug/L
CJ22052	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.2	1.0	5	5	ug/L
CJ22052	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ22052	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.2	1.0	5	5	ug/L
CJ22052	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	7.2	1.0	5	5	ug/L
CJ22052	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ22052	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ22052	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ22041 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ22041, CJ22042, CJ22043, CJ22044, CJ22045, CJ22046, CJ22047, CJ22048, CJ22049, CJ22050, CJ22051, CJ22052

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Thursday, October 07, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

October 07, 2021

SDG I.D.: GCJ22041

SDG Comments

Metals Analysis: CJ22043, CJ22046, CJ22047
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.
1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

AU-FID4 09/13/21-1 Adam Werner, Chemist 09/13/21

CJ22042 (1X), CJ22046 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 591606 (CJ22042)

CJ22042, CJ22046

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: % 1-chlorooctadecane (aliphatic)(30.7%), % o-terphenyl (aromatic)(33.1%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/14/21-1 Greg Danielewski, Chemist 09/14/21

CJ22043 , CJ22046 , CJ22047

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 591368 (CJ22061)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 07, 2021

SDG I.D.: GCJ22041

Wet Chemistry Analysis

CJ22043, CJ22046, CJ22047

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 591878 (CJ22043)

CJ22043, CJ22046, CJ22047

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/09/21-2 Brian Sheriden, Greg Danielewski, Chemist 09/09/21

CJ22043 , CJ22046 , CJ22047

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 591444 (CJ24705)

CJ22043, CJ22046, CJ22047

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/09/21 08:28 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/09/

CJ22043, CJ22046, CJ22047

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

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ICP Metals Narration

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/10/21 08:16 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/10/

CJ22043, CJ22046, CJ22047

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/13/21 07:55 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/13/

CJ22047

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 591014 (CJ22295)

CJ22043, CJ22046, CJ22047

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 591228 (CJ21041)

CJ22043, CJ22046, CJ22047

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

LACHAT

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

LACHAT 09/09/21-1 Elizabeth Rideout, Chemist 09/09/21

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LACHAT

CJ22047

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

LACHAT 09/09/21-2 Elizabeth Rideout, Chemist 09/09/21

CJ22043 , CJ22046

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

LACHAT 09/13/21-3 Elizabeth Rideout, Chemist 09/13/21

CJ22043 , CJ22046

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

LACHAT 09/15/21-1 Elizabeth Rideout, Chemist 09/15/21

CJ22047

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 591145 (CJ24440)

CJ22047

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 591332 (CJ24441)

CJ22043, CJ22046

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 591775 (CJ26797)

CJ22043, CJ22046

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 591940 (CJ18533)

CJ22047

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

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SDG I.D.: GCJ22041

SVOA-Dioxane

Instrument:

CHEM34 09/13/21-1 Adam Werner, Chemist 09/13/21

CJ22047 (1X), CJ22051 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0913_05-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 591391 (CJ21030)

CJ22047, CJ22051

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM33 09/09/21-1 Wes Bryon, Chemist 09/09/21

CJ22042 (1X), CJ22046 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0701):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0909_03-33_PAHSIM_0701) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
90% of target compounds met criteria.
The following compounds did not meet % deviation criteria: % 2-Fluorobiphenyl 22%L (20%), % Nitrobenzene-d5 26%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.

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SVOASIM Narration

The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 591048 (CJ21562)

CJ22042, CJ22046

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: % 2-Fluorobiphenyl(29.0%), Acenaphthylene(36.5%), Benzo(a)pyrene(55.4%), Benzo(ghi)perylene(38.7%), Chrysene(24.0%), Indeno(1,2,3-cd)pyrene(56.6%), Pyrene(28.2%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 592004 (Samples: CJ22044, CJ22045, CJ22046, CJ22050): -----

The LCS and/or the LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (Hexachlorobutadiene, Trichlorotrifluoroethane)

QC Batch 592876 (Samples: CJ22051, CJ22052): -----

The LCS and/or the LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (Trichlorotrifluoroethane)

QC Batch 592877 (Samples: CJ22048, CJ22049, CJ22050): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Tetrahydrofuran (THF))

QC Batch 594809 (Samples: CJ22045): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (Di-isopropyl ether)

The MS and/or the MSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Chloroethane, Trichlorofluoromethane)

The MS and/or the MSD recovery is above the upper range, therefore a slight high bias is possible. (Vinyl chloride)

The MS/MSD RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (1,4-dioxane)

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SDG I.D.: GCJ22041

VOA Narration

Instrument:

CHEM23 09/13/21-1 Michael Hahn, Chemist 09/13/21

CJ22041 (1X), CJ22042 (1X), CJ22043 (1X), CJ22044 (10X), CJ22045 , CJ22046 (100X), CJ22047 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0913_03-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.095 (0.1), Tetrachloroethene 0.193 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/14/21-2 Harry Mullin, Chemist 09/14/21

CJ22044 (1X), CJ22045 , CJ22046 (40X), CJ22050 (200X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0914_37-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.193 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/15/21-1 Michael Hahn, Chemist 09/15/21

CJ22048 (1X), CJ22049 (1X), CJ22050 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_090721):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trimethylbenzene 21% (20%), Isopropylbenzene 21% (20%), Naphthalene 29% (20%), p-Isopropyltoluene 23% (20%), sec-Butylbenzene 21% (20%), Styrene 22% (20%), tert-Butylbenzene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.191 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0915_09-VOA23_090721) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
92% of target compounds met criteria.

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VOA Narration

The following compounds did not meet % deviation criteria: Di-isopropyl ether 22%H (20%), Hexachlorobutadiene 22%L (20%), Methyl ethyl ketone 23%H (20%), Tetrahydrofuran (THF) 37%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.185 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/17/21-2 Michael Hahn, Chemist 09/17/21

CJ22051 (1X), CJ22052 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_091621):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 33% (20%), Carbon Disulfide 27% (20%), Isopropylbenzene 21% (20%), Naphthalene 31% (20%), p-Isopropyltoluene 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.194 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0917_34-VOA23_091621) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 2,2-Dichloropropane 26%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.182 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/01/21-3 Harry Mullin, Chemist 10/01/21

CJ22045 (1X, 20X, 200X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1001_14-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 591823 (CJ22041) CHEM23 9/13/2021-1

CJ22041(1X), CJ22042(1X), CJ22043(1X), CJ22044(10X), CJ22045(200X), CJ22046(100X), CJ22047(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,

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VOA Narration

The MS/MSD RPD criteria is listed above.

Batch 592004 (CJ20190) CHEM23 9/14/2021-2

CJ22044(1X), CJ22045(20X), CJ22046(40X), CJ22050(200X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Hexachlorobutadiene(69%), Trichlorotrifluoroethane(69%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 592876 (CJ22051) CHEM23 9/17/2021-2

CJ22051(1X), CJ22052(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Trichlorotrifluoroethane(68%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 592877 (CJ22048) CHEM23 9/15/2021-1

CJ22048(1X), CJ22049(1X), CJ22050(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Tetrahydrofuran (THF)(136%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 594809 (CJ22045) CHEM23 10/1/2021-3

CJ22045(20X, 200X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Di-isopropyl ether(29.5%)
All MS recoveries were within 70 - 130 with the following exceptions: Chloroethane(132%), Trichlorofluoromethane(142%), Vinyl chloride(131%)
All MSD recoveries were within 70 - 130 with the following exceptions: Trichlorofluoromethane(137%)
All MS/MSD RPDs were less than 20% with the following exceptions: 1,4-dioxane(31.4%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

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VOA Narration

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/08/21-1 Raman Makol, Chemist 09/08/21

CJ22042 (1X), CJ22046 (1X)

Initial Calibration Evaluation (PIDFID/VPH_090221_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 591177 (CJ22046)

CJ22042(1X), CJ22046(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 2.3 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/8/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
22041	21A-TB02-090721-1	GW	9/7/21	1300	2							X									
22042	21A-TRC03-090721-1	GW	9/7/21	1510	5	3						X		X	X						
22043	21A-EMW10R-090821-1	GW	9/8/21	0955	3	1		4				X					X	X	X	X	
22044	21A-EMW10D-090821-1	GW	9/8/21	1115	3							X									
22045	21A-EMW11R1-090821-1	GW	9/8/21	1145	9							X									MS/MSD
22046	21A-EMW11R2-090821-1	GW	9/8/21	0935	5	4		4				X		X	X	X	X	X	X	X	
22047	21A-STM8D-090821-1	GW	9/8/21	1050	3	2		4				X	X				X	X	X	X	
22048	21A-STM8S-090821-1	GW	9/8/21	0940	3							X									
22049	21A-STM8M-090821-1	GW	9/8/21	1015	3							X									
22050	21A-EMW11R3-090821-1	GW	9/8/21	1340	3							X									
22051	21A-STM8R-090821-1	GW	9/8/21	1340	3	1						X	X								
22052	21A-EMW11D-090821-1	GW	9/8/21	1355	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-8-21	14:30
	[signature]	9/8/21	16:42

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Friday, September 24, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60552044.25**
SDG ID: **GCJ25187**
Sample ID#s: CJ25187 - CJ25207

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

September 24, 2021

SDG I.D.: GCJ25187

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver. 2:
This report has been revised to correct the method reference for MA VPH.

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Sample Id Cross Reference

September 24, 2021

SDG I.D.: GCJ25187

Project ID: LOCKHEED-WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-GZA6-090821-1	CJ25187	GROUND WATER
21A-GZA10-090821-1	CJ25188	GROUND WATER
21A-AE100R1-090921-1	CJ25189	GROUND WATER
21A-AE100R2-090921-1	CJ25190	GROUND WATER
21A-AE100R3-090921-1	CJ25191	GROUND WATER
21A-AE100R4-090921-1	CJ25192	GROUND WATER
21A-AE100R5-090921-1	CJ25193	GROUND WATER
21A-AE100R6-090921-1	CJ25194	GROUND WATER
21A-AE108R1-090921-1	CJ25195	GROUND WATER
21A-AE108R2-090921-1	CJ25196	GROUND WATER
21A-AE108R3-090921-1	CJ25197	GROUND WATER
21A-AE108R4-090921-1	CJ25198	GROUND WATER
21A-AE108R5-090921-1	CJ25199	GROUND WATER
21A-TB01-090921-1	CJ25200	GROUND WATER
21A-AE103R1-090921-1	CJ25201	GROUND WATER
21A-AE103R2-090921-1	CJ25202	GROUND WATER
21A-AE103R3-090921-1	CJ25203	GROUND WATER
21A-AE103R4-090921-1	CJ25204	GROUND WATER
21A-AE103R5-090921-1	CJ25205	GROUND WATER
21A-AE103R6-090921-1	CJ25206	GROUND WATER
21A-AE103R7-090921-1	CJ25207	GROUND WATER

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Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	14:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25187

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-GZA6-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	09/13/21	TH	SW6010D
Arsenic (Dissolved)	0.010	0.004	mg/L	1	09/11/21	EK	SW6010D
Dissolved Metals Preparation	Completed				09/09/21	AG	SW3005A
Total Metals Digestion	Completed				09/11/21	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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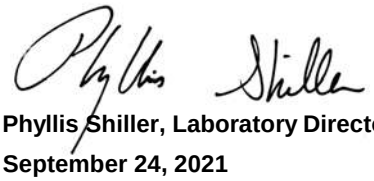

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

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Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/08/21	14:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25188

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-GZA10-090821-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.015	0.004	mg/L	1	09/13/21	TH	SW6010D
Arsenic (Dissolved)	0.006	0.004	mg/L	1	09/11/21	EK	SW6010D
Dissolved Metals Preparation	Completed				09/09/21	AG	SW3005A
Total Metals Digestion	Completed				09/11/21	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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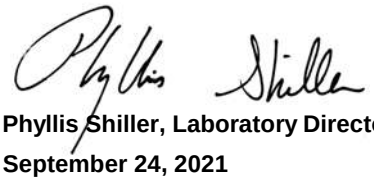

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25189

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE100R1-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	33.8	0.011	mg/L	1	09/11/21	EK	SW6010D
Manganese (Dissolved)	9.98	0.011	mg/L	10	09/13/21	EK	SW6010D
Iron	34.3	0.010	mg/L	1	09/13/21	TH	SW6010D
Manganese	9.02	0.010	mg/L	10	09/14/21	TH	SW6010D
Chloride	701	50.0	mg/L	10	09/10/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/10/21 21:43	BS/GD	E300.0
Nitrate as Nitrogen	0.58	0.05	mg/L	1	09/10/21 08:15	BS/GD	E300.0
Sulfate	11.0	5.0	mg/L	1	09/10/21	BS/GD	E300.0
Sulfide	0.11	0.05	mg/L	1	09/15/21	GD	SM4500S-D-11
Total Organic Carbon	2.9	1.0	mg/L	1	09/13/21	ARG	SM5310B-11
EPH Extraction	Completed				09/13/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/09/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/09/21	P/D/AT	SW3520C
Dissolved Metals Preparation	Completed				09/09/21	AG	SW3005A
Total Metals Digestion	Completed				09/11/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/13/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloroethane	2.8	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25189

Client ID: 21A-AE100R1-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/18/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/18/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
cis-1,2-Dichloroethene	33	1.0	ug/L	1	09/18/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Ethylbenzene	1.1	1.0	ug/L	1	09/18/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Isopropylbenzene	1.0	1.0	ug/L	1	09/18/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
n-Propylbenzene	1.6	1.0	ug/L	1	09/18/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
sec-Butylbenzene	1.1	1.0	ug/L	1	09/18/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
tert-Butylbenzene	6.0	1.0	ug/L	1	09/18/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Tetrachloroethene	5.5	1.0	ug/L	1	09/18/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/18/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
trans-1,2-Dichloroethene	1.4	1.0	ug/L	1	09/18/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Trichloroethene	44	1.0	ug/L	1	09/18/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Vinyl chloride	13	1.0	ug/L	1	09/18/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	09/18/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/18/21	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	09/18/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/18/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/18/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/10/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/10/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/10/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/10/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/10/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/10/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/10/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/10/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/10/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/10/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	57		%	1	09/10/21	WB	40 - 140 %
% Nitrobenzene-d5	56		%	1	09/10/21	WB	40 - 140 %
% Terphenyl-d14	69		%	1	09/10/21	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	09/15/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	09/15/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/15/21	AW	MAEPH 5/2019

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25189
Client ID: 21A-AE100R1-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/15/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	190	ug/L	1	09/15/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	84		%	1	09/15/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	92		%	1	09/15/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	90		%	1	09/15/21	AW	40 - 140 %
% o-terphenyl (aromatic)	76		%	1	09/15/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	140	100	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
Ethyl Benzene	1.9	1.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	97		%	1	09/13/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	97		%	1	09/13/21	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

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Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Ver 2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	13:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25190

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE100R2-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,1-Dichloroethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,1-Dichloroethene	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/18/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/18/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/18/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/18/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/18/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/18/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/18/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25190

Client ID: 21A-AE100R2-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/18/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/18/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/18/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/18/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/18/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
cis-1,2-Dichloroethene	73	20	ug/L	20	09/18/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/18/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/18/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/18/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/18/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/18/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/18/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/18/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/18/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/18/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Tetrachloroethene	1300	20	ug/L	20	09/18/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/18/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/18/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/18/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/18/21	MH	SW8260C
Trichloroethene	1500	20	ug/L	20	09/18/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	09/18/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	104		%	20	09/18/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	94		%	20	09/18/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	101		%	20	09/18/21	MH	70 - 130 %
% Toluene-d8 (20x)	97		%	20	09/18/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/18/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/18/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25190

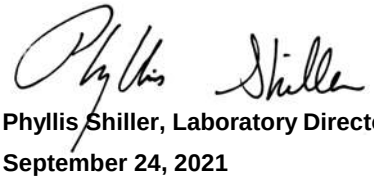
Client ID: 21A-AE100R2-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	20	ug/L	20	09/18/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/18/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/18/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	13:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25191

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE100R3-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	25	ug/L	50	09/18/21	MH	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	09/18/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	25	ug/L	50	09/18/21	MH	SW8260C
1,1,2-Trichloroethane	ND	25	ug/L	50	09/18/21	MH	SW8260C
1,1-Dichloroethane	65	50	ug/L	50	09/18/21	MH	SW8260C
1,1-Dichloroethene	ND	25	ug/L	50	09/18/21	MH	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	09/18/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	25	ug/L	50	09/18/21	MH	SW8260C
1,2,3-Trichloropropane	ND	25	ug/L	50	09/18/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	09/18/21	MH	SW8260C
1,2-Dibromoethane	ND	25	ug/L	50	09/18/21	MH	SW8260C
1,2-Dichlorobenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
1,2-Dichloroethane	ND	25	ug/L	50	09/18/21	MH	SW8260C
1,2-Dichloropropane	ND	25	ug/L	50	09/18/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	09/18/21	MH	SW8260C
1,4-Dichlorobenzene	ND	25	ug/L	50	09/18/21	MH	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	09/18/21	MH	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	09/18/21	MH	SW8260C
2-Hexanone	ND	250	ug/L	50	09/18/21	MH	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	09/18/21	MH	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	09/18/21	MH	SW8260C
Acetone	ND	1300	ug/L	50	09/18/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25191

Client ID: 21A-AE100R3-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	25	ug/L	50	09/18/21	MH	SW8260C
Bromobenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
Bromochloromethane	ND	50	ug/L	50	09/18/21	MH	SW8260C
Bromodichloromethane	ND	25	ug/L	50	09/18/21	MH	SW8260C
Bromoform	ND	25	ug/L	50	09/18/21	MH	SW8260C
Bromomethane	ND	25	ug/L	50	09/18/21	MH	SW8260C
Carbon Disulfide	ND	250	ug/L	50	09/18/21	MH	SW8260C
Carbon tetrachloride	ND	25	ug/L	50	09/18/21	MH	SW8260C
Chlorobenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
Chloroethane	ND	50	ug/L	50	09/18/21	MH	SW8260C
Chloroform	ND	50	ug/L	50	09/18/21	MH	SW8260C
Chloromethane	ND	50	ug/L	50	09/18/21	MH	SW8260C
cis-1,2-Dichloroethene	61	50	ug/L	50	09/18/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	25	ug/L	50	09/18/21	MH	SW8260C
Dibromochloromethane	ND	25	ug/L	50	09/18/21	MH	SW8260C
Dibromomethane	ND	25	ug/L	50	09/18/21	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	09/18/21	MH	SW8260C
Ethylbenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
Hexachlorobutadiene	ND	25	ug/L	50	09/18/21	MH	SW8260C
Isopropylbenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
m&p-Xylene	ND	50	ug/L	50	09/18/21	MH	SW8260C
Methyl ethyl ketone	ND	250	ug/L	50	09/18/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	09/18/21	MH	SW8260C
Methylene chloride	ND	250	ug/L	50	09/18/21	MH	SW8260C
Naphthalene	ND	50	ug/L	50	09/18/21	MH	SW8260C
n-Butylbenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
n-Propylbenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
o-Xylene	ND	50	ug/L	50	09/18/21	MH	SW8260C
p-Isopropyltoluene	ND	50	ug/L	50	09/18/21	MH	SW8260C
sec-Butylbenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
Styrene	ND	50	ug/L	50	09/18/21	MH	SW8260C
tert-Butylbenzene	ND	50	ug/L	50	09/18/21	MH	SW8260C
Tetrachloroethene	6100	200	ug/L	200	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	130	ug/L	50	09/18/21	MH	SW8260C
Toluene	ND	50	ug/L	50	09/18/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	50	ug/L	50	09/18/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	25	ug/L	50	09/18/21	MH	SW8260C
Trichloroethene	7300	200	ug/L	200	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	50	ug/L	50	09/18/21	MH	SW8260C
Trichlorotrifluoroethane	ND	50	ug/L	50	09/18/21	MH	SW8260C
Vinyl chloride	ND	25	ug/L	50	09/18/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (50x)	104		%	50	09/18/21	MH	70 - 130 %
% Bromofluorobenzene (50x)	95		%	50	09/18/21	MH	70 - 130 %
% Dibromofluoromethane (50x)	105		%	50	09/18/21	MH	70 - 130 %
% Toluene-d8 (50x)	96		%	50	09/18/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	99		%	200	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (200x)	100		%	200	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (200x)	101		%	200	09/21/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25191
Client ID: 21A-AE100R3-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	99		%	200	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	5000	ug/L	50	09/18/21	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	09/18/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	50	ug/L	50	09/18/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	09/18/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	09/18/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	12	0.20	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	87		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25192

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE100R4-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,1,2-Trichloroethane	21	20	ug/L	20	09/18/21	MH	SW8260C
1,1-Dichloroethane	39	20	ug/L	20	09/18/21	MH	SW8260C
1,1-Dichloroethene	13	10	ug/L	20	09/18/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/18/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/18/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/18/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/18/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/18/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/18/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/18/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/18/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/18/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25192

Client ID: 21A-AE100R4-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/18/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/18/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/18/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/18/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/18/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
cis-1,2-Dichloroethene	140	20	ug/L	20	09/18/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/18/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/18/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/18/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/18/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/18/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/18/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/18/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/18/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/18/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/18/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/18/21	MH	SW8260C
Tetrachloroethene	2600	100	ug/L	100	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/18/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/18/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/18/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/18/21	MH	SW8260C
Trichloroethene	3400	100	ug/L	100	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/18/21	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	09/18/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	09/18/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	09/18/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	107		%	20	09/18/21	MH	70 - 130 %
% Toluene-d8 (20x)	97		%	20	09/18/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	99		%	100	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	99		%	100	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	103		%	100	09/21/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	99		%	100	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/18/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/18/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/18/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/18/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/18/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	9.5	0.20	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	91		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25193

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE100R5-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/13/21	EK	SW6010D
Arsenic (Dissolved)	0.005	0.004	mg/L	1	09/11/21	EK	SW6010D
Iron (Dissolved)	3.30	0.011	mg/L	1	09/11/21	EK	SW6010D
Manganese (Dissolved)	1.77	0.001	mg/L	1	09/11/21	EK	SW6010D
Iron	0.018	0.010	mg/L	1	09/13/21	EK	SW6010D
Manganese	0.664	0.001	mg/L	1	09/13/21	EK	SW6010D
Chloride	389	50.0	mg/L	10	09/10/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/10/21 21:52	BS/GD	E300.0
Nitrate as Nitrogen	0.84	0.05	mg/L	1	09/10/21 08:24	BS/GD	E300.0
Sulfate	30.0	5.0	mg/L	1	09/10/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/15/21	GD	SM4500S-D-11
Total Organic Carbon	1.2	1.0	mg/L	1	09/13/21	ARG	SM5310B-11
Dissolved Metals Preparation	Completed				09/09/21	AG	SW3005A
Total Metals Digestion	Completed				09/12/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,1-Dichloroethane	30	5.0	ug/L	5	09/21/21	MH	SW8260C
1,1-Dichloroethene	10	5.0	ug/L	5	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25193

Client ID: 21A-AE100R5-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/21/21	MH	SW8260C
Acetone	ND	130	ug/L	5	09/21/21	MH	SW8260C
Benzene	ND	3.5	ug/L	5	09/21/21	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/21/21	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	740	20	ug/L	20	09/18/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Tetrachloroethene	1100	20	ug/L	20	09/18/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/21/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25193
Client ID: 21A-AE100R5-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	10	5.0	ug/L	5	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Trichloroethene	1600	20	ug/L	20	09/18/21	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Vinyl chloride	33	5.0	ug/L	5	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (5x)	100		%	5	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (5x)	97		%	5	09/21/21	MH	70 - 130 %
% Toluene-d8 (5x)	105		%	5	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	105		%	20	09/18/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	09/18/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	106		%	20	09/18/21	MH	70 - 130 %
% Toluene-d8 (20x)	97		%	20	09/18/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25194

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE100R6-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,1-Dichloroethane	21	5.0	ug/L	5	09/21/21	MH	SW8260C
1,1-Dichloroethene	5.9	5.0	ug/L	5	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/21/21	MH	SW8260C
Acetone	ND	130	ug/L	5	09/21/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25194

Client ID: 21A-AE100R6-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	09/21/21	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/21/21	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	71	5.0	ug/L	5	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Tetrachloroethene	600	50	ug/L	50	09/18/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/21/21	MH	SW8260C
Toluene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
Trichloroethene	760	50	ug/L	50	09/18/21	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/21/21	MH	SW8260C
Vinyl chloride	ND	2.5	ug/L	5	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (5x)	100		%	5	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (5x)	98		%	5	09/21/21	MH	70 - 130 %
% Toluene-d8 (5x)	101		%	5	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	106		%	50	09/18/21	MH	70 - 130 %
% Bromofluorobenzene (50x)	94		%	50	09/18/21	MH	70 - 130 %
% Dibromofluoromethane (50x)	108		%	50	09/18/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25194
Client ID: 21A-AE100R6-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (50x)	99		%	50	09/18/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/21/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	8.1	0.20	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	83		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	12:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25195

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE108R1-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/13/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/11/21	EK	SW6010D
Iron (Dissolved)	0.482	0.011	mg/L	1	09/11/21	EK	SW6010D
Manganese (Dissolved)	0.045	0.001	mg/L	1	09/11/21	EK	SW6010D
Iron	3.81	0.010	mg/L	1	09/13/21	EK	SW6010D
Manganese	0.112	0.001	mg/L	1	09/13/21	EK	SW6010D
Chloride	54.2	5.0	mg/L	1	09/10/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/10/21 08:33	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/10/21 08:33	BS/GD	E300.0
Sulfate	< 5.0	5.0	mg/L	1	09/10/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/15/21	GD	SM4500S-D-11
Total Organic Carbon	2.5	1.0	mg/L	1	09/13/21	ARG	SM5310B-11
Dissolved Metals Preparation	Completed				09/09/21	AG	SW3005A
Total Metals Digestion	Completed				09/12/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/18/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/18/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/18/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25195
Client ID: 21A-AE108R1-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	09/18/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/18/21	MH	70 - 130 %
% Dibromofluoromethane	111		%	1	09/18/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/18/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/18/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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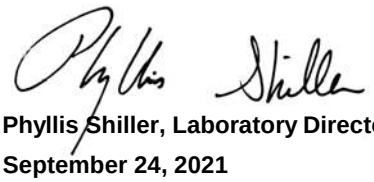

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	12:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25196

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE108R2-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25196

Client ID: 21A-AE108R2-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	10	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	36	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	28	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25196

Client ID: 21A-AE108R2-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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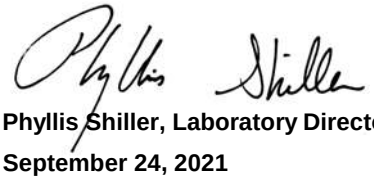


Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25197

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE108R3-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/18/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25197

Client ID: 21A-AE108R3-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/18/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
cis-1,2-Dichloroethene	7.5	1.0	ug/L	1	09/18/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Tetrachloroethene	41	1.0	ug/L	1	09/18/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/18/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Trichloroethene	24	1.0	ug/L	1	09/18/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	09/18/21	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/18/21	MH	70 - 130 %
% Dibromofluoromethane	111		%	1	09/18/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/18/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/18/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25197

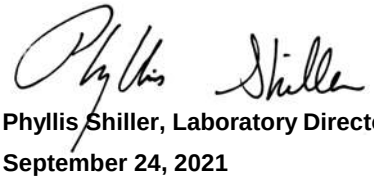
Client ID: 21A-AE108R3-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25198

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE108R4-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	2.9	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25198

Client ID: 21A-AE108R4-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	34	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	20	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	50	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25198
Client ID: 21A-AE108R4-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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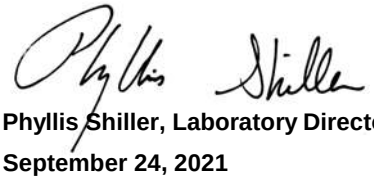


Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25199

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE108R5-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloroethane	3.0	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/18/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/18/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25199

Client ID: 21A-AE108R5-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/18/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
cis-1,2-Dichloroethene	35	1.0	ug/L	1	09/18/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/18/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/18/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Tetrachloroethene	21	1.0	ug/L	1	09/18/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/18/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/21	MH	SW8260C
Trichloroethene	51	1.0	ug/L	1	09/18/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/18/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	108		%	1	09/18/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/18/21	MH	70 - 130 %
% Dibromofluoromethane	110		%	1	09/18/21	MH	70 - 130 %
% Toluene-d8	96		%	1	09/18/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/18/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25199

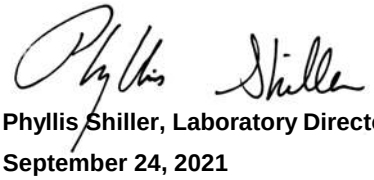
Client ID: 21A-AE108R5-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/18/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25200

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-TB01-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/20/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/20/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/20/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/20/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/20/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/20/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/20/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/20/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25200

Client ID: 21A-TB01-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/20/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/20/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/20/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/20/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/20/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/20/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/20/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/20/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/20/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/20/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/20/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/20/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/20/21	MH	70 - 130 %
% Toluene-d8	97		%	1	09/20/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/20/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/20/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25200

Client ID: 21A-TB01-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/20/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/20/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/20/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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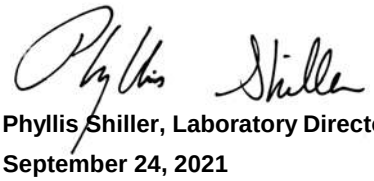


Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25201

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE103R1-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/13/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/11/21	EK	SW6010D
Iron (Dissolved)	0.519	0.011	mg/L	1	09/11/21	EK	SW6010D
Manganese (Dissolved)	1.78	0.001	mg/L	1	09/11/21	EK	SW6010D
Iron	0.765	0.010	mg/L	1	09/13/21	EK	SW6010D
Manganese	1.93	0.001	mg/L	1	09/13/21	EK	SW6010D
Chloride	669	50.0	mg/L	10	09/10/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/10/21 22:01	BS/GD	E300.0
Nitrate as Nitrogen	3.20	0.05	mg/L	1	09/10/21 08:42	BS/GD	E300.0
Sulfate	32.1	5.0	mg/L	1	09/10/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/15/21	GD	SM4500S-D-11
Total Organic Carbon	1.1	1.0	mg/L	1	09/13/21	ARG	SM5310B-11
EPH Extraction	Completed				09/13/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/09/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/09/21	P/D/AT	SW3520C
Dissolved Metals Preparation	Completed				09/09/21	AG	SW3005A
Total Metals Digestion	Completed				09/12/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/13/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
1,1-Dichloroethane	34	10	ug/L	10	09/21/21	MH	SW8260C
1,1-Dichloroethene	11	10	ug/L	10	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/21/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25201

Client ID: 21A-AE103R1-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/21/21	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/21/21	MH	SW8260C
Acetone	ND	250	ug/L	10	09/21/21	MH	SW8260C
Benzene	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/21/21	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/21/21	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/21/21	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/21/21	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	320	10	ug/L	10	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/21/21	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/21/21	MH	SW8260C
Methylene chloride	ND	50	ug/L	10	09/21/21	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/21/21	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Styrene	ND	10	ug/L	10	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/21/21	MH	SW8260C
Tetrachloroethene	1200	20	ug/L	20	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/21/21	MH	SW8260C
Toluene	ND	10	ug/L	10	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/21/21	MH	SW8260C
Trichloroethene	1800	20	ug/L	20	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/21/21	MH	SW8260C
Vinyl chloride	18	10	ug/L	10	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	100		%	10	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	101		%	10	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	101		%	10	09/21/21	MH	70 - 130 %
% Toluene-d8 (10x)	102		%	10	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	98		%	20	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	98		%	20	09/21/21	MH	70 - 130 %
% Toluene-d8 (20x)	99		%	20	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1000	ug/L	10	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/21/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/10/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/10/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/10/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	0.11	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	0.08	0.02	ug/L	1	09/10/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	0.12	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Chrysene	0.12	0.05	ug/L	1	09/10/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/10/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/10/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	0.11	0.09	ug/L	1	09/10/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/10/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/10/21	WB	SW8270D (SIM)
Pyrene	0.25	0.07	ug/L	1	09/10/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	54		%	1	09/10/21	WB	40 - 140 %
% Nitrobenzene-d5	55		%	1	09/10/21	WB	40 - 140 %
% Terphenyl-d14	61		%	1	09/10/21	WB	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,4-dioxane							
1,4-dioxane	9.4	0.20	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	89		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/14/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/14/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/14/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/14/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/14/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	82		%	1	09/14/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	106		%	1	09/14/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	102		%	1	09/14/21	AW	40 - 140 %
% o-terphenyl (aromatic)	86		%	1	09/14/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	880	100	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	880	100	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/13/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	100		%	1	09/13/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	91		%	1	09/13/21	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

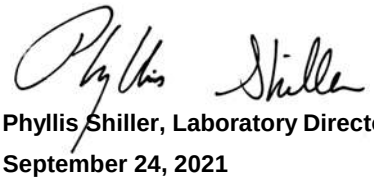
Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2021

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25202

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE103R2-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloroethane	80	20	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloroethene	29	20	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/21/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/21/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25202

Client ID: 21A-AE103R2-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/21/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	210	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/21/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/21/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/21/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Tetrachloroethene	2600	200	ug/L	200	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/21/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Trichloroethene	4300	200	ug/L	200	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Vinyl chloride	33	20	ug/L	20	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/21/21	MH	70 - 130 %
% Toluene-d8 (20x)	103		%	20	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	100		%	200	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (200x)	99		%	200	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (200x)	94		%	200	09/21/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	99		%	200	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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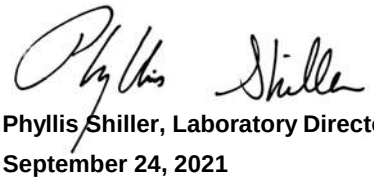


Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25203

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE103R3-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloroethane	110	20	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloroethene	39	20	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/21/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/21/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25203

Client ID: 21A-AE103R3-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/21/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	480	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/21/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/21/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/21/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Tetrachloroethene	3400	200	ug/L	200	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/21/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Trichloroethene	6000	200	ug/L	200	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Vinyl chloride	110	20	ug/L	20	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/21/21	MH	70 - 130 %
% Toluene-d8 (20x)	106		%	20	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	99		%	200	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (200x)	99		%	200	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (200x)	102		%	200	09/21/21	MH	70 - 130 %

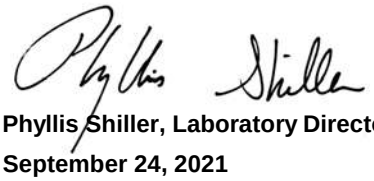
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	99		%	200	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25204

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE103R4-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,1-Dichloroethane	110	40	ug/L	40	09/21/21	MH	SW8260C
1,1-Dichloroethene	32	20	ug/L	40	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	20	ug/L	40	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	40	ug/L	40	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	40	ug/L	40	09/21/21	MH	SW8260C
2-Hexanone	ND	200	ug/L	40	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	40	ug/L	40	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	200	ug/L	40	09/21/21	MH	SW8260C
Acetone	ND	1000	ug/L	40	09/21/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25204

Client ID: 21A-AE103R4-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	20	ug/L	40	09/21/21	MH	SW8260C
Bromobenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Bromochloromethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
Bromodichloromethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
Bromoform	ND	20	ug/L	40	09/21/21	MH	SW8260C
Bromomethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	40	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	20	ug/L	40	09/21/21	MH	SW8260C
Chlorobenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Chloroethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
Chloroform	ND	40	ug/L	40	09/21/21	MH	SW8260C
Chloromethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	510	40	ug/L	40	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	20	ug/L	40	09/21/21	MH	SW8260C
Dibromochloromethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
Dibromomethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
Ethylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	20	ug/L	40	09/21/21	MH	SW8260C
Isopropylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
m&p-Xylene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	40	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	40	ug/L	40	09/21/21	MH	SW8260C
Methylene chloride	ND	200	ug/L	40	09/21/21	MH	SW8260C
Naphthalene	ND	40	ug/L	40	09/21/21	MH	SW8260C
n-Butylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
n-Propylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
o-Xylene	ND	40	ug/L	40	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	40	ug/L	40	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Styrene	ND	40	ug/L	40	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Tetrachloroethene	4900	100	ug/L	100	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	100	ug/L	40	09/21/21	MH	SW8260C
Toluene	ND	40	ug/L	40	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	40	ug/L	40	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	20	ug/L	40	09/21/21	MH	SW8260C
Trichloroethene	8000	100	ug/L	100	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
Vinyl chloride	59	40	ug/L	40	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (40x)	99		%	40	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (40x)	100		%	40	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (40x)	91		%	40	09/21/21	MH	70 - 130 %
% Toluene-d8 (40x)	102		%	40	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	100		%	100	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	100		%	100	09/21/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25204
Client ID: 21A-AE103R4-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	100		%	100	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	4000	ug/L	40	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	40	ug/L	40	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	40	ug/L	40	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	40	ug/L	40	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	40	ug/L	40	09/21/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	41	0.20	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	82		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25205

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE103R5-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/13/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/11/21	EK	SW6010D
Iron (Dissolved)	0.295	0.011	mg/L	1	09/11/21	EK	SW6010D
Manganese (Dissolved)	0.894	0.001	mg/L	1	09/11/21	EK	SW6010D
Iron	0.370	0.010	mg/L	1	09/13/21	EK	SW6010D
Manganese	0.872	0.001	mg/L	1	09/13/21	EK	SW6010D
Chloride	244	25.0	mg/L	5	09/10/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.020	0.020	mg/L	5	09/10/21 22:10	BS/GD	E300.0
Nitrate as Nitrogen	0.26	0.05	mg/L	1	09/10/21 08:51	BS/GD	E300.0
Sulfate	35.5	5.0	mg/L	1	09/10/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/15/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/13/21	ARG	SM5310B-11
Dissolved Metals Preparation	Completed				09/09/21	AG	SW3005A
Total Metals Digestion	Completed				09/12/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,1-Dichloroethane	89	40	ug/L	40	09/21/21	MH	SW8260C
1,1-Dichloroethene	26	20	ug/L	40	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25205

Client ID: 21A-AE103R5-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	20	ug/L	40	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	40	ug/L	40	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	20	ug/L	40	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	40	ug/L	40	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	40	ug/L	40	09/21/21	MH	SW8260C
2-Hexanone	ND	200	ug/L	40	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	40	ug/L	40	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	200	ug/L	40	09/21/21	MH	SW8260C
Acetone	ND	1000	ug/L	40	09/21/21	MH	SW8260C
Benzene	ND	20	ug/L	40	09/21/21	MH	SW8260C
Bromobenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Bromochloromethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
Bromodichloromethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
Bromoform	ND	20	ug/L	40	09/21/21	MH	SW8260C
Bromomethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	40	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	20	ug/L	40	09/21/21	MH	SW8260C
Chlorobenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Chloroethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
Chloroform	ND	40	ug/L	40	09/21/21	MH	SW8260C
Chloromethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	510	40	ug/L	40	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	20	ug/L	40	09/21/21	MH	SW8260C
Dibromochloromethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
Dibromomethane	ND	20	ug/L	40	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
Ethylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	20	ug/L	40	09/21/21	MH	SW8260C
Isopropylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
m&p-Xylene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	40	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	40	ug/L	40	09/21/21	MH	SW8260C
Methylene chloride	ND	200	ug/L	40	09/21/21	MH	SW8260C
Naphthalene	ND	40	ug/L	40	09/21/21	MH	SW8260C
n-Butylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
n-Propylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
o-Xylene	ND	40	ug/L	40	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	40	ug/L	40	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Styrene	ND	40	ug/L	40	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	40	ug/L	40	09/21/21	MH	SW8260C
Tetrachloroethene	5000	100	ug/L	100	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	100	ug/L	40	09/21/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	40	ug/L	40	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	40	ug/L	40	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	20	ug/L	40	09/21/21	MH	SW8260C
Trichloroethene	6900	100	ug/L	100	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	40	ug/L	40	09/21/21	MH	SW8260C
Vinyl chloride	64	40	ug/L	40	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (40x)	98		%	40	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (40x)	99		%	40	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (40x)	94		%	40	09/21/21	MH	70 - 130 %
% Toluene-d8 (40x)	100		%	40	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	98		%	100	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	99		%	100	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	09/21/21	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	4000	ug/L	40	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	40	ug/L	40	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	40	ug/L	40	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	40	ug/L	40	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	40	ug/L	40	09/21/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	38	0.20	ug/l	1	09/13/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	85		%	1	09/13/21	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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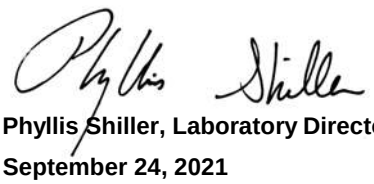

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25206

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE103R6-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloroethane	110	20	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloroethene	34	20	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/21/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/21/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25206

Client ID: 21A-AE103R6-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/21/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	1100	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/21/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/21/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/21/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Tetrachloroethene	3100	200	ug/L	200	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/21/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	39	20	ug/L	20	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Trichloroethene	6800	200	ug/L	200	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Vinyl chloride	210	20	ug/L	20	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	09/21/21	MH	70 - 130 %
% Toluene-d8 (20x)	106		%	20	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	99		%	200	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (200x)	100		%	200	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (200x)	98		%	200	09/21/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	100		%	200	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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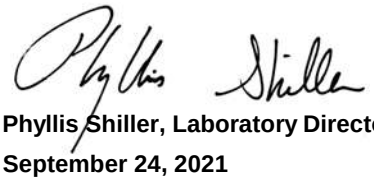

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/21	11:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/21	17:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ25187
Phoenix ID: CJ25207

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE103R7-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloroethane	82	20	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloroethene	29	20	ug/L	20	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/21/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/21/21	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ25207

Client ID: 21A-AE103R7-090921-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/21/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/21/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/21/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	280	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/21/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/21/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/21/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/21/21	MH	SW8260C
Tetrachloroethene	3700	200	ug/L	200	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/21/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/21/21	MH	SW8260C
Trichloroethene	5200	200	ug/L	200	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/21/21	MH	SW8260C
Vinyl chloride	31	20	ug/L	20	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	101		%	20	09/21/21	MH	70 - 130 %
% Toluene-d8 (20x)	104		%	20	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	99		%	200	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (200x)	100		%	200	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (200x)	99		%	200	09/21/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	99		%	200	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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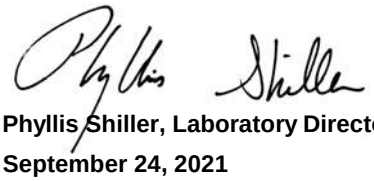

Phyllis Shiller, Laboratory Director
September 24, 2021
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 24, 2021

QA/QC Data

SDG I.D.: GCJ25187

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 591568 (mg/L), QC Sample No: CJ25105 (CJ25187, CJ25188, CJ25189)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.020	NC	95.0	97.0	2.1	95.8			80 - 120	20
Iron	BRL	0.010	0.440	0.435	1.10	91.9	97.4	5.8	97.2			80 - 120	20
Manganese	BRL	0.001	5.97	5.60	6.40	97.4	97.4	0.0	NC			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 591320 (mg/L), QC Sample No: CJ25188 (CJ25187, CJ25188, CJ25189, CJ25193, CJ25195, CJ25201, CJ25205)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.006	0.008	NC	89.3	88.1	1.4	90.5			80 - 120	20
Iron	BRL	0.011	0.978	0.977	0.10	91.7	89.0	3.0	90.7			80 - 120	20
Manganese	BRL	0.001	1.91	1.91	0	92.6	90.0	2.8	88.7			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 591581 (mg/L), QC Sample No: CJ25193 (CJ25193, CJ25195, CJ25201, CJ25205)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	103	98.8	4.2	103			80 - 120	20
Iron	BRL	0.010	0.018	0.018	NC	101	99.2	1.8	100			80 - 120	20
Manganese	BRL	0.001	0.664	0.667	0.50	101	99.0	2.0	98.0			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
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QA/QC Report

September 24, 2021

QA/QC Data

SDG I.D.: GCJ25187

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 591798 (mg/L), QC Sample No: CJ25108 (CJ25189, CJ25193, CJ25195, CJ25201, CJ25205)														
Total Organic Carbon	BRL	1.0	1.4	1.1	NC	95.0			83.0			85 - 115	20	
Comment:														
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.														
QA/QC Batch 592073 (mg/L), QC Sample No: CJ25193 (CJ25189, CJ25193, CJ25195, CJ25201, CJ25205)														
Sulfide	BRL	0.05	<0.05	<0.05	NC	97.8			86.2			90 - 110	20	
QA/QC Batch 591413 (mg/L), QC Sample No: CJ25271 (CJ25189, CJ25193, CJ25195, CJ25201, CJ25205)														
Chloride	BRL	5.0				96.9						90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.02	<0.05	NC	90.3			87.5			90 - 110	20	m
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	92.3			96.1			90 - 110	20	
Sulfate	BRL	5.0	25.9	25.3	2.30	98.1			101			90 - 110	20	
QA/QC Batch 591861 (mg/L), QC Sample No: CJ25780 (CJ25189, CJ25193, CJ25201, CJ25205)														
Chloride	BRL	5.0	12.4	12.5	NC	97.0			97.3			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.18	0.20	NC	98.5			95.3			90 - 110	20	
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	108			102			90 - 110	20	
Sulfate	BRL	5.0	19.8	19.5	NC	93.5			96.9			90 - 110	20	

m = This parameter is outside laboratory MS/MSD specified recovery limits.

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QA/QC Report

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QA/QC Data

SDG I.D.: GCJ25187

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 591606 (ug/L), QC Sample No: CJ22042 (CJ25189, CJ25201)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	64	65	1.6				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	94	93	1.1				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	88	84	4.7				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	81	81	0.0				40 - 140	25	
C9 - Nonane	ND	10	41	41	0.0				40 - 140	25	
C-10 Decane	ND	10	54	55	1.8				40 - 140	25	
C12 - Dodecane	ND	10	55	55	0.0				40 - 140	25	
C14 - Tetradecane	ND	10	68	67	1.5				40 - 140	25	
C16 - Hexadecane	ND	10	75	77	2.6				40 - 140	25	
C18 - Octadecane	ND	10	92	93	1.1				40 - 140	25	
C19 - Nonadecane	ND	10	90	90	0.0				40 - 140	25	
C20 - Eicosane	ND	10	89	90	1.1				40 - 140	25	
C22 - Docosane	ND	10	92	93	1.1				40 - 140	25	
C24 - Tetracosane	ND	10	95	96	1.0				40 - 140	25	
C26 - Hexacosane	ND	10	95	96	1.0				40 - 140	25	
C28 - Octacosane	ND	10	98	98	0.0				40 - 140	25	
C30 - Tricotane	ND	10	95	92	3.2				40 - 140	25	
C36 - Hexatriacontane	ND	10	102	90	12.5				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	92	%	94	69	30.7				40 - 140	25	r
% o-terphenyl (aromatic)	85	%	81	58	33.1				40 - 140	25	r
% 2-Fluorobiphenyl (Fractionation)	85	%	90	88	2.2				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	92	%	94	93	1.1				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 591391 (ug/l), QC Sample No: CJ21030 (CJ25191, CJ25192, CJ25194, CJ25201, CJ25204, CJ25205)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	71	90	23.6	NC			40 - 140	30	
% 1,4-dioxane-d8	82	%	87	90	3.4	81			40 - 140	30	
QA/QC Batch 591278 (ug/L), QC Sample No: CJ24734 (CJ25189, CJ25201)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	60	56	6.9				40 - 140	20	
Acenaphthene	ND	0.50	56	53	5.5				40 - 140	20	
Acenaphthylene	ND	0.10	61	58	5.0				40 - 140	20	
Anthracene	ND	0.10	58	54	7.1				40 - 140	20	
Benz(a)anthracene	ND	0.05	64	61	4.8				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzo(a)pyrene	ND	0.20	65	61	6.3				40 - 140	20
Benzo(b)fluoranthene	ND	0.07	64	63	1.6				40 - 140	20
Benzo(ghi)perylene	ND	0.02	66	63	4.7				40 - 140	20
Benzo(k)fluoranthene	ND	0.10	68	66	3.0				40 - 140	20
Chrysene	ND	0.05	61	58	5.0				40 - 140	20
Dibenz(a,h)anthracene	ND	0.02	79	73	7.9				40 - 140	20
Fluoranthene	ND	0.50	57	54	5.4				40 - 140	20
Fluorene	ND	0.10	69	64	7.5				40 - 140	20
Indeno(1,2,3-cd)pyrene	ND	0.10	84	77	8.7				40 - 140	20
Naphthalene	ND	0.50	58	60	3.4				40 - 140	20
Phenanthrene	ND	0.06	68	64	6.1				40 - 140	20
Pyrene	ND	0.07	59	57	3.4				40 - 140	20
% 2-Fluorobiphenyl	51	%	59	56	5.2				40 - 140	20
% Nitrobenzene-d5	45	%	56	52	7.4				40 - 140	20
% Terphenyl-d14	68	%	71	66	7.3				40 - 140	20

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 592876 (ug/L), QC Sample No: CJ22051 (CJ25189, CJ25190 (20X) , CJ25191 (50X) , CJ25192 (20X) , CJ25193 (20X) , CJ25194 (50X) , CJ25195, CJ25197, CJ25199)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	97	98	1.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	91	91	0.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	103	102	1.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	101	101	0.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	100	101	1.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	84	85	1.2				70 - 130	20
1,1-Dichloropropene	ND	1.0	93	92	1.1				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	108	110	1.8				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	105	105	0.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	102	102	0.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	108	108	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	107	108	0.9				70 - 130	20
1,2-Dibromoethane	ND	1.0	102	103	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	97	98	1.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	99	99	0.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	101	100	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	106	105	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	98	101	3.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	102	103	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	96	97	1.0				70 - 130	20
1,4-dioxane	ND	100	104	108	3.8				40 - 160	20
2,2-Dichloropropane	ND	1.0	92	88	4.4				70 - 130	20
2-Chlorotoluene	ND	1.0	100	100	0.0				70 - 130	20
2-Hexanone	ND	5.0	103	105	1.9				40 - 160	20
4-Chlorotoluene	ND	1.0	101	102	1.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	111	108	2.7				40 - 160	20
Acetone	ND	5.0	109	106	2.8				40 - 160	20
Benzene	ND	0.70	102	100	2.0				70 - 130	20
Bromobenzene	ND	1.0	97	99	2.0				70 - 130	20
Bromochloromethane	ND	1.0	102	101	1.0				70 - 130	20
Bromodichloromethane	ND	0.50	101	100	1.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ25187

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromoform	ND	1.0	98	101	3.0				70 - 130	20
Bromomethane	ND	1.0	97	98	1.0				40 - 160	20
Carbon Disulfide	ND	1.0	78	76	2.6				70 - 130	20
Carbon tetrachloride	ND	1.0	94	94	0.0				70 - 130	20
Chlorobenzene	ND	1.0	97	98	1.0				70 - 130	20
Chloroethane	ND	1.0	96	94	2.1				70 - 130	20
Chloroform	ND	1.0	99	99	0.0				70 - 130	20
Chloromethane	ND	1.0	109	110	0.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	101	0.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	103	103	0.0				70 - 130	20
Dibromochloromethane	ND	0.50	99	100	1.0				70 - 130	20
Dibromomethane	ND	1.0	102	102	0.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	96	98	2.1				40 - 160	20
Di-isopropyl ether	ND	1.0	105	105	0.0				70 - 130	20
Ethyl ether	ND	1.0	93	96	3.2				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	107	110	2.8				70 - 130	20
Ethylbenzene	ND	1.0	99	98	1.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	79	80	1.3				70 - 130	20
Isopropylbenzene	ND	1.0	102	102	0.0				70 - 130	20
m&p-Xylene	ND	1.0	105	103	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	110	111	0.9				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	102	103	1.0				70 - 130	20
Methylene chloride	ND	1.0	101	101	0.0				70 - 130	20
Naphthalene	ND	1.0	119	119	0.0				70 - 130	20
n-Butylbenzene	ND	1.0	104	104	0.0				70 - 130	20
n-Propylbenzene	ND	1.0	97	98	1.0				70 - 130	20
o-Xylene	ND	1.0	105	106	0.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	104	106	1.9				70 - 130	20
sec-Butylbenzene	ND	1.0	102	102	0.0				70 - 130	20
Styrene	ND	1.0	112	111	0.9				70 - 130	20
tert-amyl methyl ether	ND	1.0	101	102	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	104	103	1.0				70 - 130	20
Tetrachloroethene	ND	1.0	92	87	5.6				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	108	112	3.6				70 - 130	20
Toluene	ND	1.0	100	99	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	94	95	1.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	105	106	0.9				70 - 130	20
Trichloroethene	ND	1.0	95	94	1.1				70 - 130	20
Trichlorofluoromethane	ND	1.0	89	87	2.3				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	68	71	4.3				70 - 130	20
Vinyl chloride	ND	1.0	101	98	3.0				70 - 130	20
% 1,2-dichlorobenzene-d4	104	%	100	100	0.0				70 - 130	20
% Bromofluorobenzene	94	%	100	100	0.0				70 - 130	20
% Dibromofluoromethane	111	%	98	101	3.0				70 - 130	20
% Toluene-d8	102	%	101	100	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCJ25187

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 593031 (ug/L), QC Sample No: CJ25193 (CJ25193 (5X) , CJ25194 (5X) , CJ25201 (10X) , CJ25202 (200X) , CJ25203 (200X) , CJ25204 (40X) , CJ25205 (40X) , CJ25206 (200X) , CJ25207 (200X))											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	106	109	2.8				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	105	107	1.9				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	105	110	4.7				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	104	106	1.9				70 - 130	20	
1,1-Dichloroethane	ND	1.0	103	105	1.9				70 - 130	20	
1,1-Dichloroethene	ND	1.0	102	106	3.8				70 - 130	20	
1,1-Dichloropropene	ND	1.0	108	111	2.7				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	113	110	2.7				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	104	111	6.5				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	112	108	3.6				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	105	108	2.8				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	114	112	1.8				70 - 130	20	
1,2-Dibromoethane	ND	1.0	105	109	3.7				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	104	105	1.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	104	106	1.9				70 - 130	20	
1,2-Dichloropropane	ND	1.0	102	104	1.9				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	107	110	2.8				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	103	105	1.9				70 - 130	20	
1,3-Dichloropropane	ND	1.0	105	108	2.8				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	104	104	0.0				70 - 130	20	
1,4-dioxane	ND	100	164	119	31.8				40 - 160	20	l,r
2,2-Dichloropropane	ND	1.0	104	106	1.9				70 - 130	20	
2-Chlorotoluene	ND	1.0	105	108	2.8				70 - 130	20	
2-Hexanone	ND	5.0	102	105	2.9				40 - 160	20	
4-Chlorotoluene	ND	1.0	105	108	2.8				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	101	107	5.8				40 - 160	20	
Acetone	ND	5.0	100	100	0.0				40 - 160	20	
Benzene	ND	0.70	105	107	1.9				70 - 130	20	
Bromobenzene	ND	1.0	105	108	2.8				70 - 130	20	
Bromochloromethane	ND	1.0	105	107	1.9				70 - 130	20	
Bromodichloromethane	ND	0.50	106	109	2.8				70 - 130	20	
Bromoform	ND	1.0	108	111	2.7				70 - 130	20	
Bromomethane	ND	1.0	102	102	0.0				40 - 160	20	
Carbon Disulfide	ND	1.0	98	100	2.0				70 - 130	20	
Carbon tetrachloride	ND	1.0	104	126	19.1				70 - 130	20	
Chlorobenzene	ND	1.0	103	105	1.9				70 - 130	20	
Chloroethane	ND	1.0	96	99	3.1				70 - 130	20	
Chloroform	ND	1.0	103	106	2.9				70 - 130	20	
Chloromethane	ND	1.0	97	98	1.0				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	104	106	1.9				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	106	107	0.9				70 - 130	20	
Dibromochloromethane	ND	0.50	109	110	0.9				70 - 130	20	
Dibromomethane	ND	1.0	107	110	2.8				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	111	113	1.8				40 - 160	20	
Di-isopropyl ether	ND	1.0	102	105	2.9				70 - 130	20	
Ethyl ether	ND	1.0	94	97	3.1				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	103	106	2.9				70 - 130	20	
Ethylbenzene	ND	1.0	107	109	1.9				70 - 130	20	
Hexachlorobutadiene	ND	0.40	111	108	2.7				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ25187

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Isopropylbenzene	ND	1.0	109	112	2.7				70 - 130	20
m&p-Xylene	ND	1.0	106	108	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	101	106	4.8				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	107	3.8				70 - 130	20
Methylene chloride	ND	1.0	100	102	2.0				70 - 130	20
Naphthalene	ND	1.0	114	113	0.9				70 - 130	20
n-Butylbenzene	ND	1.0	111	110	0.9				70 - 130	20
n-Propylbenzene	ND	1.0	108	111	2.7				70 - 130	20
o-Xylene	ND	1.0	104	106	1.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	111	112	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	109	113	3.6				70 - 130	20
Styrene	ND	1.0	108	110	1.8				70 - 130	20
tert-amyl methyl ether	ND	1.0	103	107	3.8				70 - 130	20
tert-Butylbenzene	ND	1.0	108	111	2.7				70 - 130	20
Tetrachloroethene	ND	1.0	105	107	1.9				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	94	99	5.2				70 - 130	20
Toluene	ND	1.0	106	108	1.9				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	99	103	4.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	108	110	1.8				70 - 130	20
Trichloroethene	ND	1.0	104	109	4.7				70 - 130	20
Trichlorofluoromethane	ND	1.0	107	112	4.6				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	98	101	3.0				70 - 130	20
Vinyl chloride	ND	1.0	108	109	0.9				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	100	101	1.0				70 - 130	20
% Bromofluorobenzene	99	%	100	99	1.0				70 - 130	20
% Dibromofluoromethane	96	%	101	99	2.0				70 - 130	20
% Toluene-d8	98	%	99	100	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 592875 (ug/L), QC Sample No: CJ25200 (CJ25191 (200X) , CJ25192 (100X) , CJ25196, CJ25198, CJ25200, CJ25201 (20X) , CJ25202 (20X) , CJ25203 (20X) , CJ25204 (100X) , CJ25205 (100X) , CJ25206 (20X) , CJ25207 (20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	102	103	1.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	107	107	0.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	95	96	1.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	92	93	1.1				70 - 130	20
1,1-Dichloroethane	ND	1.0	102	102	0.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	113	114	0.9				70 - 130	20
1,1-Dichloropropene	ND	1.0	112	113	0.9				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	103	107	3.8				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	98	99	1.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	102	107	4.8				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	107	109	1.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	95	97	2.1				70 - 130	20
1,2-Dibromoethane	ND	1.0	96	97	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	100	102	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	96	98	2.1				70 - 130	20
1,2-Dichloropropane	ND	1.0	98	97	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	110	112	1.8				70 - 130	20

QA/QC Data

SDG I.D.: GCJ25187

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,3-Dichlorobenzene	ND	1.0	102	105	2.9				70 - 130	20
1,3-Dichloropropane	ND	1.0	98	100	2.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	102	106	3.8				70 - 130	20
1,4-dioxane	ND	100	95	96	1.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	101	100	1.0				70 - 130	20
2-Chlorotoluene	ND	1.0	107	108	0.9				70 - 130	20
2-Hexanone	ND	5.0	88	90	2.2				40 - 160	20
4-Chlorotoluene	ND	1.0	105	107	1.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	90	91	1.1				40 - 160	20
Acetone	ND	5.0	78	82	5.0				40 - 160	20
Benzene	ND	0.70	105	105	0.0				70 - 130	20
Bromobenzene	ND	1.0	103	104	1.0				70 - 130	20
Bromochloromethane	ND	1.0	94	94	0.0				70 - 130	20
Bromodichloromethane	ND	0.50	96	98	2.1				70 - 130	20
Bromoform	ND	1.0	93	95	2.1				70 - 130	20
Bromomethane	ND	1.0	114	114	0.0				40 - 160	20
Carbon Disulfide	ND	1.0	104	106	1.9				70 - 130	20
Carbon tetrachloride	ND	1.0	104	106	1.9				70 - 130	20
Chlorobenzene	ND	1.0	103	105	1.9				70 - 130	20
Chloroethane	ND	1.0	114	116	1.7				70 - 130	20
Chloroform	ND	1.0	98	98	0.0				70 - 130	20
Chloromethane	ND	1.0	106	104	1.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	99	2.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	96	96	0.0				70 - 130	20
Dibromochloromethane	ND	0.50	97	98	1.0				70 - 130	20
Dibromomethane	ND	1.0	92	93	1.1				70 - 130	20
Dichlorodifluoromethane	ND	1.0	135	138	2.2				40 - 160	20
Di-isopropyl ether	ND	1.0	96	96	0.0				70 - 130	20
Ethyl ether	ND	1.0	91	90	1.1				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	94	94	0.0				70 - 130	20
Ethylbenzene	ND	1.0	111	111	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	106	113	6.4				70 - 130	20
Isopropylbenzene	ND	1.0	112	115	2.6				70 - 130	20
m&p-Xylene	ND	1.0	109	111	1.8				70 - 130	20
Methyl ethyl ketone	ND	5.0	84	85	1.2				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	93	95	2.1				70 - 130	20
Methylene chloride	ND	1.0	96	95	1.0				70 - 130	20
Naphthalene	ND	1.0	101	104	2.9				70 - 130	20
n-Butylbenzene	ND	1.0	112	114	1.8				70 - 130	20
n-Propylbenzene	ND	1.0	113	114	0.9				70 - 130	20
o-Xylene	ND	1.0	103	104	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	110	113	2.7				70 - 130	20
sec-Butylbenzene	ND	1.0	113	117	3.5				70 - 130	20
Styrene	ND	1.0	104	104	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	92	94	2.2				70 - 130	20
tert-Butylbenzene	ND	1.0	112	115	2.6				70 - 130	20
Tetrachloroethene	ND	1.0	109	111	1.8				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	88	89	1.1				70 - 130	20
Toluene	ND	1.0	105	104	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	103	104	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	93	95	2.1				70 - 130	20
Trichloroethene	ND	1.0	106	106	0.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	122	124	1.6				70 - 130	20

QA/QC Data

SDG I.D.: GCJ25187

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Trichlorotrifluoroethane	ND	1.0	100	104	3.9				70 - 130	20
Vinyl chloride	ND	1.0	117	117	0.0				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	98	%	98	99	1.0				70 - 130	20
% Dibromofluoromethane	96	%	95	93	2.1				70 - 130	20
% Toluene-d8	98	%	98	98	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 591832 (ug/L), QC Sample No: CJ25189 (CJ25189, CJ25201)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	93	95	2.1				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	79	82	3.7				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	93	95	2.1				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	79	82	3.7				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	85	86	1.2				70 - 130	25
Benzene	ND	1.0	98	100	2.0				70 - 130	25
Ethyl Benzene	ND	1.0	90	92	2.2				70 - 130	25
MTBE	ND	1.0	97	97	0.0				70 - 130	25
Naphthalene	ND	5.0	95	98	3.1				70 - 130	25
Toluene	ND	1.0	94	95	1.1				70 - 130	25
m,p-Xylenes	ND	2.0	90	91	1.1				70 - 130	25
o-Xylene	ND	1.0	88	89	1.1				70 - 130	25
% 2,5-Dibromotoluene (PID)	92	%	91	94	3.2				70 - 130	25
% 2,5-Dibromotoluene (FID)	96	%	97	97	0.0				70 - 130	25

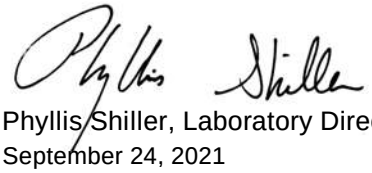
Comment:

This batch consists of a Blank, LCS and LCSD.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
September 24, 2021

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25188	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.015	0.004	0.01	0.01	mg/L
CJ25188	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.015	0.004	0.01	0.01	mg/L
CJ25188	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.015	0.004	0.01	0.01	mg/L
CJ25189	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	13	1.0	2	2	ug/L
CJ25189	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	44	1.0	5	5	ug/L
CJ25189	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5.5	1.0	5	5	ug/L
CJ25189	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	33	1.0	20	20	ug/L
CJ25189	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ25189	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ25189	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ25189	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	1.0	2	2	ug/L
CJ25189	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	44	1.0	5	5	ug/L
CJ25189	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.5	1.0	5	5	ug/L
CJ25189	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	1.0	20	20	ug/L
CJ25189	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ25189	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	1.0	2	2	ug/L
CJ25189	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	1.0	20	20	ug/L
CJ25189	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	44	1.0	5	5	ug/L
CJ25189	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ25189	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	13	1.0	2	2	ug/L
CJ25189	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	44	1.0	5	5	ug/L
CJ25189	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	5.5	1.0	5	5	ug/L
CJ25189	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	13	1.0	2	2	ug/L
CJ25189	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	44	1.0	5	5	ug/L
CJ25189	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	33	1.0	20	20	ug/L
CJ25189	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ25189	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ25189	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ25189	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	33.8	0.011	14	14	mg/L
CJ25189	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	9.98	0.011	0.43	0.43	mg/L
CJ25189	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED-WILMINGT	34.3	0.010	14	14	mg/L
CJ25189	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	9.02	0.010	0.43	0.43	mg/L
CJ25190	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25190	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ25190	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ25190	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ25190	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25190	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25190	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	73	20	20	20	ug/L
CJ25190	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25190	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ25190	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ25190	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25190	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ25190	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25190	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1300	20	5	5	ug/L
CJ25190	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25190	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25190	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ25190	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1500	20	5	5	ug/L
CJ25190	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ25190	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ25190	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1500	20	5	5	ug/L
CJ25190	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25190	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25190	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	20	5	5	ug/L
CJ25190	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ25190	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ25190	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	73	20	20	20	ug/L
CJ25190	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25190	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25190	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ25190	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ25190	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25190	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	20	50	50	ug/L
CJ25190	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	73	20	20	20	ug/L
CJ25190	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ25190	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ25190	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1500	20	5	5	ug/L
CJ25190	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ25190	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ25190	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	20	5	5	ug/L
CJ25190	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1500	20	5	5	ug/L
CJ25190	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ25190	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	7	7	ug/L
CJ25190	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ25190	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ25190	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ25190	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	73	20	70	70	ug/L
CJ25190	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ25190	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1500	20	5	5	ug/L
CJ25190	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ25190	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ25190	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25190	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ25190	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ25190	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	20	50	50	ug/L
CJ25190	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ25190	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	73	20	20	20	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25190	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ25190	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ25190	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CJ25191	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	8.3	8.3	ug/L
CJ25191	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	0.47	0.47	ug/L
CJ25191	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	0.6	0.6	ug/L
CJ25191	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	0.0075	0.0075	ug/L
CJ25191	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	61	50	20	20	ug/L
CJ25191	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	3	3	ug/L
CJ25191	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	4	4	ug/L
CJ25191	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	0.00033	0.00033	ug/L
CJ25191	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	7300	200	5	5	ug/L
CJ25191	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	250	38	38	ug/L
CJ25191	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	7	7	ug/L
CJ25191	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	0.47	0.47	ug/L
CJ25191	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	3	3	ug/L
CJ25191	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	7	7	ug/L
CJ25191	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	0.00075	0.00075	ug/L
CJ25191	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	250	38	38	ug/L
CJ25191	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6100	200	5	5	ug/L
CJ25191	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	250	5	5	ug/L
CJ25191	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7300	200	5	5	ug/L
CJ25191	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L
CJ25191	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.6	0.6	ug/L
CJ25191	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	4	4	ug/L
CJ25191	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	7	7	ug/L
CJ25191	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CJ25191	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	61	50	20	20	ug/L
CJ25191	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6100	200	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25191	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CJ25191	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	250	5	5	ug/L
CJ25191	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L
CJ25191	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	7	7	ug/L
CJ25191	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.02	0.02	ug/L
CJ25191	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	20	20	ug/L
CJ25191	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	9	9	ug/L
CJ25191	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	61	50	20	20	ug/L
CJ25191	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6100	200	50	50	ug/L
CJ25191	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	10	10	ug/L
CJ25191	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	3	3	ug/L
CJ25191	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	6	6	ug/L
CJ25191	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	7	7	ug/L
CJ25191	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	7300	200	5	5	ug/L
CJ25191	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.6	0.6	ug/L
CJ25191	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	7	7	ug/L
CJ25191	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7300	200	5	5	ug/L
CJ25191	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	6100	200	5	5	ug/L
CJ25191	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	250	5	5	ug/L
CJ25191	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	3	3	ug/L
CJ25191	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	25	4	4	ug/L
CJ25191	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	10	10	ug/L
CJ25191	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25191	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.02	0.02	ug/L
CJ25191	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	6	6	ug/L
CJ25191	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	7	7	ug/L
CJ25191	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	3	3	ug/L
CJ25191	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	10	10	ug/L
CJ25191	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	20	20	ug/L
CJ25191	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	61	50	20	20	ug/L
CJ25191	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	9	9	ug/L
CJ25191	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CJ25191	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	6100	200	50	50	ug/L
CJ25191	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	5	5	ug/L
CJ25191	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	7300	200	5	5	ug/L
CJ25191	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	7300	200	5000	5000	ug/L
CJ25191	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	12	0.20	0.3	0.3	ug/l
CJ25191	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	0.20	0.3	0.3	ug/l
CJ25191	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	12	0.20	0.3	0.3	ug/l
CJ25191	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5000	0.3	0.3	ug/L
CJ25192	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ25192	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25192	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25192	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ25192	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25192	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3400	100	5	5	ug/L
CJ25192	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2600	100	5	5	ug/L
CJ25192	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25192	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ25192	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ25192	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25192	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25192	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25192	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25192	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	21	20	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25192	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ25192	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ25192	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ25192	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	140	20	20	20	ug/L
CJ25192	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ25192	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25192	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25192	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2600	100	5	5	ug/L
CJ25192	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	20	20	20	ug/L
CJ25192	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ25192	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	10	7	7	ug/L
CJ25192	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25192	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3400	100	5	5	ug/L
CJ25192	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ25192	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25192	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	20	5	5	ug/L
CJ25192	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ25192	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ25192	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3400	100	5	5	ug/L
CJ25192	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2600	100	50	50	ug/L
CJ25192	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	20	20	20	ug/L
CJ25192	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ25192	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ25192	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ25192	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25192	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2600	100	5	5	ug/L
CJ25192	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ25192	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ25192	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	21	20	5	5	ug/L
CJ25192	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	3400	100	5	5	ug/L
CJ25192	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	13	10	7	7	ug/L
CJ25192	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	20	70	70	ug/L
CJ25192	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ25192	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ25192	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ25192	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2600	100	50	50	ug/L
CJ25192	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ25192	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ25192	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ25192	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	3400	100	5	5	ug/L
CJ25192	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ25192	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	20	20	20	ug/L
CJ25192	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25192	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ25192	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	9.5	0.20	0.3	0.3	ug/l
CJ25192	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.5	0.20	0.3	0.3	ug/l
CJ25192	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	9.5	0.20	0.3	0.3	ug/l
CJ25192	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ25193	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	33	5.0	2	2	ug/L
CJ25193	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CJ25193	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.6	0.6	ug/L
CJ25193	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	740	20	20	20	ug/L
CJ25193	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1600	20	5	5	ug/L
CJ25193	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25193	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1100	20	5	5	ug/L
CJ25193	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.0075	0.0075	ug/L
CJ25193	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00033	0.00033	ug/L
CJ25193	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00075	0.00075	ug/L
CJ25193	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CJ25193	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	740	20	20	20	ug/L
CJ25193	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ25193	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1600	20	5	5	ug/L
CJ25193	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	5.0	2	2	ug/L
CJ25193	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CJ25193	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CJ25193	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	5.0	7	7	ug/L
CJ25193	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ25193	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1100	20	5	5	ug/L
CJ25193	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1100	20	50	50	ug/L
CJ25193	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1600	20	5	5	ug/L
CJ25193	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	740	20	20	20	ug/L
CJ25193	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	5.0	2	2	ug/L
CJ25193	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	33	5.0	2	2	ug/L
CJ25193	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1600	20	5	5	ug/L
CJ25193	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1100	20	5	5	ug/L
CJ25193	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CJ25193	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	740	20	70	70	ug/L
CJ25193	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	5.0	7	7	ug/L
CJ25193	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CJ25193	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1600	20	5	5	ug/L
CJ25193	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1100	20	50	50	ug/L
CJ25193	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	33	5.0	2	2	ug/L
CJ25193	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ25193	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	740	20	20	20	ug/L
CJ25193	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	0.3	0.3	ug/L
CJ25193	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.3	0.3	ug/L
CJ25193	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.3	0.3	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25193	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.77	0.001	0.43	0.43	mg/L
CJ25193	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.664	0.001	0.43	0.43	mg/L
CJ25194	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CJ25194	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.6	0.6	ug/L
CJ25194	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	71	5.0	20	20	ug/L
CJ25194	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	760	50	5	5	ug/L
CJ25194	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.0075	0.0075	ug/L
CJ25194	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00033	0.00033	ug/L
CJ25194	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00075	0.00075	ug/L
CJ25194	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CJ25194	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	600	50	5	5	ug/L
CJ25194	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ25194	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	600	50	5	5	ug/L
CJ25194	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CJ25194	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ25194	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	760	50	5	5	ug/L
CJ25194	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	71	5.0	20	20	ug/L
CJ25194	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CJ25194	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	71	5.0	20	20	ug/L
CJ25194	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	600	50	50	50	ug/L
CJ25194	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	760	50	5	5	ug/L
CJ25194	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CJ25194	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	760	50	5	5	ug/L
CJ25194	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CJ25194	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	600	50	5	5	ug/L
CJ25194	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	71	5.0	70	70	ug/L
CJ25194	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	71	5.0	20	20	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25194	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	760	50	5	5	ug/L
CJ25194	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ25194	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	600	50	50	50	ug/L
CJ25194	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	8.1	0.20	0.3	0.3	ug/l
CJ25194	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.1	0.20	0.3	0.3	ug/l
CJ25194	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	8.1	0.20	0.3	0.3	ug/l
CJ25194	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	0.3	0.3	ug/L
CJ25195	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ25195	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ25195	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ25195	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ25195	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ25195	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ25195	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ25195	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ25196	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ25196	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	28	1.0	5	5	ug/L
CJ25196	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	36	1.0	5	5	ug/L
CJ25196	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ25196	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ25196	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	36	1.0	5	5	ug/L
CJ25196	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	28	1.0	5	5	ug/L
CJ25196	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ25196	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	28	1.0	5	5	ug/L
CJ25196	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ25196	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	36	1.0	5	5	ug/L
CJ25196	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	28	1.0	5	5	ug/L
CJ25196	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	28	1.0	5	5	ug/L
CJ25196	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ25196	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ25196	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ25197	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ25197	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ25197	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ25197	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	41	1.0	5	5	ug/L
CJ25197	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	24	1.0	5	5	ug/L
CJ25197	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ25197	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	41	1.0	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25197	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	24	1.0	5	5	ug/L
CJ25197	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	24	1.0	5	5	ug/L
CJ25197	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	24	1.0	5	5	ug/L
CJ25197	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	41	1.0	5	5	ug/L
CJ25197	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ25197	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	24	1.0	5	5	ug/L
CJ25197	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ25197	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ25197	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ25198	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	50	1.0	5	5	ug/L
CJ25198	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	20	1.0	5	5	ug/L
CJ25198	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ25198	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ25198	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ25198	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	34	1.0	20	20	ug/L
CJ25198	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	50	1.0	5	5	ug/L
CJ25198	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	1.0	5	5	ug/L
CJ25198	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	34	1.0	20	20	ug/L
CJ25198	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ25198	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	34	1.0	20	20	ug/L
CJ25198	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	50	1.0	5	5	ug/L
CJ25198	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	20	1.0	5	5	ug/L
CJ25198	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ25198	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	50	1.0	5	5	ug/L
CJ25198	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	34	1.0	20	20	ug/L
CJ25198	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	50	1.0	5	5	ug/L
CJ25198	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ25198	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ25198	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ25199	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	35	1.0	20	20	ug/L
CJ25199	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ25199	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ25199	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ25199	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	51	1.0	5	5	ug/L
CJ25199	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	21	1.0	5	5	ug/L
CJ25199	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	1.0	5	5	ug/L
CJ25199	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	51	1.0	5	5	ug/L
CJ25199	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	35	1.0	20	20	ug/L
CJ25199	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ25199	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	35	1.0	20	20	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25199	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	51	1.0	5	5	ug/L
CJ25199	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	51	1.0	5	5	ug/L
CJ25199	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ25199	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	21	1.0	5	5	ug/L
CJ25199	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	51	1.0	5	5	ug/L
CJ25199	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	35	1.0	20	20	ug/L
CJ25199	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ25199	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ25199	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ25200	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ25200	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ25200	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ25200	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ25200	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ25200	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ25200	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ25200	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ25201	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.0075	0.0075	ug/L
CJ25201	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ25201	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1800	20	5	5	ug/L
CJ25201	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ25201	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	4	4	ug/L
CJ25201	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	320	10	20	20	ug/L
CJ25201	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ25201	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	18	10	2	2	ug/L
CJ25201	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.47	0.47	ug/L
CJ25201	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00033	0.00033	ug/L
CJ25201	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.00075	0.00075	ug/L
CJ25201	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	38	38	ug/L
CJ25201	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	3	3	ug/L
CJ25201	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CJ25201	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1200	20	5	5	ug/L
CJ25201	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	5.0	0.6	0.6	ug/L
CJ25201	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CJ25201	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CJ25201	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25201	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	320	10	20	20	ug/L
CJ25201	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1200	20	5	5	ug/L
CJ25201	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ25201	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ25201	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1800	20	5	5	ug/L
CJ25201	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	18	10	2	2	ug/L
CJ25201	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ25201	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ25201	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ25201	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	10	7	7	ug/L
CJ25201	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CJ25201	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	18	10	2	2	ug/L
CJ25201	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1200	20	50	50	ug/L
CJ25201	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	320	10	20	20	ug/L
CJ25201	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CJ25201	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1800	20	5	5	ug/L
CJ25201	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	11	10	7	7	ug/L
CJ25201	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	18	10	2	2	ug/L
CJ25201	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CJ25201	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ25201	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CJ25201	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1200	20	5	5	ug/L
CJ25201	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1800	20	5	5	ug/L
CJ25201	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CJ25201	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CJ25201	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	320	10	70	70	ug/L
CJ25201	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1800	20	5	5	ug/L
CJ25201	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	18	10	2	2	ug/L
CJ25201	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1200	20	50	50	ug/L
CJ25201	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CJ25201	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ25201	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	320	10	20	20	ug/L
CJ25201	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	9.4	0.20	0.3	0.3	ug/l
CJ25201	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.4	0.20	0.3	0.3	ug/l
CJ25201	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	9.4	0.20	0.3	0.3	ug/l
CJ25201	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1000	0.3	0.3	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25201	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED-WILMINGT	880	100	300	300	ug/L
CJ25201	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	880	100	300	300	ug/L
CJ25201	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	880	100	300	300	ug/L
CJ25201	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.78	0.001	0.43	0.43	mg/L
CJ25201	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.93	0.001	0.43	0.43	mg/L
CJ25202	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ25202	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	4300	200	5	5	ug/L
CJ25202	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	80	20	70	70	ug/L
CJ25202	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25202	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2600	200	5	5	ug/L
CJ25202	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	33	20	2	2	ug/L
CJ25202	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25202	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25202	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25202	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ25202	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25202	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25202	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25202	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	210	20	20	20	ug/L
CJ25202	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ25202	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ25202	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ25202	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ25202	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25202	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ25202	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ25202	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ25202	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25202	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	210	20	20	20	ug/L
CJ25202	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25202	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25202	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ25202	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ25202	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	20	2	2	ug/L
CJ25202	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ25202	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	29	20	7	7	ug/L
CJ25202	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25202	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	80	20	70	70	ug/L
CJ25202	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2600	200	5	5	ug/L
CJ25202	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4300	200	5	5	ug/L
CJ25202	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ25202	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	20	2	2	ug/L
CJ25202	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4300	200	5	5	ug/L
CJ25202	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	210	20	20	20	ug/L
CJ25202	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2600	200	50	50	ug/L
CJ25202	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ25202	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ25202	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ25202	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	80	20	70	70	ug/L
CJ25202	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ25202	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ25202	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ25202	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2600	200	5	5	ug/L
CJ25202	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4300	200	5	5	ug/L
CJ25202	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	33	20	2	2	ug/L
CJ25202	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	29	20	7	7	ug/L
CJ25202	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25202	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ25202	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	210	20	70	70	ug/L
CJ25202	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ25202	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	33	20	2	2	ug/L
CJ25202	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ25202	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4300	200	5	5	ug/L
CJ25202	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ25202	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ25202	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2600	200	50	50	ug/L
CJ25202	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25202	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	210	20	20	20	ug/L
CJ25202	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ25202	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ25202	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ25202	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ25202	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CJ25203	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3400	200	5	5	ug/L
CJ25203	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ25203	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ25203	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25203	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ25203	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25203	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25203	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ25203	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25203	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25203	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25203	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	480	20	20	20	ug/L
CJ25203	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ25203	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25203	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25203	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ25203	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	110	20	2	2	ug/L
CJ25203	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ25203	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25203	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	110	20	70	70	ug/L
CJ25203	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6000	200	5	5	ug/L
CJ25203	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25203	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	480	20	20	20	ug/L
CJ25203	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25203	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ25203	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ25203	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25203	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	20	2	2	ug/L
CJ25203	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	20	70	70	ug/L
CJ25203	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ25203	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	39	20	7	7	ug/L
CJ25203	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6000	200	5	5	ug/L
CJ25203	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3400	200	5	5	ug/L
CJ25203	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ25203	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25203	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ25203	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	480	20	20	20	ug/L
CJ25203	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	110	20	2	2	ug/L
CJ25203	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6000	200	5	5	ug/L
CJ25203	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3400	200	50	50	ug/L
CJ25203	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ25203	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ25203	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ25203	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25203	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ25203	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6000	200	5	5	ug/L
CJ25203	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3400	200	5	5	ug/L
CJ25203	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ25203	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	110	20	70	70	ug/L
CJ25203	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	110	20	2	2	ug/L
CJ25203	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	39	20	7	7	ug/L
CJ25203	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ25203	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ25203	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	480	20	70	70	ug/L
CJ25203	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ25203	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	110	20	2	2	ug/L
CJ25203	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ25203	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ25203	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6000	200	5	5	ug/L
CJ25203	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ25203	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3400	200	50	50	ug/L
CJ25203	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25203	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ25203	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ25203	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	480	20	20	20	ug/L
CJ25203	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	6000	200	5000	5000	ug/L
CJ25203	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ25203	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ25203	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CJ25204	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	7	7	ug/L
CJ25204	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.00033	0.00033	ug/L
CJ25204	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25204	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.47	0.47	ug/L
CJ25204	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	8.3	8.3	ug/L
CJ25204	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	510	40	20	20	ug/L
CJ25204	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.00075	0.00075	ug/L
CJ25204	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	7	7	ug/L
CJ25204	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	3	3	ug/L
CJ25204	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	4	4	ug/L
CJ25204	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	3	3	ug/L
CJ25204	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	38	38	ug/L
CJ25204	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	8000	100	5	5	ug/L
CJ25204	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	59	40	2	2	ug/L
CJ25204	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	110	40	70	70	ug/L
CJ25204	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	38	38	ug/L
CJ25204	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	5	5	ug/L
CJ25204	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.47	0.47	ug/L
CJ25204	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.0075	0.0075	ug/L
CJ25204	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	4900	100	5	5	ug/L
CJ25204	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.6	0.6	ug/L
CJ25204	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	4	4	ug/L
CJ25204	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	59	40	2	2	ug/L
CJ25204	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	3	3	ug/L
CJ25204	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8000	100	5	5	ug/L
CJ25204	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	7	7	ug/L
CJ25204	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.5	0.5	ug/L
CJ25204	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4900	100	5	5	ug/L
CJ25204	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	510	40	20	20	ug/L
CJ25204	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	5	5	ug/L
CJ25204	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.5	0.5	ug/L
CJ25204	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.6	0.6	ug/L
CJ25204	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.02	0.02	ug/L
CJ25204	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	40	70	70	ug/L
CJ25204	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25204	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	3	3	ug/L
CJ25204	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	32	20	7	7	ug/L
CJ25204	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	8000	100	5	5	ug/L
CJ25204	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	9	9	ug/L
CJ25204	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	6	6	ug/L
CJ25204	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	10	10	ug/L
CJ25204	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4900	100	50	50	ug/L
CJ25204	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	3	3	ug/L
CJ25204	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	59	40	2	2	ug/L
CJ25204	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	7	7	ug/L
CJ25204	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	510	40	20	20	ug/L
CJ25204	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	200	5	5	ug/L
CJ25204	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	4900	100	5	5	ug/L
CJ25204	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	110	40	70	70	ug/L
CJ25204	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	0.6	0.6	ug/L
CJ25204	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	20	4	4	ug/L
CJ25204	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	3	3	ug/L
CJ25204	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	59	40	2	2	ug/L
CJ25204	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	8000	100	5	5	ug/L
CJ25204	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	10	10	ug/L
CJ25204	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	510	40	70	70	ug/L
CJ25204	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	0.02	0.02	ug/L
CJ25204	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	32	20	7	7	ug/L
CJ25204	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	8000	100	5	5	ug/L
CJ25204	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	59	40	2	2	ug/L
CJ25204	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	6	6	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25204	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	4900	100	50	50	ug/L
CJ25204	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	9	9	ug/L
CJ25204	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	510	40	20	20	ug/L
CJ25204	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CJ25204	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	7	7	ug/L
CJ25204	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	10	10	ug/L
CJ25204	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	5	5	ug/L
CJ25204	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	3	3	ug/L
CJ25204	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	8000	100	5000	5000	ug/L
CJ25204	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	41	0.20	0.3	0.3	ug/l
CJ25204	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	41	0.20	0.3	0.3	ug/l
CJ25204	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	41	0.20	0.3	0.3	ug/l
CJ25204	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	4000	0.3	0.3	ug/L
CJ25205	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	38	38	ug/L
CJ25205	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.00033	0.00033	ug/L
CJ25205	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.00075	0.00075	ug/L
CJ25205	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.0075	0.0075	ug/L
CJ25205	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	8.3	8.3	ug/L
CJ25205	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.47	0.47	ug/L
CJ25205	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	510	40	20	20	ug/L
CJ25205	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	3	3	ug/L
CJ25205	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	7	7	ug/L
CJ25205	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	7	7	ug/L
CJ25205	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	4	4	ug/L
CJ25205	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	38	38	ug/L
CJ25205	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.47	0.47	ug/L
CJ25205	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	3	3	ug/L
CJ25205	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	89	40	70	70	ug/L
CJ25205	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	5	5	ug/L
CJ25205	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	64	40	2	2	ug/L
CJ25205	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5000	100	5	5	ug/L
CJ25205	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.6	0.6	ug/L
CJ25205	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6900	100	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25205	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	3	3	ug/L
CJ25205	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6900	100	5	5	ug/L
CJ25205	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	4	4	ug/L
CJ25205	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	7	7	ug/L
CJ25205	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.5	0.5	ug/L
CJ25205	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	89	40	70	70	ug/L
CJ25205	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	510	40	20	20	ug/L
CJ25205	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5000	100	5	5	ug/L
CJ25205	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.5	0.5	ug/L
CJ25205	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	5	5	ug/L
CJ25205	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.6	0.6	ug/L
CJ25205	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	64	40	2	2	ug/L
CJ25205	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.02	0.02	ug/L
CJ25205	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	20	7	7	ug/L
CJ25205	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	3	3	ug/L
CJ25205	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	510	40	20	20	ug/L
CJ25205	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	9	9	ug/L
CJ25205	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5000	100	50	50	ug/L
CJ25205	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	64	40	2	2	ug/L
CJ25205	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	7	7	ug/L
CJ25205	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	3	3	ug/L
CJ25205	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	10	10	ug/L
CJ25205	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6900	100	5	5	ug/L
CJ25205	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	6	6	ug/L
CJ25205	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	0.6	0.6	ug/L
CJ25205	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	89	40	70	70	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25205	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	5000	100	5	5	ug/L
CJ25205	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	200	5	5	ug/L
CJ25205	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6900	100	5	5	ug/L
CJ25205	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	10	10	ug/L
CJ25205	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	26	20	7	7	ug/L
CJ25205	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	20	4	4	ug/L
CJ25205	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	510	40	70	70	ug/L
CJ25205	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	3	3	ug/L
CJ25205	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	0.02	0.02	ug/L
CJ25205	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	64	40	2	2	ug/L
CJ25205	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	5	5	ug/L
CJ25205	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6900	100	5	5	ug/L
CJ25205	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	64	40	2	2	ug/L
CJ25205	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	3	3	ug/L
CJ25205	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	6	6	ug/L
CJ25205	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	10	10	ug/L
CJ25205	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	5000	100	50	50	ug/L
CJ25205	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	510	40	20	20	ug/L
CJ25205	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	9	9	ug/L
CJ25205	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CJ25205	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	7	7	ug/L
CJ25205	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	6900	100	5000	5000	ug/L
CJ25205	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	38	0.20	0.3	0.3	ug/l
CJ25205	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	38	0.20	0.3	0.3	ug/l
CJ25205	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	38	0.20	0.3	0.3	ug/l
CJ25205	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	4000	0.3	0.3	ug/L
CJ25205	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.894	0.001	0.43	0.43	mg/L
CJ25205	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.872	0.001	0.43	0.43	mg/L
CJ25206	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ25206	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ25206	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ25206	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25206	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25206	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1100	20	20	20	ug/L
CJ25206	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25206	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25206	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25206	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25206	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ25206	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25206	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3100	200	5	5	ug/L
CJ25206	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6800	200	5	5	ug/L
CJ25206	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25206	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ25206	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	110	20	70	70	ug/L
CJ25206	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	210	20	2	2	ug/L
CJ25206	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25206	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ25206	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ25206	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ25206	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6800	200	5	5	ug/L
CJ25206	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25206	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ25206	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25206	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1100	20	20	20	ug/L
CJ25206	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25206	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ25206	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	210	20	2	2	ug/L
CJ25206	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ25206	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3100	200	5	5	ug/L
CJ25206	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	20	70	70	ug/L
CJ25206	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25206	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	34	20	7	7	ug/L
CJ25206	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25206	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ25206	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6800	200	5	5	ug/L
CJ25206	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3100	200	50	50	ug/L
CJ25206	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1100	20	20	20	ug/L
CJ25206	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ25206	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	210	20	2	2	ug/L
CJ25206	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ25206	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ25206	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ25206	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ25206	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3100	200	5	5	ug/L
CJ25206	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ25206	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ25206	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ25206	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	34	20	7	7	ug/L
CJ25206	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ25206	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6800	200	5	5	ug/L
CJ25206	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	210	20	2	2	ug/L
CJ25206	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1100	20	70	70	ug/L
CJ25206	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	110	20	70	70	ug/L
CJ25206	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6800	200	5	5	ug/L
CJ25206	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	210	20	2	2	ug/L
CJ25206	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ25206	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25206	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ25206	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ25206	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3100	200	50	50	ug/L
CJ25206	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1100	20	20	20	ug/L
CJ25206	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25206	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ25206	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	6800	200	5000	5000	ug/L
CJ25206	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ25206	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ25206	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CJ25207	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ25207	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25207	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ25207	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ25207	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25207	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	280	20	20	20	ug/L
CJ25207	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25207	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ25207	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25207	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ25207	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ25207	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5200	200	5	5	ug/L
CJ25207	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ25207	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ25207	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	31	20	2	2	ug/L
CJ25207	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ25207	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ25207	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	3700	200	5	5	ug/L
CJ25207	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ25207	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	82	20	70	70	ug/L
CJ25207	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25207	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	31	20	2	2	ug/L
CJ25207	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25207	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ25207	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	280	20	20	20	ug/L
CJ25207	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5200	200	5	5	ug/L
CJ25207	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3700	200	5	5	ug/L
CJ25207	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ25207	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25207	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ25207	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ25207	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ25207	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	82	20	70	70	ug/L
CJ25207	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	29	20	7	7	ug/L
CJ25207	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ25207	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	280	20	20	20	ug/L
CJ25207	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3700	200	50	50	ug/L
CJ25207	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ25207	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	31	20	2	2	ug/L
CJ25207	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5200	200	5	5	ug/L
CJ25207	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ25207	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ25207	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ25207	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	29	20	7	7	ug/L
CJ25207	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	31	20	2	2	ug/L
CJ25207	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ25207	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ25207	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5200	200	5	5	ug/L
CJ25207	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	82	20	70	70	ug/L

Friday, September 24, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ25187 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ25207	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3700	200	5	5	ug/L
CJ25207	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ25207	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ25207	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ25207	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	280	20	70	70	ug/L
CJ25207	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	31	20	2	2	ug/L
CJ25207	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ25207	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5200	200	5	5	ug/L
CJ25207	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ25207	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ25207	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ25207	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	280	20	20	20	ug/L
CJ25207	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3700	200	50	50	ug/L
CJ25207	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ25207	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ25207	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	5200	200	5000	5000	ug/L
CJ25207	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ25207	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ25207	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ25187, CJ25188, CJ25189, CJ25190, CJ25191, CJ25192, CJ25193, CJ25194, CJ25195, CJ25196, CJ25197, CJ25198, CJ25199, CJ25200, CJ25201, CJ25202, CJ25203, CJ25204, CJ25205, CJ25206, CJ25207

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Friday, September 24, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

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Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ25187

SDG Comments

Metals Analysis: CJ25187, CJ25188, CJ25189, CJ25193, CJ25195, CJ25201, CJ25205
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.
1,4-Dioxane does not meet the GWP. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 591606 (Samples: CJ25189, CJ25201): -----

The LCS/LCSD RPD exceeds the method criteria for one or more surrogates. The RPD for the target analytes is acceptable. No significant variability is suspected. (% 1-chlorooctadecane (aliphatic), % o-terphenyl (aromatic))

Instrument:

AU-FID3 09/15/21-1 Adam Werner, Chemist 09/15/21

CJ25189 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/13/21-1 Adam Werner, Chemist 09/13/21

CJ25201 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/15/21-1 Adam Werner, Chemist 09/15/21

CJ25189 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 591606 (CJ22042)

CJ25189, CJ25201

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: % 1-chlorooctadecane (aliphatic)(30.7%), % o-terphenyl (aromatic)(33.1%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for

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MCP Certification Report

September 24, 2021

SDG I.D.: GCJ25187

EPH Narration

obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/15/21-3 Greg Danielewski, Chemist 09/15/21

CJ25189 , CJ25193 , CJ25195 , CJ25201 , CJ25205

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 591798 (CJ25108)

CJ25189, CJ25193, CJ25195, CJ25201, CJ25205

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 592073 (CJ25193)

CJ25189, CJ25193, CJ25195, CJ25201, CJ25205

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/09/21-1 Brian Sheriden, Greg Danielewski, Chemist 09/09/21

CJ25189 , CJ25193 , CJ25195 , CJ25201 , CJ25205

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/10/21-1 Brian Sheriden, Greg Danielewski, Chemist 09/10/21

CJ25189 , CJ25193 , CJ25201 , CJ25205

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 591413 (CJ25271)

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NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ25187

IC

CJ25189, CJ25193, CJ25195, CJ25201, CJ25205

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 591861 (CJ25780)

CJ25189, CJ25193, CJ25201, CJ25205

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/13/21 08:30 Emily Kolominskaya, Tina Hall, Chemist 09/13/21

CJ25187, CJ25188, CJ25189, CJ25193, CJ25195, CJ25201, CJ25205

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS 09/14/21 08:16 Tina Hall, Chemist 09/14/21

CJ25189

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/11/21 08:02 Emily Kolominskaya, Chemist 09/11/21

CJ25187, CJ25188, CJ25189, CJ25193, CJ25195, CJ25201, CJ25205

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/13/21 07:55 Emily Kolominskaya, Chemist 09/13/21

CJ25189

The initial calibration met criteria.

Environmental Laboratories, Inc.
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NY # 11301

Certification Report

September 24, 2021

SDG I.D.: GCJ25187

ICP Metals Narration

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 591320 (CJ25188)

CJ25187, CJ25188, CJ25189, CJ25193, CJ25195, CJ25201, CJ25205

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 591568 (CJ25105)

CJ25187, CJ25188, CJ25189

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 591581 (CJ25193)

CJ25193, CJ25195, CJ25201, CJ25205

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/13/21-1 Adam Werner, Chemist 09/13/21

CJ25191 (1X), CJ25192 (1X), CJ25194 (1X), CJ25201 (1X), CJ25204 (1X), CJ25205 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0913_05-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.

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MCP Certification Report

September 24, 2021

SDG I.D.: GCJ25187

SVOA-Dioxane

The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 591391 (CJ21030)

CJ25191, CJ25192, CJ25194, CJ25201, CJ25204, CJ25205

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM25 09/10/21-1 Wes Bryon, Chemist 09/10/21

CJ25189 (1X), CJ25201 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM25/25_BNSIM18_0812):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM25/0910_03-25_BNSIM18_0812) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Indeno(1,2,3-cd)pyrene 34%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 591278 (CJ24734)

CJ25189, CJ25201

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

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MCP Certification Report

September 24, 2021

SDG I.D.: GCJ25187

SVOASIM Narration

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 592876 (Samples: CJ25189, CJ25190, CJ25191, CJ25192, CJ25193, CJ25194, CJ25195, CJ25197, CJ25199): -----

The LCS recovery is below the lower range. The LCSD is acceptable. No significant bias is suspected. (Trichlorotrifluoroethane)

QC Batch 593031 (Samples: CJ25193, CJ25194, CJ25201, CJ25202, CJ25203, CJ25204, CJ25205, CJ25206, CJ25207): -----

The LCS recovery is above the upper range, therefore a slight high bias is possible. (1,4-dioxane)

The LCS/LCSD RPD exceeds the method criteria for one analyte, therefore there may be variability in the reported result. (1,4-dioxane)

Instrument:

CHEM23 09/17/21-2 Michael Hahn, Chemist 09/17/21

CJ25189 (1X), CJ25190 (20X), CJ25191 (50X), CJ25192 (20X), CJ25193 (20X), CJ25194 (50X), CJ25195 (1X), CJ25197 (1X), CJ25199 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_091621):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 33% (20%), Carbon Disulfide 27% (20%), Isopropylbenzene 21% (20%), Naphthalene 31% (20%), p-Isopropyltoluene 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.194 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0917_34-VOA23_091621) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 2,2-Dichloropropane 26%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.182 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/20/21-4 Michael Hahn, Chemist 09/20/21

CJ25191 (200X), CJ25192 (100X), CJ25196 (1X), CJ25198 (1X), CJ25200 (1X), CJ25201 (20X), CJ25202 (20X), CJ25203 (20X), CJ25204 (100X), CJ25205 (100X), CJ25206 (20X), CJ25207 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_092021):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,1-Dichloroethene 21% (20%), Dichlorodifluoromethane 27% (20%), Trichlorofluoromethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.072 (0.1), Tetrachloroethene 0.149 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0920_21-VOA23_092021) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

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September 24, 2021

SDG I.D.: GCJ25187

VOA Narration

100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.067 (0.1), Tetrachloroethene 0.161 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/21/21-3 Michael Hahn, Chemist 09/21/21

CJ25193 (1X, 5X), CJ25194 (5X), CJ25201 (10X), CJ25202 (200X), CJ25203 (200X), CJ25204 (40X), CJ25205 (40X), CJ25206 (200X), CJ25207 (200X)

Initial Calibration Evaluation (CHEM23/VOA23_092121):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.072 (0.1), Tetrachloroethene 0.161 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0921_12-VOA23_092121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.066 (0.1), Tetrachloroethene 0.156 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 592875 (CJ25200) CHEM23 9/20/2021-4

CJ25191(200X), CJ25192(100X), CJ25196(1X), CJ25198(1X), CJ25200(1X), CJ25201(20X), CJ25202(20X), CJ25203(20X), CJ25204(100X), CJ25205(100X), CJ25206(20X), CJ25207(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 592876 (CJ22051) CHEM23 9/17/2021-2

CJ25189(1X), CJ25190(20X), CJ25191(50X), CJ25192(20X), CJ25193(20X), CJ25194(50X), CJ25195(1X), CJ25197(1X), CJ25199(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Trichlorotrifluoroethane(68%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593031 (CJ25193) CHEM23 9/21/2021-3

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NY # 11301

MCP Certification Report

September 24, 2021

SDG I.D.: GCJ25187

VOA Narration

CJ25193(5X), CJ25194(5X), CJ25201(10X), CJ25202(200X), CJ25203(200X), CJ25204(40X), CJ25205(40X), CJ25206(200X), CJ25207(200X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,4-dioxane(164%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: 1,4-dioxane(31.8%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/13/21-1 Raman Makol, Chemist 09/13/21

CJ25189 (1X), CJ25201 (1X)

Initial Calibration Evaluation (PIDFID/VPH_090221_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 591832 (CJ25189)

CJ25189(1X), CJ25201(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 1.4° C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/9/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
25187	21A-GZA6-090821-1	GW	9/8/21	MM0				2								X					
25188	21A-GZA10-090821-1	GW	9/8/21	1450				2								X					
25189	21A-AE100R1-090921-1	GW	9/9/21	1125	5	4		4				X		X	X		X	X	X	X	
25190	21A-AE100R2-090921-1	GW	9/9/21	1340	3							X									
25191	21A-AE100R3-090921-1	GW	9/9/21	1345	3	1						X	X								
25192	21A-AE100R4-090921-1	GW	9/9/21	1350	3	1						X	X								
25193	21A-AE100R5-090921-1	GW	9/9/21	1130	3	1		4				X				X	X	X	X	X	
25194	21A-AE100R6-090921-1	GW	9/9/21	1355	3	1						X	X								
25195	21A-AE108R1-090921-1	GW	9/9/21	1205	3	1		4				X				X	X	X	X	X	
25196	21A-AE108R2-090921-1	GW	9/9/21	1200	3							X									
25197	21A-AE108R3-090921-1	GW	9/9/21	1155	3							X									
25198	21A-AE108R4-090921-1	GW	9/9/21	1150	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-9-21	14:55
[signature]	[signature]	9/9/21	17:10

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

Temp 4.4 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature
Client Sample - Information - Identification Date: 9/9/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
25199	21A-AE108R5-090921-1	GW	9/9/21	1145	3							X									
25200	21A-TB01-090921-1	GW	9/9/21	0800	2							X									
25201	21A-AE103R1-090921-1	GW	9/9/21	1117	5	5		4				X	X	X	X	X	X	X	X	X	
25202	21A-AE103R2-090921-1	GW	9/9/21	~~1120~~ 1115	3							X									
25203	21A-AE103R3-090921-1	GW	9/9/21	1120	3							X									
25204	21A-AE103R4-090921-1	GW	9/9/21	1125	3	1						X	X								
25205	21A-AE103R5-090921-1	GW	9/9/21	1130	3	2		4				X	X			X	X	X	X	X	
25206	21A-AE103R6-090921-1	GW	9/9/21	1135	3							X									
25207	21A-AE103R7-090921-1	GW	9/9/21	1140	3							X									

Relinquished by:	Accepted by:	Date:	Time:
		9-9-21	14:55
		9/9/21	17:10

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
X PDF
X AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Thursday, September 23, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: LOCKHEED WILMINGTON MA 06552044.25
SDG ID: GCJ26085
Sample ID#s: CJ26085 - CJ26098

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

September 23, 2021

SDG I.D.: GCJ26085

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

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Sample Id Cross Reference

September 23, 2021

SDG I.D.: GCJ26085

Project ID: LOCKHEED WILMINGTON MA 06552044.25

Client Id	Lab Id	Matrix
21A-AE29R1-091021-1	CJ26085	GROUND WATER
21A-AE29R2-091021-1	CJ26086	GROUND WATER
21A-AE29R3-091021-1	CJ26087	GROUND WATER
21A-AE29R4-091021-1	CJ26088	GROUND WATER
21A-AE29R5-091021-1	CJ26089	GROUND WATER
21A-TRC201R-091021-1	CJ26090	GROUND WATER
21A-AE101R1-091021-1	CJ26091	GROUND WATER
21A-AE101R2-091021-1	CJ26092	GROUND WATER
21A-AE101R3-091021-1	CJ26093	GROUND WATER
21A-TB01-091021-1	CJ26094	GROUND WATER
21A-AE2R-091021-1	CJ26095	GROUND WATER
21A-AE101R4-091021-1	CJ26096	GROUND WATER
21A-AE2I-091021-1	CJ26097	GROUND WATER
21A-AE112D-091021-1	CJ26098	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	9:10
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26085

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE29R1-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26085

Client ID: 21A-AE29R1-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	1.4	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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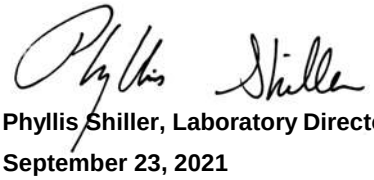

Phyllis Shiller, Laboratory Director
September 23, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	9:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26086

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE29R2-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	1.5	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26086

Client ID: 21A-AE29R2-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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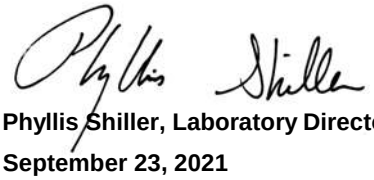


Phyllis Shiller, Laboratory Director

September 23, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	9:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26087

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE29R3-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	2.3	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26087

Client ID: 21A-AE29R3-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	16	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	2.0	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	3.4	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26087

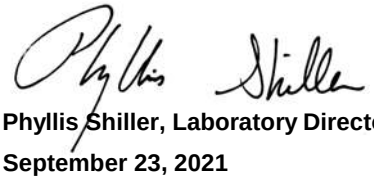
Client ID: 21A-AE29R3-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 23, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	10:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26088

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE29R4-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	18	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	3.1	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26088

Client ID: 21A-AE29R4-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	98	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	2.6	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	3.3	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26088

Client ID: 21A-AE29R4-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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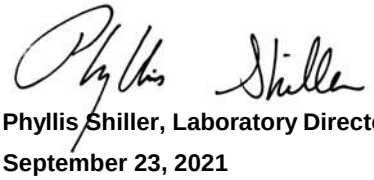

Phyllis Shiller, Laboratory Director

September 23, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	10:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26089

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE29R5-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	29	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	7.0	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26089

Client ID: 21A-AE29R5-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	140	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	5.2	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	52	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	98		%	20	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/21/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	98		%	20	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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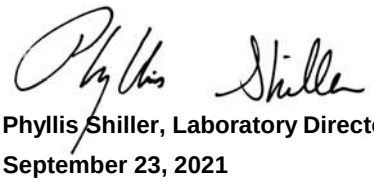

Phyllis Shiller, Laboratory Director
September 23, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	9:55
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26090

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-TRC201R-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	74	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	19	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26090

Client ID: 21A-TRC201R-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	180	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	31	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	44	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	2.4	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/21/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/21/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	98		%	20	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 23, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	9:40
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26091

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE101R1-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	2.0	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26091

Client ID: 21A-AE101R1-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	33	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	2.2	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	130	5.0	ug/L	5	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	41	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	8.5	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/22/21	MH	70 - 130 %
% Dibromofluoromethane	91		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/22/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (5x)	100		%	5	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (5x)	98		%	5	09/21/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (5x)	100		%	5	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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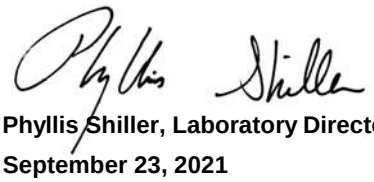


Phyllis Shiller, Laboratory Director
September 23, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	10:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26092

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE101R2-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	7.1	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26092

Client ID: 21A-AE101R2-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	74	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	33	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	91	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	13	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	101		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26092

Client ID: 21A-AE101R2-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	6.5	0.20	ug/l	1	09/15/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	76		%	1	09/15/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/14/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

September 23, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	11:05
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26093

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE101R3-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	3.2	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26093

Client ID: 21A-AE101R3-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	26	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	4.3	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	12	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	9.3	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	102		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26093
Client ID: 21A-AE101R3-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	2.7	0.20	ug/l	1	09/15/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	71		%	1	09/15/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/14/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 23, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26094

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-TB01-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26094

Client ID: 21A-TB01-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26094

Client ID: 21A-TB01-091021-1

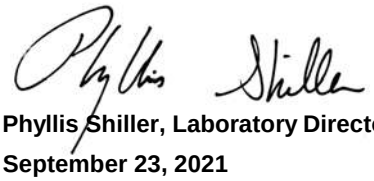
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 23, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	11:40
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26095

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE2R-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26095

Client ID: 21A-AE2R-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/21/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrachloroethene	4.4	1.0	ug/L	1	09/21/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/21/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/21/21	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	09/21/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26095

Client ID: 21A-AE2R-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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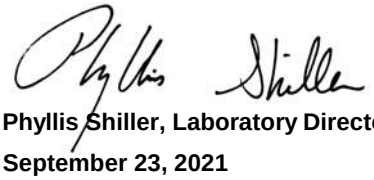

Phyllis Shiller, Laboratory Director

September 23, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	13:20
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26096

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE101R4-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	11	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	1.8	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26096

Client ID: 21A-AE101R4-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	380	20	ug/L	20	09/21/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	31	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	2.6	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	160	20	ug/L	20	09/21/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	26	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/22/21	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/21/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	101		%	20	09/21/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	09/21/21	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26096
Client ID: 21A-AE101R4-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	99		%	20	09/21/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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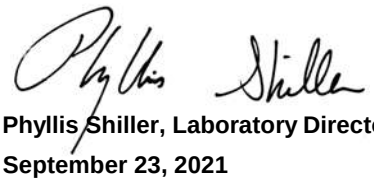

Phyllis Shiller, Laboratory Director
September 23, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	13:35
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26097

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE2I-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26097

Client ID: 21A-AE2I-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	4.5	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/22/21	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26097

Client ID: 21A-AE2I-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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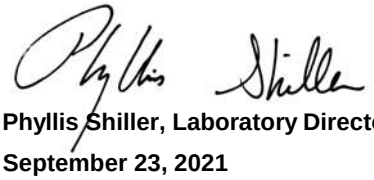

Phyllis Shiller, Laboratory Director

September 23, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/21	13:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/10/21	15:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ26085
Phoenix ID: CJ26098

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE112D-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/14/21	EK	SW6010D
Dissolved Metals Preparation	Completed				09/13/21	AG	SW3005A
Total Metals Digestion	Completed				09/14/21	AG/AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ26098

Client ID: 21A-AE112D-091021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	1.0	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/22/21	MH	70 - 130 %

Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	93		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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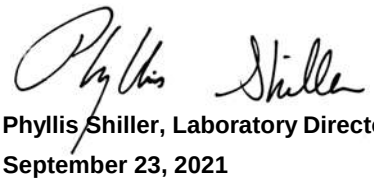

Phyllis Shiller, Laboratory Director
September 23, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 23, 2021

QA/QC Data

SDG I.D.: GCJ26085

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 591857 (mg/L), QC Sample No: CJ26648 (CJ26098)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	100	99.5	0.5	102			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 591711 (mg/L), QC Sample No: CJ27037 (CJ26098)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	87.4	89.1	1.9	91.6			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

September 23, 2021

QA/QC Data

SDG I.D.: GCJ26085

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 591810 (ug/l), QC Sample No: CJ22105 (CJ26092, CJ26093)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	98	97	1.0	100			70 - 130	20	
% 1,4-dioxane-d8	78	%	79	78	1.3	74			70 - 130	20	
QA/QC Batch 593031 (ug/L), QC Sample No: CJ25193 (CJ26088, CJ26089, CJ26090, CJ26091 (5X) , CJ26092, CJ26093, CJ26094, CJ26095, CJ26096 (20X))											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	106	109	2.8				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	105	107	1.9				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	105	110	4.7				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	104	106	1.9				70 - 130	20	
1,1-Dichloroethane	ND	1.0	103	105	1.9				70 - 130	20	
1,1-Dichloroethene	ND	1.0	102	106	3.8				70 - 130	20	
1,1-Dichloropropene	ND	1.0	108	111	2.7				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	113	110	2.7				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	104	111	6.5				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	112	108	3.6				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	105	108	2.8				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	114	112	1.8				70 - 130	20	
1,2-Dibromoethane	ND	1.0	105	109	3.7				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	104	105	1.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	104	106	1.9				70 - 130	20	
1,2-Dichloropropane	ND	1.0	102	104	1.9				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	107	110	2.8				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	103	105	1.9				70 - 130	20	
1,3-Dichloropropane	ND	1.0	105	108	2.8				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	104	104	0.0				70 - 130	20	
1,4-dioxane	ND	100	164	119	31.8				40 - 160	20	I,r
2,2-Dichloropropane	ND	1.0	104	106	1.9				70 - 130	20	
2-Chlorotoluene	ND	1.0	105	108	2.8				70 - 130	20	
2-Hexanone	ND	5.0	102	105	2.9				40 - 160	20	
4-Chlorotoluene	ND	1.0	105	108	2.8				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	101	107	5.8				40 - 160	20	
Acetone	ND	5.0	100	100	0.0				40 - 160	20	
Benzene	ND	0.70	105	107	1.9				70 - 130	20	
Bromobenzene	ND	1.0	105	108	2.8				70 - 130	20	
Bromochloromethane	ND	1.0	105	107	1.9				70 - 130	20	
Bromodichloromethane	ND	0.50	106	109	2.8				70 - 130	20	
Bromoform	ND	1.0	108	111	2.7				70 - 130	20	
Bromomethane	ND	1.0	102	102	0.0				40 - 160	20	
Carbon Disulfide	ND	1.0	98	100	2.0				70 - 130	20	
Carbon tetrachloride	ND	1.0	104	126	19.1				70 - 130	20	
Chlorobenzene	ND	1.0	103	105	1.9				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ26085

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloroethane	ND	1.0	96	99	3.1				70 - 130	20
Chloroform	ND	1.0	103	106	2.9				70 - 130	20
Chloromethane	ND	1.0	97	98	1.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	104	106	1.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	106	107	0.9				70 - 130	20
Dibromochloromethane	ND	0.50	109	110	0.9				70 - 130	20
Dibromomethane	ND	1.0	107	110	2.8				70 - 130	20
Dichlorodifluoromethane	ND	1.0	111	113	1.8				40 - 160	20
Di-isopropyl ether	ND	1.0	102	105	2.9				70 - 130	20
Ethyl ether	ND	1.0	94	97	3.1				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	103	106	2.9				70 - 130	20
Ethylbenzene	ND	1.0	107	109	1.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	111	108	2.7				70 - 130	20
Isopropylbenzene	ND	1.0	109	112	2.7				70 - 130	20
m&p-Xylene	ND	1.0	106	108	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	101	106	4.8				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	107	3.8				70 - 130	20
Methylene chloride	ND	1.0	100	102	2.0				70 - 130	20
Naphthalene	ND	1.0	114	113	0.9				70 - 130	20
n-Butylbenzene	ND	1.0	111	110	0.9				70 - 130	20
n-Propylbenzene	ND	1.0	108	111	2.7				70 - 130	20
o-Xylene	ND	1.0	104	106	1.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	111	112	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	109	113	3.6				70 - 130	20
Styrene	ND	1.0	108	110	1.8				70 - 130	20
tert-amyl methyl ether	ND	1.0	103	107	3.8				70 - 130	20
tert-Butylbenzene	ND	1.0	108	111	2.7				70 - 130	20
Tetrachloroethene	ND	1.0	105	107	1.9				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	94	99	5.2				70 - 130	20
Toluene	ND	1.0	106	108	1.9				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	99	103	4.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	108	110	1.8				70 - 130	20
Trichloroethene	ND	1.0	104	109	4.7				70 - 130	20
Trichlorofluoromethane	ND	1.0	107	112	4.6				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	98	101	3.0				70 - 130	20
Vinyl chloride	ND	1.0	108	109	0.9				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	100	101	1.0				70 - 130	20
% Bromofluorobenzene	99	%	100	99	1.0				70 - 130	20
% Dibromofluoromethane	96	%	101	99	2.0				70 - 130	20
% Toluene-d8	98	%	99	100	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 592875 (ug/L), QC Sample No: CJ25200 (CJ26085, CJ26086, CJ26087, CJ26089 (20X) , CJ26090 (20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	102	103	1.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	107	107	0.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	95	96	1.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	92	93	1.1				70 - 130	20
1,1-Dichloroethane	ND	1.0	102	102	0.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ26085

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1-Dichloroethene	ND	1.0	113	114	0.9				70 - 130	20
1,1-Dichloropropene	ND	1.0	112	113	0.9				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	103	107	3.8				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	98	99	1.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	102	107	4.8				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	107	109	1.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	95	97	2.1				70 - 130	20
1,2-Dibromoethane	ND	1.0	96	97	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	100	102	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	96	98	2.1				70 - 130	20
1,2-Dichloropropane	ND	1.0	98	97	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	110	112	1.8				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	102	105	2.9				70 - 130	20
1,3-Dichloropropane	ND	1.0	98	100	2.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	102	106	3.8				70 - 130	20
1,4-dioxane	ND	100	95	96	1.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	101	100	1.0				70 - 130	20
2-Chlorotoluene	ND	1.0	107	108	0.9				70 - 130	20
2-Hexanone	ND	5.0	88	90	2.2				40 - 160	20
4-Chlorotoluene	ND	1.0	105	107	1.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	90	91	1.1				40 - 160	20
Acetone	ND	5.0	78	82	5.0				40 - 160	20
Benzene	ND	0.70	105	105	0.0				70 - 130	20
Bromobenzene	ND	1.0	103	104	1.0				70 - 130	20
Bromochloromethane	ND	1.0	94	94	0.0				70 - 130	20
Bromodichloromethane	ND	0.50	96	98	2.1				70 - 130	20
Bromoform	ND	1.0	93	95	2.1				70 - 130	20
Bromomethane	ND	1.0	114	114	0.0				40 - 160	20
Carbon Disulfide	ND	1.0	104	106	1.9				70 - 130	20
Carbon tetrachloride	ND	1.0	104	106	1.9				70 - 130	20
Chlorobenzene	ND	1.0	103	105	1.9				70 - 130	20
Chloroethane	ND	1.0	114	116	1.7				70 - 130	20
Chloroform	ND	1.0	98	98	0.0				70 - 130	20
Chloromethane	ND	1.0	106	104	1.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	99	2.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	96	96	0.0				70 - 130	20
Dibromochloromethane	ND	0.50	97	98	1.0				70 - 130	20
Dibromomethane	ND	1.0	92	93	1.1				70 - 130	20
Dichlorodifluoromethane	ND	1.0	135	138	2.2				40 - 160	20
Di-isopropyl ether	ND	1.0	96	96	0.0				70 - 130	20
Ethyl ether	ND	1.0	91	90	1.1				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	94	94	0.0				70 - 130	20
Ethylbenzene	ND	1.0	111	111	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	106	113	6.4				70 - 130	20
Isopropylbenzene	ND	1.0	112	115	2.6				70 - 130	20
m&p-Xylene	ND	1.0	109	111	1.8				70 - 130	20
Methyl ethyl ketone	ND	5.0	84	85	1.2				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	93	95	2.1				70 - 130	20
Methylene chloride	ND	1.0	96	95	1.0				70 - 130	20
Naphthalene	ND	1.0	101	104	2.9				70 - 130	20
n-Butylbenzene	ND	1.0	112	114	1.8				70 - 130	20
n-Propylbenzene	ND	1.0	113	114	0.9				70 - 130	20
o-Xylene	ND	1.0	103	104	1.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
p-Isopropyltoluene	ND	1.0	110	113	2.7				70 - 130	20
sec-Butylbenzene	ND	1.0	113	117	3.5				70 - 130	20
Styrene	ND	1.0	104	104	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	92	94	2.2				70 - 130	20
tert-Butylbenzene	ND	1.0	112	115	2.6				70 - 130	20
Tetrachloroethene	ND	1.0	109	111	1.8				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	88	89	1.1				70 - 130	20
Toluene	ND	1.0	105	104	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	103	104	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	93	95	2.1				70 - 130	20
Trichloroethene	ND	1.0	106	106	0.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	122	124	1.6				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	100	104	3.9				70 - 130	20
Vinyl chloride	ND	1.0	117	117	0.0				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	98	%	98	99	1.0				70 - 130	20
% Dibromofluoromethane	96	%	95	93	2.1				70 - 130	20
% Toluene-d8	98	%	98	98	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593226 (ug/L), QC Sample No: CJ27035 (CJ26091, CJ26096, CJ26097, CJ26098)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	107	107	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	109	106	2.8				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	109	112	2.7				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	103	104	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	106	104	1.9				70 - 130	20
1,1-Dichloroethene	ND	1.0	107	102	4.8				70 - 130	20
1,1-Dichloropropene	ND	1.0	116	112	3.5				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	106	107	0.9				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	113	116	2.6				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	105	105	0.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	108	107	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	112	120	6.9				70 - 130	20
1,2-Dibromoethane	ND	1.0	106	108	1.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	102	103	1.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	104	105	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	104	102	1.9				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	110	109	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	104	102	1.9				70 - 130	20
1,3-Dichloropropane	ND	1.0	104	108	3.8				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	102	101	1.0				70 - 130	20
1,4-dioxane	ND	100	103	115	11.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	113	109	3.6				70 - 130	20
2-Chlorotoluene	ND	1.0	109	107	1.9				70 - 130	20
2-Hexanone	ND	5.0	107	112	4.6				40 - 160	20
4-Chlorotoluene	ND	1.0	108	106	1.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	107	109	1.9				40 - 160	20
Acetone	ND	5.0	91	105	14.3				40 - 160	20

QA/QC Data

SDG I.D.: GCJ26085

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzene	ND	0.70	107	105	1.9				70 - 130	20
Bromobenzene	ND	1.0	105	104	1.0				70 - 130	20
Bromochloromethane	ND	1.0	102	101	1.0				70 - 130	20
Bromodichloromethane	ND	0.50	107	106	0.9				70 - 130	20
Bromoform	ND	1.0	107	111	3.7				70 - 130	20
Bromomethane	ND	1.0	105	100	4.9				40 - 160	20
Carbon Disulfide	ND	1.0	101	99	2.0				70 - 130	20
Carbon tetrachloride	ND	1.0	111	124	11.1				70 - 130	20
Chlorobenzene	ND	1.0	104	105	1.0				70 - 130	20
Chloroethane	ND	1.0	106	98	7.8				70 - 130	20
Chloroform	ND	1.0	106	102	3.8				70 - 130	20
Chloromethane	ND	1.0	104	101	2.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	104	101	2.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	106	104	1.9				70 - 130	20
Dibromochloromethane	ND	0.50	109	109	0.0				70 - 130	20
Dibromomethane	ND	1.0	107	107	0.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	127	123	3.2				40 - 160	20
Di-isopropyl ether	ND	1.0	104	102	1.9				70 - 130	20
Ethyl ether	ND	1.0	92	92	0.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	103	103	0.0				70 - 130	20
Ethylbenzene	ND	1.0	110	109	0.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	104	104	0.0				70 - 130	20
Isopropylbenzene	ND	1.0	115	112	2.6				70 - 130	20
m&p-Xylene	ND	1.0	109	108	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	107	110	2.8				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	100	103	3.0				70 - 130	20
Methylene chloride	ND	1.0	94	96	2.1				70 - 130	20
Naphthalene	ND	1.0	109	111	1.8				70 - 130	20
n-Butylbenzene	ND	1.0	116	114	1.7				70 - 130	20
n-Propylbenzene	ND	1.0	112	112	0.0				70 - 130	20
o-Xylene	ND	1.0	105	103	1.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	113	112	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	114	114	0.0				70 - 130	20
Styrene	ND	1.0	107	107	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	103	104	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	112	111	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	110	106	3.7				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	98	102	4.0				70 - 130	20
Toluene	ND	1.0	107	107	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	99	98	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	108	108	0.0				70 - 130	20
Trichloroethene	ND	1.0	108	107	0.9				70 - 130	20
Trichlorofluoromethane	ND	1.0	117	116	0.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	103	102	1.0				70 - 130	20
Vinyl chloride	ND	1.0	116	112	3.5				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	98	%	98	99	1.0				70 - 130	20
% Dibromofluoromethane	94	%	97	95	2.1				70 - 130	20
% Toluene-d8	100	%	99	101	2.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ26085

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
September 23, 2021

Thursday, September 23, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ26085 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ26085	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26085	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26085	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26085	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26085	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26085	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26085	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26085	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26086	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26086	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26086	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26086	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26086	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26086	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26086	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26086	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26087	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26087	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26087	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26087	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26087	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26087	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26087	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26087	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26088	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26088	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26088	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26088	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	98	1.0	20	20	ug/L
CJ26088	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	98	1.0	20	20	ug/L
CJ26088	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26088	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	98	1.0	20	20	ug/L
CJ26088	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	98	1.0	70	70	ug/L
CJ26088	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26088	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	98	1.0	20	20	ug/L
CJ26088	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26088	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26088	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26089	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	140	20	20	20	ug/L
CJ26089	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L

Thursday, September 23, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ26085 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ26089	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26089	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26089	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	52	1.0	5	5	ug/L
CJ26089	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	52	1.0	5	5	ug/L
CJ26089	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	20	20	20	ug/L
CJ26089	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26089	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	20	20	20	ug/L
CJ26089	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	52	1.0	5	5	ug/L
CJ26089	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	20	70	70	ug/L
CJ26089	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	52	1.0	5	5	ug/L
CJ26089	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26089	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	20	20	20	ug/L
CJ26089	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	52	1.0	5	5	ug/L
CJ26089	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26089	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26089	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26090	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26090	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	180	20	20	20	ug/L
CJ26090	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.4	1.0	2	2	ug/L
CJ26090	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	44	1.0	5	5	ug/L
CJ26090	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26090	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26090	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	74	1.0	70	70	ug/L
CJ26090	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	180	20	20	20	ug/L
CJ26090	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.4	1.0	2	2	ug/L
CJ26090	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	19	1.0	7	7	ug/L
CJ26090	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	74	1.0	70	70	ug/L
CJ26090	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	44	1.0	5	5	ug/L
CJ26090	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26090	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.4	1.0	2	2	ug/L
CJ26090	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	44	1.0	5	5	ug/L
CJ26090	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	180	20	20	20	ug/L
CJ26090	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	44	1.0	5	5	ug/L
CJ26090	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26090	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	19	1.0	7	7	ug/L
CJ26090	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	74	1.0	70	70	ug/L
CJ26090	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.4	1.0	2	2	ug/L
CJ26090	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	180	20	70	70	ug/L
CJ26090	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	180	20	20	20	ug/L
CJ26090	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	44	1.0	5	5	ug/L
CJ26090	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.4	1.0	2	2	ug/L

Thursday, September 23, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ26085 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ26090	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26090	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26090	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26091	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26091	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26091	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26091	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	41	1.0	5	5	ug/L
CJ26091	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	33	1.0	20	20	ug/L
CJ26091	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	8.5	1.0	2	2	ug/L
CJ26091	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	130	5.0	5	5	ug/L
CJ26091	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	1.0	20	20	ug/L
CJ26091	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	41	1.0	5	5	ug/L
CJ26091	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	5.0	5	5	ug/L
CJ26091	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.5	1.0	2	2	ug/L
CJ26091	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26091	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	41	1.0	5	5	ug/L
CJ26091	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	5.0	50	50	ug/L
CJ26091	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	8.5	1.0	2	2	ug/L
CJ26091	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	1.0	20	20	ug/L
CJ26091	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	8.5	1.0	2	2	ug/L
CJ26091	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	41	1.0	5	5	ug/L
CJ26091	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	130	5.0	5	5	ug/L
CJ26091	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26091	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	41	1.0	5	5	ug/L
CJ26091	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	33	1.0	20	20	ug/L
CJ26091	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	8.5	1.0	2	2	ug/L
CJ26091	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	130	5.0	50	50	ug/L
CJ26091	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26091	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26091	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26092	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	91	1.0	5	5	ug/L
CJ26092	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26092	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26092	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26092	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	13	1.0	2	2	ug/L
CJ26092	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	74	1.0	20	20	ug/L
CJ26092	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	33	1.0	5	5	ug/L
CJ26092	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	1.0	2	2	ug/L
CJ26092	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	91	1.0	5	5	ug/L
CJ26092	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	1.0	5	5	ug/L

Thursday, September 23, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ26085 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ26092	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26092	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	74	1.0	20	20	ug/L
CJ26092	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	1.0	2	2	ug/L
CJ26092	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	74	1.0	20	20	ug/L
CJ26092	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	91	1.0	5	5	ug/L
CJ26092	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	13	1.0	2	2	ug/L
CJ26092	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	33	1.0	5	5	ug/L
CJ26092	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26092	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	91	1.0	5	5	ug/L
CJ26092	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	74	1.0	70	70	ug/L
CJ26092	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	74	1.0	20	20	ug/L
CJ26092	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	13	1.0	2	2	ug/L
CJ26092	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	91	1.0	5	5	ug/L
CJ26092	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	6.5	0.20	0.3	0.3	ug/l
CJ26092	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.5	0.20	0.3	0.3	ug/l
CJ26092	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	6.5	0.20	0.3	0.3	ug/l
CJ26092	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26093	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26093	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26093	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	26	1.0	20	20	ug/L
CJ26093	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	12	1.0	5	5	ug/L
CJ26093	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	9.3	1.0	2	2	ug/L
CJ26093	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26093	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26093	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	1.0	20	20	ug/L
CJ26093	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.3	1.0	2	2	ug/L
CJ26093	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	1.0	5	5	ug/L
CJ26093	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	12	1.0	5	5	ug/L
CJ26093	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	9.3	1.0	2	2	ug/L
CJ26093	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	26	1.0	20	20	ug/L
CJ26093	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	9.3	1.0	2	2	ug/L
CJ26093	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	1.0	5	5	ug/L
CJ26093	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26093	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	26	1.0	20	20	ug/L
CJ26093	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	9.3	1.0	2	2	ug/L
CJ26093	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	12	1.0	5	5	ug/L
CJ26093	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.7	0.20	0.3	0.3	ug/l
CJ26093	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.7	0.20	0.3	0.3	ug/l
CJ26093	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	2.7	0.20	0.3	0.3	ug/l
CJ26093	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L

Thursday, September 23, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ26085 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ26094	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26094	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26094	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26094	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26094	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26094	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26094	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26094	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26095	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26095	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26095	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26095	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26095	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26095	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26095	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26095	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26096	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	31	1.0	5	5	ug/L
CJ26096	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26096	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26096	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26096	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	26	1.0	2	2	ug/L
CJ26096	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	160	20	5	5	ug/L
CJ26096	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	380	20	20	20	ug/L
CJ26096	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	160	20	5	5	ug/L
CJ26096	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	1.0	2	2	ug/L
CJ26096	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	31	1.0	5	5	ug/L
CJ26096	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26096	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	380	20	20	20	ug/L
CJ26096	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	380	20	20	20	ug/L
CJ26096	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	160	20	5	5	ug/L
CJ26096	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	26	1.0	2	2	ug/L
CJ26096	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	380	20	70	70	ug/L
CJ26096	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	31	1.0	5	5	ug/L
CJ26096	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26096	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	160	20	5	5	ug/L
CJ26096	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	26	1.0	2	2	ug/L
CJ26096	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	380	20	20	20	ug/L
CJ26096	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	26	1.0	2	2	ug/L
CJ26096	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	160	20	5	5	ug/L
CJ26096	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L

Thursday, September 23, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ26085 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ26096	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26096	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26097	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26097	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26097	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26097	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26097	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26097	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26097	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26097	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ26098	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ26098	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ26098	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ26098	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ26098	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ26098	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ26098	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ26098	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 0655204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ26085, CJ26086, CJ26087, CJ26088, CJ26089, CJ26090, CJ26091, CJ26092, CJ26093, CJ26094, CJ26095, CJ26096, CJ26097, CJ26098

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Thursday, September 23, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 23, 2021

SDG I.D.: GCJ26085

SDG Comments

CJ26098 - The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.
1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/15/21-1 Adam Werner, Chemist 09/15/21

CJ26092 (1X), CJ26093 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0915_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 591810 (CJ22105)

CJ26092, CJ26093

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/15/21 09:07 Emily Kolominskaya, Chemist 09/15/21

CJ26098

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Certification Report

September 23, 2021

SDG I.D.: GCJ26085

ICP Metals Narration

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/14/21 08:44 Emily Kolominskaya, Chemist 09/14/21

CJ26098

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 591711 (CJ27037)

CJ26098

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 591857 (CJ26648)

CJ26098

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 593031 (Samples: CJ26088, CJ26089, CJ26090, CJ26091, CJ26092, CJ26093, CJ26094, CJ26095, CJ26096): -----

The LCS and/or the LCSD recovery is above the upper range, therefore a slight high bias is possible. (1,4-dioxane)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (1,4-dioxane)

Instrument:

CHEM23 09/20/21-4 Michael Hahn, Chemist 09/20/21

CJ26085 (1X), CJ26086 (1X), CJ26087 (1X), CJ26089 (20X), CJ26090 (20X)

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NY # 11301

MCP Certification Report

September 23, 2021

SDG I.D.: GCJ26085

VOA Narration

Initial Calibration Evaluation (CHEM23/VOA23_092021):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,1-Dichloroethene 21% (20%), Dichlorodifluoromethane 27% (20%), Trichlorofluoromethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.072 (0.1), Tetrachloroethene 0.149 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0920_21-VOA23_092021) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.067 (0.1), Tetrachloroethene 0.161 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/21/21-3 Michael Hahn, Chemist 09/21/21

CJ26088 (1X), CJ26089 (1X), CJ26090 (1X), CJ26091 (5X), CJ26092 (1X), CJ26093 (1X), CJ26094 (1X), CJ26095 (1X), CJ26096 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_092121):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.072 (0.1), Tetrachloroethene 0.161 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0921_12-VOA23_092121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.066 (0.1), Tetrachloroethene 0.156 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/22/21-1 Michael Hahn, Chemist 09/22/21

CJ26091 (1X), CJ26096 (1X), CJ26097 (1X), CJ26098 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092121):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.072 (0.1), Tetrachloroethene 0.161 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_03-VOA23_092121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 26%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.067 (0.1),

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NY # 11301

MCP Certification Report

September 23, 2021

SDG I.D.: GCJ26085

VOA Narration

Tetrachloroethene 0.178 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 592875 (CJ25200) CHEM23 9/20/2021-4

CJ26085(1X), CJ26086(1X), CJ26087(1X), CJ26089(20X), CJ26090(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593031 (CJ25193) CHEM23 9/21/2021-3

CJ26088(1X), CJ26089(1X), CJ26090(1X), CJ26091(5X), CJ26092(1X), CJ26093(1X), CJ26094(1X), CJ26095(1X), CJ26096(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,4-dioxane(164%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: 1,4-dioxane(31.8%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593226 (CJ27035) CHEM23 9/22/2021-1

CJ26091(1X), CJ26096(1X), CJ26097(1X), CJ26098(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☐ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 2.7°C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/10/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
260085	21A-AE29R1-091021-1	GW	9.10.21	0910	3							X									
260086	21A-AE29R2-091021-1	GW	9.10.21	0930	3							X									
260087	21A-AE29R3-091021-1	GW	9.10.21	0945	3							X									
260088	21A-AE29R4-091021-1	GW	9.10.21	1015	3							X									
260089	21A-AE29R5-091021-1	GW	9.10.21	1045	3							X									
260090	21A-TRC201R-091021-1	GW	9.10.21	0955	3							X									
260091	21A-AE101R1-091021-1	GW	9.10.21	0940	3							X									
260092	21A-AE101R2-091021	GW	9.10.21	1025	3	1						X	X								
260093	21A-AE101R3-091021-1	GW	9.10.21	1105	3	1						X	X								
260094	21A-TB01-091021-1	GW	9/10/21	0800	2							X									
260095	21A-AE2R-091021-1	GW	9/10/21	1140	3							X									
260096	21A-AE101R4-091021-1	GW	9/10/21	1320	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9/9/21	1357
		9/10/21	15:50

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

Temp 2.7 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature
Client Sample - Information - Identification
Date: 9/9/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
260097	21A-AE2I-090921-1	GW	9/9/21	1335	3							X									
260098	21A-AE112D-090921-1	GW	9/9/21	1345	3			2				X				X					

Relinquished by:	Accepted by:	Date:	Time:
		9/9/21	1357
		9/10/21	15:50

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

PHOENIX
Environmental Laboratories, Inc.

Thursday, September 23, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: LOCKHEED WILMINGTON MA 06552044.25
SDG ID: GCJ27035
Sample ID#s: CJ27035 - CJ27038

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

September 23, 2021

SDG I.D.: GCJ27035

Project ID: LOCKHEED WILMINGTON MA 06552044.25

Client Id	Lab Id	Matrix
21A-TB01-091321-1	CJ27035	GROUND WATER
21A-TRC301R3-091321-1	CJ27036	GROUND WATER
21A-AE106D-091321-1	CJ27037	GROUND WATER
21A-TRC301R1-091321-1	CJ27038	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	LB	09/13/21	16:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCJ27035
Phoenix ID: CJ27035

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-TB01-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ27035

Client ID: 21A-TB01-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/22/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ27035

Client ID: 21A-TB01-091321-1

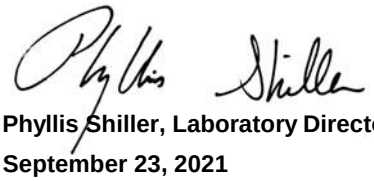
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 23, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	11:05
Location Code:	AECOM-WILMINGTN	Received by:	LB	09/13/21	16:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCJ27035
Phoenix ID: CJ27036

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-TRC301R3-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.196	0.011	mg/L	1	09/14/21	EK	SW6010D
Manganese (Dissolved)	0.618	0.001	mg/L	1	09/14/21	EK	SW6010D
Iron	0.232	0.010	mg/L	1	09/16/21	EK	SW6010D
Manganese	0.679	0.001	mg/L	1	09/16/21	EK	SW6010D
Chloride	102	10.0	mg/L	2	09/18/21	BS\EG	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/13/21 23:14	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/13/21 23:14	BS/GD	E300.0
Sulfate	60.1	5.0	mg/L	1	09/13/21	BS/GD	E300.0
Sulfide	0.06	0.05	mg/L	1	09/17/21	GD	SM4500S-D-11
Total Organic Carbon	3.2	1.0	mg/L	1	09/15/21	BJA/ARG	SM5310B-11
Dissolved Metals Preparation	Completed				09/13/21	AG	SW3005A
Total Metals Digestion	Completed				09/15/21	AG	

Volatiles

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	3.2	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	1.7	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ27036

Client ID: 21A-TRC301R3-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	18	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	5.8	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	40	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	100	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	1.8	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/22/21	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 23, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	11:50
Location Code:	AECOM-WILMINGTN	Received by:	LB	09/13/21	16:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCJ27035
Phoenix ID: CJ27037

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-AE106D-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/16/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/14/21	EK	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	09/14/21	EK	SW6010D
Manganese (Dissolved)	2.57	0.011	mg/L	10	09/14/21	EK	SW6010D
Iron	0.723	0.010	mg/L	1	09/16/21	EK	SW6010D
Manganese	2.75	0.010	mg/L	10	09/18/21	TH	SW6010D
Chloride	548	50.0	mg/L	10	09/14/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/14/21 01:41	BS/GD	E300.0
Nitrate as Nitrogen	2.81	0.05	mg/L	1	09/13/21 23:23	BS/GD	E300.0
Sulfate	27.2	5.0	mg/L	1	09/13/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/17/21	GD	SM4500S-D-11
Total Organic Carbon	1.3	1.0	mg/L	1	09/15/21	BJA/ARG	SM5310B-11
Dissolved Metals Preparation	Completed				09/13/21	AG	SW3005A
Total Metals Digestion	Completed				09/15/21	AG	

Volatiles

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ27037

Client ID: 21A-AE106D-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	2.7	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	4.8	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/22/21	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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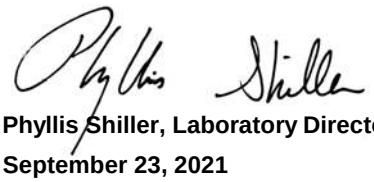


Phyllis Shiller, Laboratory Director
September 23, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	12:45
Location Code:	AECOM-WILMINGTN	Received by:	LB	09/13/21	16:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCJ27035
Phoenix ID: CJ27038

Project ID: LOCKHEED WILMINGTON MA 06552044.25
Client ID: 21A-TRC301R1-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	2.0	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ27038

Client ID: 21A-TRC301R1-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	17	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.2	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	16	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	61	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	1.7	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/22/21	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 06552044.25 Phoenix I.D.: CJ27038

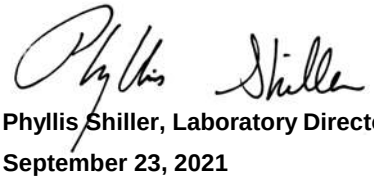
Client ID: 21A-TRC301R1-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 23, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 23, 2021

QA/QC Data

SDG I.D.: GCJ27035

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 592013 (mg/L), QC Sample No: CJ26714 (CJ27036, CJ27037)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	102	100	2.0	101			80 - 120	20
Iron	BRL	0.010	0.056	0.056	0	105	103	1.9	103			80 - 120	20
Manganese	BRL	0.001	0.066	0.066	0	107	104	2.8	104			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 591711 (mg/L), QC Sample No: CJ27037 (CJ27036, CJ27037)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	87.4	89.1	1.9	91.6			80 - 120	20
Iron	BRL	0.011	<0.011	<0.011	NC	87.3	89.6	2.6	86.3			80 - 120	20
Manganese	BRL	0.001	2.57	2.61	1.50	88.6	90.6	2.2	88.0			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

September 23, 2021

QA/QC Data

SDG I.D.: GCJ27035

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 592140 (mg/L), QC Sample No: CJ26759 (CJ27036, CJ27037)													
Total Organic Carbon	BRL	1.0	4.1	4.3	NC	95.0			100			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 592492 (mg/L), QC Sample No: CJ27928 (CJ27036, CJ27037)													
Sulfide	BRL	0.05	<0.05	0.07	NC	104			98.7			90 - 110	20
QA/QC Batch 592053 (mg/L), QC Sample No: CJ26714 (CJ27036, CJ27037)													
Chloride	BRL	5.0	50.1	50.3	0.40	97.5			97.3			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	<0.05	<0.05	NC	91.1			93.1			90 - 110	20
Nitrite as Nitrogen	BRL	0.01	<0.01	<0.01	NC	96.0			97.5			90 - 110	20
Sulfate	BRL	5.0	5.8	5.4	NC	98.9			95.3			90 - 110	20
QA/QC Batch 592638 (mg/L), QC Sample No: CJ28874 (CJ27036)													
Chloride	BRL	5.0	22.7	23.2	NC	94.7			101			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	<0.05	<0.05	NC	98.3			104			90 - 110	20
Sulfate	BRL	5.0	<3.0	<5.0	NC	102			99.3			90 - 110	20

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QA/QC Report

September 23, 2021

QA/QC Data

SDG I.D.: GCJ27035

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 593226 (ug/L), QC Sample No: CJ27035 (CJ27035, CJ27037)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	107	107	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	109	106	2.8				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	109	112	2.7				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	103	104	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	106	104	1.9				70 - 130	20
1,1-Dichloroethene	ND	1.0	107	102	4.8				70 - 130	20
1,1-Dichloropropene	ND	1.0	116	112	3.5				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	106	107	0.9				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	113	116	2.6				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	105	105	0.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	108	107	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	112	120	6.9				70 - 130	20
1,2-Dibromoethane	ND	1.0	106	108	1.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	102	103	1.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	104	105	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	104	102	1.9				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	110	109	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	104	102	1.9				70 - 130	20
1,3-Dichloropropane	ND	1.0	104	108	3.8				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	102	101	1.0				70 - 130	20
1,4-dioxane	ND	100	103	115	11.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	113	109	3.6				70 - 130	20
2-Chlorotoluene	ND	1.0	109	107	1.9				70 - 130	20
2-Hexanone	ND	5.0	107	112	4.6				40 - 160	20
4-Chlorotoluene	ND	1.0	108	106	1.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	107	109	1.9				40 - 160	20
Acetone	ND	5.0	91	105	14.3				40 - 160	20
Benzene	ND	0.70	107	105	1.9				70 - 130	20
Bromobenzene	ND	1.0	105	104	1.0				70 - 130	20
Bromochloromethane	ND	1.0	102	101	1.0				70 - 130	20
Bromodichloromethane	ND	0.50	107	106	0.9				70 - 130	20
Bromoform	ND	1.0	107	111	3.7				70 - 130	20
Bromomethane	ND	1.0	105	100	4.9				40 - 160	20
Carbon Disulfide	ND	1.0	101	99	2.0				70 - 130	20
Carbon tetrachloride	ND	1.0	111	124	11.1				70 - 130	20
Chlorobenzene	ND	1.0	104	105	1.0				70 - 130	20
Chloroethane	ND	1.0	106	98	7.8				70 - 130	20
Chloroform	ND	1.0	106	102	3.8				70 - 130	20
Chloromethane	ND	1.0	104	101	2.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	104	101	2.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	106	104	1.9				70 - 130	20

QA/QC Data

SDG I.D.: GCJ27035

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dibromochloromethane	ND	0.50	109	109	0.0				70 - 130	20
Dibromomethane	ND	1.0	107	107	0.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	127	123	3.2				40 - 160	20
Di-isopropyl ether	ND	1.0	104	102	1.9				70 - 130	20
Ethyl ether	ND	1.0	92	92	0.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	103	103	0.0				70 - 130	20
Ethylbenzene	ND	1.0	110	109	0.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	104	104	0.0				70 - 130	20
Isopropylbenzene	ND	1.0	115	112	2.6				70 - 130	20
m&p-Xylene	ND	1.0	109	108	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	107	110	2.8				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	100	103	3.0				70 - 130	20
Methylene chloride	ND	1.0	94	96	2.1				70 - 130	20
Naphthalene	ND	1.0	109	111	1.8				70 - 130	20
n-Butylbenzene	ND	1.0	116	114	1.7				70 - 130	20
n-Propylbenzene	ND	1.0	112	112	0.0				70 - 130	20
o-Xylene	ND	1.0	105	103	1.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	113	112	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	114	114	0.0				70 - 130	20
Styrene	ND	1.0	107	107	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	103	104	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	112	111	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	110	106	3.7				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	98	102	4.0				70 - 130	20
Toluene	ND	1.0	107	107	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	99	98	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	108	108	0.0				70 - 130	20
Trichloroethene	ND	1.0	108	107	0.9				70 - 130	20
Trichlorofluoromethane	ND	1.0	117	116	0.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	103	102	1.0				70 - 130	20
Vinyl chloride	ND	1.0	116	112	3.5				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	98	%	98	99	1.0				70 - 130	20
% Dibromofluoromethane	94	%	97	95	2.1				70 - 130	20
% Toluene-d8	100	%	99	101	2.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593271 (ug/L), QC Sample No: CJ27912 (CJ27036, CJ27038)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	105	103	1.9				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	103	101	2.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	109	110	0.9				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	101	100	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	102	100	2.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	102	97	5.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	107	108	0.9				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	100	100	0.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	110	110	0.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	100	99	1.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ27035

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,4-Trimethylbenzene	ND	1.0	105	105	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	113	111	1.8				70 - 130	20
1,2-Dibromoethane	ND	1.0	105	104	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	102	100	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	104	103	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	102	101	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	107	106	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	103	101	2.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	107	106	0.9				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	101	99	2.0				70 - 130	20
1,4-dioxane	ND	100	103	107	3.8				40 - 160	20
2,2-Dichloropropane	ND	1.0	95	91	4.3				70 - 130	20
2-Chlorotoluene	ND	1.0	105	104	1.0				70 - 130	20
2-Hexanone	ND	5.0	113	112	0.9				40 - 160	20
4-Chlorotoluene	ND	1.0	105	105	0.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	109	109	0.0				40 - 160	20
Acetone	ND	5.0	102	95	7.1				40 - 160	20
Benzene	ND	0.70	104	102	1.9				70 - 130	20
Bromobenzene	ND	1.0	104	104	0.0				70 - 130	20
Bromochloromethane	ND	1.0	99	97	2.0				70 - 130	20
Bromodichloromethane	ND	0.50	104	103	1.0				70 - 130	20
Bromoform	ND	1.0	106	107	0.9				70 - 130	20
Bromomethane	ND	1.0	97	93	4.2				40 - 160	20
Carbon Disulfide	ND	1.0	96	93	3.2				70 - 130	20
Carbon tetrachloride	ND	1.0	99	99	0.0				70 - 130	20
Chlorobenzene	ND	1.0	104	103	1.0				70 - 130	20
Chloroethane	ND	1.0	96	95	1.0				70 - 130	20
Chloroform	ND	1.0	102	99	3.0				70 - 130	20
Chloromethane	ND	1.0	102	98	4.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	98	3.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	100	100	0.0				70 - 130	20
Dibromochloromethane	ND	0.50	107	106	0.9				70 - 130	20
Dibromomethane	ND	1.0	104	103	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	110	108	1.8				40 - 160	20
Di-isopropyl ether	ND	1.0	103	100	3.0				70 - 130	20
Ethyl ether	ND	1.0	92	89	3.3				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	101	99	2.0				70 - 130	20
Ethylbenzene	ND	1.0	107	105	1.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	98	96	2.1				70 - 130	20
Isopropylbenzene	ND	1.0	109	109	0.0				70 - 130	20
m&p-Xylene	ND	1.0	106	105	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	108	105	2.8				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	100	97	3.0				70 - 130	20
Methylene chloride	ND	1.0	94	91	3.2				70 - 130	20
Naphthalene	ND	1.0	105	104	1.0				70 - 130	20
n-Butylbenzene	ND	1.0	108	109	0.9				70 - 130	20
n-Propylbenzene	ND	1.0	107	108	0.9				70 - 130	20
o-Xylene	ND	1.0	104	101	2.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	107	108	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	109	110	0.9				70 - 130	20
Styrene	ND	1.0	107	105	1.9				70 - 130	20
tert-amyl methyl ether	ND	1.0	101	99	2.0				70 - 130	20
tert-Butylbenzene	ND	1.0	108	107	0.9				70 - 130	20

QA/QC Data

SDG I.D.: GCJ27035

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Tetrachloroethene	ND	1.0	101	100	1.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	101	99	2.0				70 - 130	20
Toluene	ND	1.0	104	103	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	96	95	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	101	1.0				70 - 130	20
Trichloroethene	ND	1.0	104	102	1.9				70 - 130	20
Trichlorofluoromethane	ND	1.0	109	109	0.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	96	94	2.1				70 - 130	20
Vinyl chloride	ND	1.0	108	105	2.8				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	100	100	0.0				70 - 130	20
% Bromofluorobenzene	99	%	100	99	1.0				70 - 130	20
% Dibromofluoromethane	92	%	94	92	2.2				70 - 130	20
% Toluene-d8	99	%	100	100	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
September 23, 2021

Thursday, September 23, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27035 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27035	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ27035	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ27035	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ27035	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27035	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27035	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ27035	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27035	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27036	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	40	1.0	5	5	ug/L
CJ27036	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ27036	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ27036	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ27036	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	100	1.0	5	5	ug/L
CJ27036	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	100	1.0	5	5	ug/L
CJ27036	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	40	1.0	5	5	ug/L
CJ27036	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27036	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	100	1.0	5	5	ug/L
CJ27036	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	40	1.0	5	5	ug/L
CJ27036	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	100	1.0	5	5	ug/L
CJ27036	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27036	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	100	1.0	5	5	ug/L
CJ27036	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ27036	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27036	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27036	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.618	0.001	0.43	0.43	mg/L
CJ27036	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.679	0.001	0.43	0.43	mg/L
CJ27037	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ27037	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ27037	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ27037	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27037	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27037	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ27037	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27037	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27037	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.57	0.011	0.43	0.43	mg/L
CJ27037	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.75	0.010	0.43	0.43	mg/L
CJ27038	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	16	1.0	5	5	ug/L
CJ27038	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ27038	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ27038	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	61	1.0	5	5	ug/L

Thursday, September 23, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27035 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27038	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ27038	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	61	1.0	5	5	ug/L
CJ27038	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	1.0	5	5	ug/L
CJ27038	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27038	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	61	1.0	5	5	ug/L
CJ27038	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	16	1.0	5	5	ug/L
CJ27038	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	61	1.0	5	5	ug/L
CJ27038	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27038	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	61	1.0	5	5	ug/L
CJ27038	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ27038	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27038	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 0655204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ27035, CJ27036, CJ27037, CJ27038

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☑ Yes ☐ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Thursday, September 23, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 23, 2021

SDG I.D.: GCJ27035

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/17/21-1 Greg Danielewski, Chemist 09/17/21

CJ27036 , CJ27037

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 592140 (CJ26759)

CJ27036, CJ27037

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 592492 (CJ27928)

CJ27036, CJ27037

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/13/21-2 Brian Sheriden, Greg Danielewski, Chemist 09/13/21

CJ27036 , CJ27037

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/17/21-2

CJ27036

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 23, 2021

SDG I.D.: GCJ27035

IC

QC (Batch Specific):

Batch 592053_(CJ26714)

CJ27036, CJ27037

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 592638_(CJ28874)

CJ27036

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/14/21 08:44 Emily Kolominskaya, Tina Hall, Chemist 09/14/21

CJ27036, CJ27037

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/16/21 08:29 Emily Kolominskaya, Tina Hall, Chemist 09/16/21

CJ27036, CJ27037

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/18/21 07:56 Emily Kolominskaya, Tina Hall, Chemist 09/18/21

CJ27037

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

September 23, 2021

SDG I.D.: GCJ27035

ICP Metals Narration

range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 591711 (CJ27037)

CJ27036, CJ27037

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 592013 (CJ26714)

CJ27036, CJ27037

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/22/21-1 Michael Hahn, Chemist 09/22/21

CJ27035 (1X), CJ27037 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092121):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.072 (0.1), Tetrachloroethene 0.161 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_03-VOA23_092121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 26%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.067 (0.1), Tetrachloroethene 0.178 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/22/21-2 Michael Hahn, Chemist 09/22/21

CJ27036 (1X), CJ27038 (1X)

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NY # 11301

MCP Certification Report

September 23, 2021

SDG I.D.: GCJ27035

VOA Narration

Initial Calibration Evaluation (CHEM23/VOA23_092121):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.072 (0.1), Tetrachloroethene 0.161 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_34-VOA23_092121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
93% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 2,2-Dichloropropane 21%L (20%), Di-isopropyl ether 21%L (20%), Trichlorofluoromethane 26%H (20%), Trichlorotrifluoroethane 21%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.083 (0.1), Tetrachloroethene 0.177 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 593226 (CJ27035) CHEM23 9/22/2021-1

CJ27035(1X), CJ27037(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593271 (CJ27912) CHEM23 9/22/2021-2

CJ27036(1X), CJ27038(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]
Temp 1.2° C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX *Environmental Laboratories, Inc.*

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Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
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Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature
Client Sample - Information - Identification
Date: 9/13/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
27035	21A-TB01-091321-1	GW	9/13/21	0800	2							X									
27036	21A-TRC301R3-091321-1	GW	9/13/21	1105	3	1		4				X					X	X	X	X	
27037	21A-AE106D-091321-1	GW	9/13/21	1150	3	1		4				X				X	X	X	X	X	
27038	21A-TRC301R1-091321-1	GW	9/13/21	1245	3							X									

Relinquished by	Accepted by:	Date:	Time:
		9/13/21	1424
		9/13	1615

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- [ ] Direct Exposure (Residential)
- [ ] GW
- [ ] Other

CT
- [ ] RCP Cert
- [ ] GW Protection
- [ ] SW Protection
- [ ] GA Mobility
- [ ] GB Mobility
- [ ] Residential DEC
- [ ] I/C DEC
- [ ] Other

MA
- [X] MCP (CAM Rpt)
- [X] GW-1
- [X] GW-2
- [X] GW-3
- [ ] S-1
- [ ] S-2
- [ ] S-3
- [ ] MWRA eSMART
- [ ] Other

Data Format
- [x] PDF
- [x] AECOM EQuIS 4-File EDD format

Data Package
- [ ] Tier II Checklist
- [ ] Full Data Package*
- [ ] Phoenix Std Report
- [ ] Other

* SURCHARGE APPLIES

State where samples were collected: MA

PHOENIX
Environmental Laboratories, Inc.

Friday, October 08, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60552044.25**
SDG ID: **GCJ27912**
Sample ID#s: CJ27912 - CJ27929

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 08, 2021

SDG I.D.: GCJ27912

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver.2:
This report has been revised to calculated MS/MSD recoveries for PCE & TCE in batch 593727.

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 08, 2021

SDG I.D.: GCJ27912

Project ID: LOCKHEED-WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-TB02-091321-1	CJ27912	GROUND WATER
21A-AE106S-091321-1	CJ27913	GROUND WATER
21A-AE106M-091321-1	CJ27914	GROUND WATER
21A-AE106R1-091321-1	CJ27915	GROUND WATER
21A-AE106R2-091321-1	CJ27916	GROUND WATER
21A-AE106R3-091321-1	CJ27917	GROUND WATER
21A-AE106R4-091321-1	CJ27918	GROUND WATER
21A-AE106R5-091321-1	CJ27919	GROUND WATER
21A-AE105R1-091321-1	CJ27920	GROUND WATER
21A-AE105R2-091321-1	CJ27921	GROUND WATER
21A-AE105R3-091321-1	CJ27922	GROUND WATER
21A-AE105R4-091321-1	CJ27923	GROUND WATER
21A-AE105R5-091321-1	CJ27924	GROUND WATER
21A-TRC301R2-091321-1	CJ27925	GROUND WATER
21A-TRC301R4-091321-1	CJ27926	GROUND WATER
21A-AE29R6-091421-1	CJ27927	GROUND WATER
21A-AE103D-091421-1	CJ27928	GROUND WATER
21A-GZA105R-091421-1	CJ27929	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	8:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27912

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-TB02-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27912

Client ID: 21A-TB02-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/22/21	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27912

Client ID: 21A-TB02-091321-1

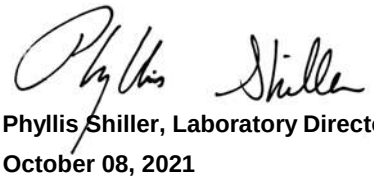
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 08, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	16:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27913

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE106S-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	1.0	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27913

Client ID: 21A-AE106S-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	11	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.5	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	24	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	33	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/22/21	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27913

Client ID: 21A-AE106S-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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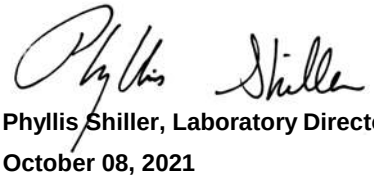


Phyllis Shiller, Laboratory Director

October 08, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	15:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27914

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE106M-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27914

Client ID: 21A-AE106M-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	9.2	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	26	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	35	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

Ver 2

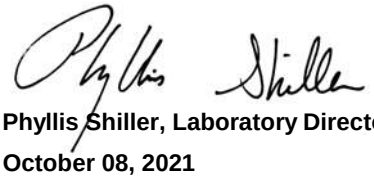
Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27914
Client ID: 21A-AE106M-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	14:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27915

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE106R1-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,1-Dichloroethane	1.3	1.0	ug/L	1	09/23/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27915

Client ID: 21A-AE106R1-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/23/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
cis-1,2-Dichloroethene	18	1.0	ug/L	1	09/23/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Tetrachloroethene	1.8	1.0	ug/L	1	09/23/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/21	MH	SW8260C
Trichloroethene	5.3	1.0	ug/L	1	09/23/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/23/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/23/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/23/21	MH	70 - 130 %
% Dibromofluoromethane	92		%	1	09/23/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/23/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27915

Client ID: 21A-AE106R1-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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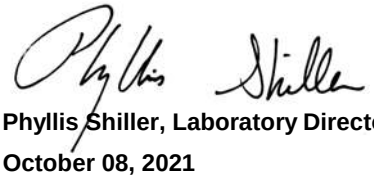


Phyllis Shiller, Laboratory Director

October 08, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	14:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27916

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE106R2-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	1.5	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27916

Client ID: 21A-AE106R2-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	22	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	1.7	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	6.0	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	1.4	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27916

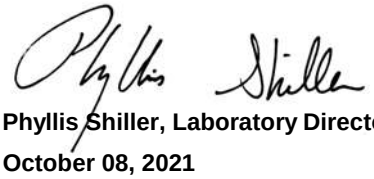
Client ID: 21A-AE106R2-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 08, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	14:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27917

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE106R3-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
Iron (Dissolved)	0.081	0.011	mg/L	1	09/15/21	EK	SW6010D
Manganese (Dissolved)	0.158	0.001	mg/L	1	09/15/21	EK	SW6010D
Iron	0.086	0.010	mg/L	1	09/15/21	EK	SW6010D
Manganese	0.168	0.001	mg/L	1	09/15/21	EK	SW6010D
Chloride	90.5	10.0	mg/L	2	09/15/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/14/21 22:24	BS/GD	E300.0
Nitrate as Nitrogen	0.10	0.05	mg/L	1	09/14/21 22:24	BS/GD	E300.0
Sulfate	11.9	5.0	mg/L	1	09/14/21	BS/GD	E300.0
Sulfide	0.07	0.05	mg/L	1	09/17/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/17/21	ARG	SM5310B-11
EPH Extraction	Completed				09/17/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/14/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/15/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/14/21	AG	SW3005A
Total Metals Digestion	Completed				09/14/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethane	1.5	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27917

Client ID: 21A-AE106R3-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/22/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,2-Dichloroethene	23	1.0	ug/L	1	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Styrene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrachloroethene	2.2	1.0	ug/L	1	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/21	MH	SW8260C
Trichloroethene	8.6	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/21	MH	SW8260C
Vinyl chloride	1.1	1.0	ug/L	1	09/22/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/22/21	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	09/22/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/16/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/16/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/16/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	64		%	1	09/16/21	WB	40 - 140 %
% Nitrobenzene-d5	58		%	1	09/16/21	WB	40 - 140 %
% Terphenyl-d14	97		%	1	09/16/21	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/20/21	AW	MAEPH 5/2019

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27917
Client ID: 21A-AE106R3-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/20/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/20/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/20/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/20/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	62		%	1	09/20/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	91		%	1	09/20/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	90		%	1	09/20/21	AW	40 - 140 %
% o-terphenyl (aromatic)	73		%	1	09/20/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	93		%	1	09/15/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	91		%	1	09/15/21	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	14:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27918

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE106R4-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	1.1	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27918

Client ID: 21A-AE106R4-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	18	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	1.2	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	14	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27918

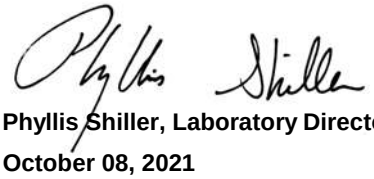
Client ID: 21A-AE106R4-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 08, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	15:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27919

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE106R5-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/17/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/14/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/15/21	P/D	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	1.6	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27919

Client ID: 21A-AE106R5-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	13	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	1.8	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	40	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/25/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	98		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/16/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/16/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/16/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	09/16/21	WB	40 - 140 %
% Nitrobenzene-d5	58		%	1	09/16/21	WB	40 - 140 %
% Terphenyl-d14	90		%	1	09/16/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	0.40	0.20	ug/l	1	09/17/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	77		%	1	09/17/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/16/21	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/17/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/17/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/17/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	90		%	1	09/17/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	99		%	1	09/17/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	99		%	1	09/17/21	AW	40 - 140 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27919
Client ID: 21A-AE106R5-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% o-terphenyl (aromatic)	87		%	1	09/17/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	96		%	1	09/15/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	95		%	1	09/15/21	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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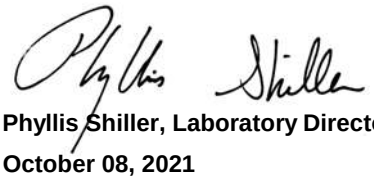


Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27920

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE105R1-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.139	0.011	mg/L	1	09/15/21	EK	SW6010D
Manganese (Dissolved)	0.160	0.001	mg/L	1	09/15/21	EK	SW6010D
Iron	0.083	0.010	mg/L	1	09/15/21	EK	SW6010D
Manganese	0.125	0.001	mg/L	1	09/15/21	EK	SW6010D
Chloride	67.3	5.0	mg/L	1	09/14/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/14/21 22:33	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/14/21 22:33	BS/GD	E300.0
Sulfate	17.7	5.0	mg/L	1	09/14/21	BS/GD	E300.0
Sulfide	0.10	0.05	mg/L	1	09/17/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/17/21	ARG	SM5310B-11
Dissolved Metals Preparation	Completed				09/14/21	AG	SW3005A
Total Metals Digestion	Completed				09/14/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	3.2	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	2.0	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27920

Client ID: 21A-AE105R1-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	31	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.8	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	26	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	110	10	ug/L	10	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	1.3	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/25/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	98		%	10	09/22/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	100		%	10	09/22/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	90		%	10	09/22/21	MH	70 - 130 %
% Toluene-d8 (10x)	99		%	10	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	14:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27921

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE105R2-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
EPH Extraction	Completed				09/17/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/14/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/15/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/14/21	AG	SW3005A
Total Metals Digestion	Completed				09/14/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	4.2	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	3.1	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27921

Client ID: 21A-AE105R2-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	35	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.6	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrachloroethene	45	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	140	2.0	ug/L	2	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	2.0	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/27/21	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/27/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (2x)	100		%	2	09/25/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	97		%	2	09/25/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	93		%	2	09/25/21	MH	70 - 130 %
% Toluene-d8 (2x)	99		%	2	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/16/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/16/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/16/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	71		%	1	09/16/21	WB	40 - 140 %
% Nitrobenzene-d5	71		%	1	09/16/21	WB	40 - 140 %
% Terphenyl-d14	92		%	1	09/16/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	5.3	0.20	ug/l	1	09/17/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	72		%	1	09/17/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/16/21	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/17/21	AW	MAEPH 5/2019

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27921
Client ID: 21A-AE105R2-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/17/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/17/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	78		%	1	09/17/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	92		%	1	09/17/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	96		%	1	09/17/21	AW	40 - 140 %
% o-terphenyl (aromatic)	88		%	1	09/17/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
MTBE	2.7	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	98		%	1	09/15/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	98		%	1	09/15/21	RM	70 - 130 %

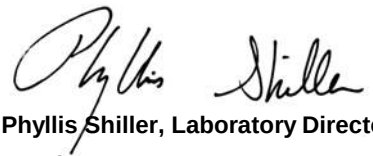
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	14:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27922

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE105R3-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	4.6	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	3.6	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27922

Client ID: 21A-AE105R3-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	38	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	3.2	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrachloroethene	53	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	150	2.0	ug/L	2	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Vinyl chloride	1.9	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/27/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/27/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (2x)	101		%	2	09/25/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	99		%	2	09/25/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	98		%	2	09/25/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27922
Client ID: 21A-AE105R3-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (2x)	99		%	2	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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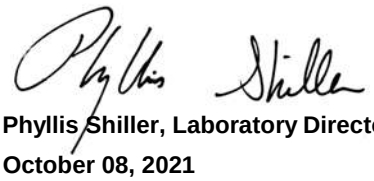


Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	14:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27923

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE105R4-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/17/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/14/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/15/21	P/D	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	4.4	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	3.5	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27923

Client ID: 21A-AE105R4-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	44	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.8	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrachloroethene	51	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	170	2.0	ug/L	2	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Vinyl chloride	1.6	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/27/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	97		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/27/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (2x)	100		%	2	09/25/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	98		%	2	09/25/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	99		%	2	09/25/21	MH	70 - 130 %
% Toluene-d8 (2x)	99		%	2	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.48	ug/L	1	09/16/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	09/16/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/16/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/16/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/16/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/16/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	09/16/21	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/16/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/16/21	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	09/16/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	09/16/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/16/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	60		%	1	09/16/21	WB	40 - 140 %
% Nitrobenzene-d5	57		%	1	09/16/21	WB	40 - 140 %
% Terphenyl-d14	88		%	1	09/16/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	5.5	0.20	ug/l	1	09/17/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	75		%	1	09/17/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/16/21	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/20/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/20/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/20/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/20/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/20/21	AW	MAEPH 5/2019

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27923
Client ID: 21A-AE105R4-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	71		%	1	09/20/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	130		%	1	09/20/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	98		%	1	09/20/21	AW	40 - 140 %
% o-terphenyl (aromatic)	87		%	1	09/20/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
MTBE	3.0	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	97		%	1	09/15/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	95		%	1	09/15/21	RM	70 - 130 %

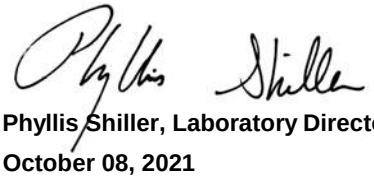
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	14:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27924

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE105R5-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	4.1	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	3.4	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27924

Client ID: 21A-AE105R5-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	45	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.2	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	46	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	150	2.0	ug/L	2	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	1.1	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/28/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (2x)	101		%	2	09/25/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	98		%	2	09/25/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	99		%	2	09/25/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27924
Client ID: 21A-AE105R5-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (2x)	99		%	2	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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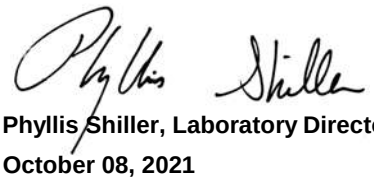


Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	16:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27925

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-TRC301R2-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
Dissolved Metals Preparation	Completed				09/14/21	AG	SW3005A
Total Metals Digestion	Completed				09/14/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	3.5	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	2.1	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27925

Client ID: 21A-TRC301R2-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	20	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	6.3	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	41	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	97	2.0	ug/L	2	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	1.9	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/28/21	MH	70 - 130 %

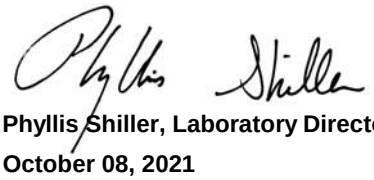
Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27925
Client ID: 21A-TRC301R2-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	101		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/28/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (2x)	99		%	2	09/25/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	100		%	2	09/25/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	98		%	2	09/25/21	MH	70 - 130 %
% Toluene-d8 (2x)	100		%	2	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/13/21	15:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27926

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-TRC301R4-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.020	0.004	mg/L	1	09/15/21	EK	SW6010D
Arsenic (Dissolved)	0.018	0.004	mg/L	1	09/15/21	EK	SW6010D
Dissolved Metals Preparation	Completed				09/14/21	AG	SW3005A
Total Metals Digestion	Completed				09/14/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	1.4	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	20	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	6.2	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	8.7	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	27	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	10	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/25/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27926
Client ID: 21A-TRC301R4-091321-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	96		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

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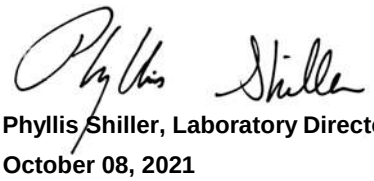

Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/21	11:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27927

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE29R6-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
Iron (Dissolved)	1.12	0.011	mg/L	1	09/15/21	EK	SW6010D
Manganese (Dissolved)	0.849	0.001	mg/L	1	09/15/21	EK	SW6010D
Iron	1.18	0.010	mg/L	1	09/15/21	EK	SW6010D
Manganese	0.872	0.001	mg/L	1	09/15/21	EK	SW6010D
Chloride	423	50.0	mg/L	10	09/16/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/16/21 04:58	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/15/21 10:41	BS/GD	E300.0
Sulfate	43.8	5.0	mg/L	1	09/15/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/17/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/17/21	ARG	SM5310B-11
EPH Extraction	Completed				09/22/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/14/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/15/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/14/21	AG	SW3005A
Total Metals Digestion	Completed				09/14/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,1-Dichloroethane	50	2.0	ug/L	2	09/27/21	MH	SW8260C
1,1-Dichloroethene	14	2.0	ug/L	2	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27927

Client ID: 21A-AE29R6-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	2	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	09/27/21	MH	SW8260C
Acetone	ND	50	ug/L	2	09/27/21	MH	SW8260C
Benzene	ND	1.4	ug/L	2	09/27/21	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	09/27/21	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	300	5.0	ug/L	5	09/22/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	09/27/21	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	09/27/21	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	09/27/21	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Styrene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Tetrachloroethene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	09/27/21	MH	SW8260C
Toluene	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	20	2.0	ug/L	2	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	09/27/21	MH	SW8260C
Trichloroethene	70	2.0	ug/L	2	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	09/27/21	MH	SW8260C
Vinyl chloride	4.9	2.0	ug/L	2	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	99		%	2	09/27/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	98		%	2	09/27/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	95		%	2	09/27/21	MH	70 - 130 %
% Toluene-d8 (2x)	101		%	2	09/27/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	98		%	5	09/22/21	MH	70 - 130 %
% Bromofluorobenzene (5x)	99		%	5	09/22/21	MH	70 - 130 %
% Dibromofluoromethane (5x)	92		%	5	09/22/21	MH	70 - 130 %
% Toluene-d8 (5x)	100		%	5	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	2	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	09/27/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	09/27/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/16/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/16/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/16/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/16/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/16/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/16/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	09/16/21	WB	40 - 140 %
% Nitrobenzene-d5	53		%	1	09/16/21	WB	40 - 140 %
% Terphenyl-d14	82		%	1	09/16/21	WB	40 - 140 %

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27927

Client ID: 21A-AE29R6-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,4-dioxane							
1,4-dioxane	43	0.20	ug/l	1	09/17/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	74		%	1	09/17/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/16/21	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	09/23/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	09/23/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/23/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/23/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	190	ug/L	1	09/23/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	61		%	1	09/23/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	97		%	1	09/23/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	101		%	1	09/23/21	AW	40 - 140 %
% o-terphenyl (aromatic)	102		%	1	09/23/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	170	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	170	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/15/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	101		%	1	09/15/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	101		%	1	09/15/21	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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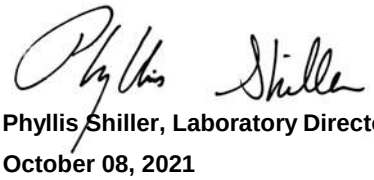

Phyllis Shiller, Laboratory Director

October 08, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/21	10:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27928

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-AE103D-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/21	EK	SW6010D
Iron (Dissolved)	0.064	0.011	mg/L	1	09/15/21	EK	SW6010D
Manganese (Dissolved)	1.94	0.001	mg/L	1	09/15/21	EK	SW6010D
Iron	0.056	0.010	mg/L	1	09/15/21	EK	SW6010D
Manganese	1.94	0.001	mg/L	1	09/15/21	EK	SW6010D
Chloride	848	125	mg/L	25	09/16/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.100	0.100	mg/L	25	09/16/21 05:44	BS/GD	E300.0
Nitrate as Nitrogen	5.09	0.10	mg/L	2	09/16/21 06:11	BS/GD	E300.0
Sulfate	36.2	5.0	mg/L	1	09/15/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/17/21	GD	SM4500S-D-11
Total Organic Carbon	1.2	1.0	mg/L	1	09/17/21	ARG	SM5310B-11
Client MS/MSD	Completed				09/25/21		
Dissolved Metals Preparation	Completed				09/14/21	AG	SW3005A
Total Metals Digestion	Completed				09/14/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	1.6	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27928

Client ID: 21A-AE103D-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	3.5	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	47	1.0	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27928
Client ID: 21A-AE103D-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	77	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	98		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.68	0.20	ug/l	1	09/24/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	86		%	1	09/24/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/23/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 08, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/21	11:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/14/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ27912
Phoenix ID: CJ27929

Project ID: LOCKHEED-WILMINGTON MA 60552044.25
Client ID: 21A-GZA105R-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.142	0.011	mg/L	1	09/15/21	EK	SW6010D
Manganese (Dissolved)	0.986	0.001	mg/L	1	09/15/21	EK	SW6010D
Iron	0.055	0.010	mg/L	1	09/15/21	EK	SW6010D
Manganese	1.94	0.010	mg/L	10	09/15/21	TH	SW6010D
Chloride	256	25.0	mg/L	5	09/16/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.020	0.020	mg/L	5	09/16/21 06:39	BS/GD	E300.0
Nitrate as Nitrogen	0.14	0.05	mg/L	1	09/15/21 04:36	BS/GD	E300.0
Sulfate	26.7	5.0	mg/L	1	09/15/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/17/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/17/21	ARG	SM5310B-11
Dissolved Metals Preparation	Completed				09/14/21	AG	SW3005A
Total Metals Digestion	Completed				09/14/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	20	ug/L	40	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	40	ug/L	40	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	20	ug/L	40	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	20	ug/L	40	09/28/21	MH	SW8260C
1,1-Dichloroethane	97	40	ug/L	40	09/28/21	MH	SW8260C
1,1-Dichloroethene	30	20	ug/L	40	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	40	ug/L	40	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	20	ug/L	40	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	20	ug/L	40	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	20	ug/L	40	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	20	ug/L	40	09/28/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27929

Client ID: 21A-GZA105R-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	20	ug/L	40	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	20	ug/L	40	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	40	ug/L	40	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	20	ug/L	40	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	40	ug/L	40	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	40	ug/L	40	09/28/21	MH	SW8260C
2-Hexanone	ND	200	ug/L	40	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	40	ug/L	40	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	200	ug/L	40	09/28/21	MH	SW8260C
Acetone	ND	1000	ug/L	40	09/28/21	MH	SW8260C
Benzene	ND	20	ug/L	40	09/28/21	MH	SW8260C
Bromobenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
Bromochloromethane	ND	40	ug/L	40	09/28/21	MH	SW8260C
Bromodichloromethane	ND	20	ug/L	40	09/28/21	MH	SW8260C
Bromoform	ND	20	ug/L	40	09/28/21	MH	SW8260C
Bromomethane	ND	20	ug/L	40	09/28/21	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	40	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	20	ug/L	40	09/28/21	MH	SW8260C
Chlorobenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
Chloroethane	ND	40	ug/L	40	09/28/21	MH	SW8260C
Chloroform	ND	40	ug/L	40	09/28/21	MH	SW8260C
Chloromethane	ND	40	ug/L	40	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	150	40	ug/L	40	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	20	ug/L	40	09/28/21	MH	SW8260C
Dibromochloromethane	ND	20	ug/L	40	09/28/21	MH	SW8260C
Dibromomethane	ND	20	ug/L	40	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	40	ug/L	40	09/28/21	MH	SW8260C
Ethylbenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	20	ug/L	40	09/28/21	MH	SW8260C
Isopropylbenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
m&p-Xylene	ND	40	ug/L	40	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	40	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	40	ug/L	40	09/28/21	MH	SW8260C
Methylene chloride	ND	200	ug/L	40	09/28/21	MH	SW8260C
Naphthalene	ND	40	ug/L	40	09/28/21	MH	SW8260C
n-Butylbenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
n-Propylbenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
o-Xylene	ND	40	ug/L	40	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	40	ug/L	40	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
Styrene	ND	40	ug/L	40	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	40	ug/L	40	09/28/21	MH	SW8260C
Tetrachloroethene	5600	100	ug/L	100	09/22/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	100	ug/L	40	09/28/21	MH	SW8260C
Toluene	ND	40	ug/L	40	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	40	ug/L	40	09/28/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ27929
Client ID: 21A-GZA105R-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	20	ug/L	40	09/28/21	MH	SW8260C
Trichloroethene	7500	100	ug/L	100	09/22/21	MH	SW8260C
Trichlorofluoromethane	ND	40	ug/L	40	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	40	ug/L	40	09/28/21	MH	SW8260C
Vinyl chloride	ND	20	ug/L	40	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (40x)	101		%	40	09/28/21	MH	70 - 130 %
% Bromofluorobenzene (40x)	100		%	40	09/28/21	MH	70 - 130 %
% Dibromofluoromethane (40x)	99		%	40	09/28/21	MH	70 - 130 %
% Toluene-d8 (40x)	98		%	40	09/28/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	98		%	100	09/22/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	100		%	100	09/22/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	92		%	100	09/22/21	MH	70 - 130 %
% Toluene-d8 (100x)	100		%	100	09/22/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	4000	ug/L	40	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	40	ug/L	40	09/28/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	40	ug/L	40	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	40	ug/L	40	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	40	ug/L	40	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 08, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 08, 2021

QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 591889 (mg/L), QC Sample No: CJ27928 (CJ27917, CJ27920, CJ27921, CJ27925, CJ27926, CJ27927, CJ27928, CJ27929)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	99.9	99.4	0.5	104	105	1.0	80 - 120	20
Iron	BRL	0.010	0.056	0.059	5.20	100	99.3	0.7	96.7	97.9	1.2	80 - 120	20
Manganese	BRL	0.001	1.94	1.98	2.00	100	99.8	0.2	100	103	3.0	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 591885 (mg/L), QC Sample No: CJ27928 (CJ27917, CJ27920, CJ27921, CJ27925, CJ27926, CJ27927, CJ27928, CJ27929)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	88.8	87.7	1.2	93.8	95.3	1.6	80 - 120	20
Iron	BRL	0.011	0.064	0.064	0	89.4	88.6	0.9	87.8	88.1	0.3	80 - 120	20
Manganese	BRL	0.001	1.94	1.92	1.00	90.7	90.1	0.7	88.6	83.9	5.4	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 08, 2021

QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 592492 (mg/L), QC Sample No: CJ27928 (CJ27917, CJ27920, CJ27927, CJ27928, CJ27929)														
Sulfide	BRL	0.05	<0.05	0.07	NC	104			98.7			90 - 110	20	
Comment:														
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.														
QA/QC Batch 592588 (mg/L), QC Sample No: CJ27928 (CJ27917, CJ27920, CJ27927, CJ27928, CJ27929)														
Total Organic Carbon	BRL	1.0	1.2	1.1	NC	91.0			91.0			85 - 115	20	
Comment:														
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.														
QA/QC Batch 592075 (mg/L), QC Sample No: CJ27574 (CJ27917, CJ27920)														
Chloride	BRL	5.0	<5.0	<5.0	NC	96.7			101			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.02	<0.05	NC	91.6			92.2			90 - 110	20	
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	94.8			101			90 - 110	20	
Sulfate	BRL	5.0	8.5	8.2	NC	95.7			94.8			90 - 110	20	
QA/QC Batch 592076 (mg/L), QC Sample No: CJ27928 (CJ27927, CJ27928, CJ27929)														
Chloride	BRL	5.0	848	852	0.50	97.3			99.4			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	5.09	5.10	0.20	90.3			110			90 - 110	20	
Nitrite as Nitrogen	BRL	0.01	<0.100	<0.25	NC	99.2			97.5			90 - 110	20	
Sulfate	BRL	5.0	36.2	35.1	3.10	95.3			97.9			90 - 110	20	
QA/QC Batch 592077 (mg/L), QC Sample No: CJ28254 (CJ27917)														
Chloride	BRL	5.0	8.4	8.5	NC	96.6			95.4			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	1.08	1.07	0.90	90.2			91.3			90 - 110	20	
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	96.9			106			90 - 110	20	
Sulfate	BRL	5.0	7.7	7.4	NC	95.0			94.1			90 - 110	20	
QA/QC Batch 592283 (mg/L), QC Sample No: CJ29233 (CJ27927, CJ27928)														
Chloride	BRL	5.0	459	460	0.20	98.7			99.0			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	<0.05	<0.05	NC	91.0			85.5			90 - 110	20	m
Nitrite as Nitrogen	BRL	0.01	<0.040	<0.10	NC	93.8			106			90 - 110	20	
Sulfate	BRL	5.0	<5.0	<5.0	NC	96.2			92.9			90 - 110	20	

m = This parameter is outside laboratory MS/MSD specified recovery limits.

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QA/QC Report

October 08, 2021

QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 592174 (ug/l), QC Sample No: CJ27928 (CJ27919, CJ27921, CJ27923, CJ27927)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	75	76	1.3	77	79	2.6	70 - 130	20
% 1,4-dioxane-d8	71	%	74	70	5.6	71	71	0.0	70 - 130	20
QA/QC Batch 593240 (ug/l), QC Sample No: CJ31559 (CJ27928)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	82	70	15.8	NC			70 - 130	20
% 1,4-dioxane-d8	89	%	89	85	4.6	85			70 - 130	20
QA/QC Batch 592367 (ug/L), QC Sample No: CJ27610 (CJ27917, CJ27919, CJ27921, CJ27923)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	66	67	1.5				40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	94	98	4.2				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	89	92	3.3				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	82	84	2.4				40 - 140	25
C9 - Nonane	11	10	41	45	9.3				40 - 140	25
C-10 Decane	ND	10	55	56	1.8				40 - 140	25
C12 - Dodecane	ND	10	56	56	0.0				40 - 140	25
C14 - Tetradecane	ND	10	69	70	1.4				40 - 140	25
C16 - Hexadecane	ND	10	79	79	0.0				40 - 140	25
C18 - Octadecane	ND	10	93	94	1.1				40 - 140	25
C19 - Nonadecane	ND	10	91	93	2.2				40 - 140	25
C20 - Eicosane	ND	10	90	92	2.2				40 - 140	25
C22 - Docosane	ND	10	93	95	2.1				40 - 140	25
C24 - Tetracosane	ND	10	95	97	2.1				40 - 140	25
C26 - Hexacosane	ND	10	95	97	2.1				40 - 140	25
C28 - Octacosane	ND	10	98	103	5.0				40 - 140	25
C30 - Tricotane	ND	10	95	98	3.1				40 - 140	25
C36 - Hexatriacontane	ND	10	95	107	11.9				40 - 140	25
% 1-chlorooctadecane (aliphatic)	71	%	86	93	7.8				40 - 140	25
% o-terphenyl (aromatic)	85	%	85	90	5.7				40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	94	%	107	103	3.8				40 - 140	25
% 2-Bromonaphthalene (Fractionati	94	%	108	101	6.7				40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 593018 (ug/L), QC Sample No: CJ31474 (CJ27927)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	100	94	6.2				40 - 140	25

QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	130	122	6.3				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	112	107	4.6				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	117	110	6.2				40 - 140	25
C9 - Nonane	ND	10	63	59	6.6				40 - 140	25
C-10 Decane	ND	10	84	79	6.1				40 - 140	25
C12 - Dodecane	ND	10	88	84	4.7				40 - 140	25
C14 - Tetradecane	ND	10	105	96	9.0				40 - 140	25
C16 - Hexadecane	ND	10	118	110	7.0				40 - 140	25
C18 - Octadecane	ND	10	143	134	6.5				40 - 140	25
C19 - Nonadecane	ND	10	134	125	6.9				40 - 140	25
C20 - Eicosane	ND	10	133	124	7.0				40 - 140	25
C22 - Docosane	ND	10	136	127	6.8				40 - 140	25
C24 - Tetracosane	ND	10	139	130	6.7				40 - 140	25
C26 - Hexacosane	ND	10	136	127	6.8				40 - 140	25
C28 - Octacosane	ND	10	135	126	6.9				40 - 140	25
C30 - Tricotane	ND	10	125	116	7.5				40 - 140	25
C36 - Hexatriacontane	ND	10	103	97	6.0				40 - 140	25
% 1-chlorooctadecane (aliphatic)	59	%	83	78	6.2				40 - 140	25
% o-terphenyl (aromatic)	105	%	104	101	2.9				40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	109	%	103	114	10.1				40 - 140	25
% 2-Bromonaphthalene (Fractionati	113	%	105	118	11.7				40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 592025 (ug/L), QC Sample No: CJ27741 (CJ27917, CJ27919, CJ27921, CJ27923, CJ27927)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50	60	61	1.7				40 - 140	20
Acenaphthene	ND	0.50	74	79	6.5				40 - 140	20
Acenaphthylene	ND	0.10	70	76	8.2				40 - 140	20
Anthracene	ND	0.10	79	84	6.1				40 - 140	20
Benz(a)anthracene	ND	0.05	76	82	7.6				40 - 140	20
Benzo(a)pyrene	ND	0.20	81	83	2.4				40 - 140	20
Benzo(b)fluoranthene	ND	0.07	85	90	5.7				40 - 140	20
Benzo(ghi)perylene	ND	0.02	78	83	6.2				40 - 140	20
Benzo(k)fluoranthene	ND	0.10	80	85	6.1				40 - 140	20
Chrysene	ND	0.05	80	84	4.9				40 - 140	20
Dibenz(a,h)anthracene	ND	0.02	86	93	7.8				40 - 140	20
Fluoranthene	ND	0.50	87	95	8.8				40 - 140	20
Fluorene	ND	0.10	80	85	6.1				40 - 140	20
Indeno(1,2,3-cd)pyrene	ND	0.10	89	94	5.5				40 - 140	20
Naphthalene	ND	0.50	55	55	0.0				40 - 140	20
Phenanthrene	ND	0.06	73	79	7.9				40 - 140	20
Pyrene	ND	0.07	91	97	6.4				40 - 140	20
% 2-Fluorobiphenyl	69	%	65	70	7.4				40 - 140	20
% Nitrobenzene-d5	52	%	69	69	0.0				40 - 140	20
% Terphenyl-d14	91	%	89	98	9.6				40 - 140	20

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 593226 (ug/L), QC Sample No: CJ27035 (CJ27917, CJ27920 (10X) , CJ27927 (5X) , CJ27929 (100X))										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	107	107	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	109	106	2.8				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	109	112	2.7				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	103	104	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	106	104	1.9				70 - 130	20
1,1-Dichloroethene	ND	1.0	107	102	4.8				70 - 130	20
1,1-Dichloropropene	ND	1.0	116	112	3.5				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	106	107	0.9				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	113	116	2.6				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	105	105	0.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	108	107	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	112	120	6.9				70 - 130	20
1,2-Dibromoethane	ND	1.0	106	108	1.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	102	103	1.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	104	105	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	104	102	1.9				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	110	109	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	104	102	1.9				70 - 130	20
1,3-Dichloropropane	ND	1.0	104	108	3.8				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	102	101	1.0				70 - 130	20
1,4-dioxane	ND	100	103	115	11.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	113	109	3.6				70 - 130	20
2-Chlorotoluene	ND	1.0	109	107	1.9				70 - 130	20
2-Hexanone	ND	5.0	107	112	4.6				40 - 160	20
4-Chlorotoluene	ND	1.0	108	106	1.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	107	109	1.9				40 - 160	20
Acetone	ND	5.0	91	105	14.3				40 - 160	20
Benzene	ND	0.70	107	105	1.9				70 - 130	20
Bromobenzene	ND	1.0	105	104	1.0				70 - 130	20
Bromochloromethane	ND	1.0	102	101	1.0				70 - 130	20
Bromodichloromethane	ND	0.50	107	106	0.9				70 - 130	20
Bromoform	ND	1.0	107	111	3.7				70 - 130	20
Bromomethane	ND	1.0	105	100	4.9				40 - 160	20
Carbon Disulfide	ND	1.0	101	99	2.0				70 - 130	20
Carbon tetrachloride	ND	1.0	111	124	11.1				70 - 130	20
Chlorobenzene	ND	1.0	104	105	1.0				70 - 130	20
Chloroethane	ND	1.0	106	98	7.8				70 - 130	20
Chloroform	ND	1.0	106	102	3.8				70 - 130	20
Chloromethane	ND	1.0	104	101	2.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	104	101	2.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	106	104	1.9				70 - 130	20
Dibromochloromethane	ND	0.50	109	109	0.0				70 - 130	20
Dibromomethane	ND	1.0	107	107	0.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	127	123	3.2				40 - 160	20
Di-isopropyl ether	ND	1.0	104	102	1.9				70 - 130	20
Ethyl ether	ND	1.0	92	92	0.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	103	103	0.0				70 - 130	20
Ethylbenzene	ND	1.0	110	109	0.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	104	104	0.0				70 - 130	20
Isopropylbenzene	ND	1.0	115	112	2.6				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
m&p-Xylene	ND	1.0	109	108	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	107	110	2.8				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	100	103	3.0				70 - 130	20
Methylene chloride	ND	1.0	94	96	2.1				70 - 130	20
Naphthalene	ND	1.0	109	111	1.8				70 - 130	20
n-Butylbenzene	ND	1.0	116	114	1.7				70 - 130	20
n-Propylbenzene	ND	1.0	112	112	0.0				70 - 130	20
o-Xylene	ND	1.0	105	103	1.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	113	112	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	114	114	0.0				70 - 130	20
Styrene	ND	1.0	107	107	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	103	104	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	112	111	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	110	106	3.7				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	98	102	4.0				70 - 130	20
Toluene	ND	1.0	107	107	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	99	98	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	108	108	0.0				70 - 130	20
Trichloroethene	ND	1.0	108	107	0.9				70 - 130	20
Trichlorofluoromethane	ND	1.0	117	116	0.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	103	102	1.0				70 - 130	20
Vinyl chloride	ND	1.0	116	112	3.5				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	98	%	98	99	1.0				70 - 130	20
% Dibromofluoromethane	94	%	97	95	2.1				70 - 130	20
% Toluene-d8	100	%	99	101	2.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593271 (ug/L), QC Sample No: CJ27912 (CJ27912, CJ27913, CJ27915)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	105	103	1.9				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	103	101	2.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	109	110	0.9				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	101	100	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	102	100	2.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	102	97	5.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	107	108	0.9				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	100	100	0.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	110	110	0.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	100	99	1.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	105	105	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	113	111	1.8				70 - 130	20
1,2-Dibromoethane	ND	1.0	105	104	1.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	102	100	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	104	103	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	102	101	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	107	106	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	103	101	2.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	107	106	0.9				70 - 130	20

QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,4-Dichlorobenzene	ND	1.0	101	99	2.0				70 - 130	20
1,4-dioxane	ND	100	103	107	3.8				40 - 160	20
2,2-Dichloropropane	ND	1.0	95	91	4.3				70 - 130	20
2-Chlorotoluene	ND	1.0	105	104	1.0				70 - 130	20
2-Hexanone	ND	5.0	113	112	0.9				40 - 160	20
4-Chlorotoluene	ND	1.0	105	105	0.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	109	109	0.0				40 - 160	20
Acetone	ND	5.0	102	95	7.1				40 - 160	20
Benzene	ND	0.70	104	102	1.9				70 - 130	20
Bromobenzene	ND	1.0	104	104	0.0				70 - 130	20
Bromochloromethane	ND	1.0	99	97	2.0				70 - 130	20
Bromodichloromethane	ND	0.50	104	103	1.0				70 - 130	20
Bromoform	ND	1.0	106	107	0.9				70 - 130	20
Bromomethane	ND	1.0	97	93	4.2				40 - 160	20
Carbon Disulfide	ND	1.0	96	93	3.2				70 - 130	20
Carbon tetrachloride	ND	1.0	99	99	0.0				70 - 130	20
Chlorobenzene	ND	1.0	104	103	1.0				70 - 130	20
Chloroethane	ND	1.0	96	95	1.0				70 - 130	20
Chloroform	ND	1.0	102	99	3.0				70 - 130	20
Chloromethane	ND	1.0	102	98	4.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	98	3.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	100	100	0.0				70 - 130	20
Dibromochloromethane	ND	0.50	107	106	0.9				70 - 130	20
Dibromomethane	ND	1.0	104	103	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	110	108	1.8				40 - 160	20
Di-isopropyl ether	ND	1.0	103	100	3.0				70 - 130	20
Ethyl ether	ND	1.0	92	89	3.3				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	101	99	2.0				70 - 130	20
Ethylbenzene	ND	1.0	107	105	1.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	98	96	2.1				70 - 130	20
Isopropylbenzene	ND	1.0	109	109	0.0				70 - 130	20
m&p-Xylene	ND	1.0	106	105	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	108	105	2.8				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	100	97	3.0				70 - 130	20
Methylene chloride	ND	1.0	94	91	3.2				70 - 130	20
Naphthalene	ND	1.0	105	104	1.0				70 - 130	20
n-Butylbenzene	ND	1.0	108	109	0.9				70 - 130	20
n-Propylbenzene	ND	1.0	107	108	0.9				70 - 130	20
o-Xylene	ND	1.0	104	101	2.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	107	108	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	109	110	0.9				70 - 130	20
Styrene	ND	1.0	107	105	1.9				70 - 130	20
tert-amyl methyl ether	ND	1.0	101	99	2.0				70 - 130	20
tert-Butylbenzene	ND	1.0	108	107	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	101	100	1.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	101	99	2.0				70 - 130	20
Toluene	ND	1.0	104	103	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	96	95	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	101	1.0				70 - 130	20
Trichloroethene	ND	1.0	104	102	1.9				70 - 130	20
Trichlorofluoromethane	ND	1.0	109	109	0.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	96	94	2.1				70 - 130	20
Vinyl chloride	ND	1.0	108	105	2.8				70 - 130	20

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
% 1,2-dichlorobenzene-d4	99	%		100	100	0.0				70 - 130	20	
% Bromofluorobenzene	99	%		100	99	1.0				70 - 130	20	
% Dibromofluoromethane	92	%		94	92	2.2				70 - 130	20	
% Toluene-d8	99	%		100	100	0.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593727 (ug/L), QC Sample No: CJ27928 (CJ27919, CJ27921 (2X) , CJ27922 (2X) , CJ27923 (2X) , CJ27924 (2X) , CJ27925 (2X) , CJ27928)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0		107	106	0.9	101	89	12.6	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0		108	106	1.9	104	84	21.3	70 - 130	20	r
1,1,2,2-Tetrachloroethane	ND	0.50		111	111	0.0	110	100	9.5	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0		103	103	0.0	103	90	13.5	70 - 130	20	
1,1-Dichloroethane	ND	1.0		103	100	3.0	97	86	12.0	70 - 130	20	
1,1-Dichloroethene	ND	1.0		105	100	4.9	104	86	18.9	70 - 130	20	
1,1-Dichloropropene	ND	1.0		111	109	1.8	103	88	15.7	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0		107	104	2.8	102	93	9.2	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0		115	115	0.0	109	101	7.6	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0		102	100	2.0	98	88	10.8	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0		105	105	0.0	106	91	15.2	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0		120	121	0.8	122	112	8.5	70 - 130	20	
1,2-Dibromoethane	ND	1.0		108	107	0.9	106	94	12.0	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0		99	97	2.0	96	86	11.0	70 - 130	20	
1,2-Dichloroethane	ND	1.0		106	102	3.8	103	90	13.5	70 - 130	20	
1,2-Dichloropropane	ND	1.0		102	99	3.0	98	83	16.6	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0		107	107	0.0	100	89	11.6	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0		101	100	1.0	96	84	13.3	70 - 130	20	
1,3-Dichloropropane	ND	1.0		108	105	2.8	104	93	11.2	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0		100	98	2.0	96	85	12.2	70 - 130	20	
1,4-dioxane	ND	100		107	112	4.6	95	104	9.0	40 - 160	20	
2,2-Dichloropropane	ND	1.0		111	105	5.6	80	66	19.2	70 - 130	20	m
2-Chlorotoluene	ND	1.0		106	106	0.0	98	88	10.8	70 - 130	20	
2-Hexanone	ND	5.0		118	119	0.8	120	110	8.7	40 - 160	20	
4-Chlorotoluene	ND	1.0		105	103	1.9	98	87	11.9	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0		115	117	1.7	115	104	10.0	40 - 160	20	
Acetone	ND	5.0		107	103	3.8	123	101	19.6	40 - 160	20	
Benzene	ND	0.70		104	101	2.9	98	83	16.6	70 - 130	20	
Bromobenzene	ND	1.0		104	103	1.0	99	88	11.8	70 - 130	20	
Bromochloromethane	ND	1.0		99	96	3.1	100	82	19.8	70 - 130	20	
Bromodichloromethane	ND	0.50		105	102	2.9	100	86	15.1	70 - 130	20	
Bromoform	ND	1.0		114	114	0.0	108	98	9.7	70 - 130	20	
Bromomethane	ND	1.0		100	94	6.2	90	72	22.2	40 - 160	20	r
Carbon Disulfide	ND	1.0		102	96	6.1	96	78	20.7	70 - 130	20	r
Carbon tetrachloride	ND	1.0		99	116	15.8	103	97	6.0	70 - 130	20	
Chlorobenzene	ND	1.0		103	100	3.0	96	84	13.3	70 - 130	20	
Chloroethane	ND	1.0		105	96	9.0	112	84	28.6	70 - 130	20	r
Chloroform	ND	1.0		103	97	6.0	99	80	21.2	70 - 130	20	r
Chloromethane	ND	1.0		104	99	4.9	93	77	18.8	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0		101	97	4.0	99	98	1.0	70 - 130	20	

QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
cis-1,3-Dichloropropene	ND	0.40	107	103	3.8	96	84	13.3	70 - 130	20	
Dibromochloromethane	ND	0.50	108	106	1.9	103	92	11.3	70 - 130	20	
Dibromomethane	ND	1.0	104	102	1.9	102	90	12.5	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	122	122	0.0	110	89	21.1	40 - 160	20	r
Di-isopropyl ether	ND	1.0	102	98	4.0	100	83	18.6	70 - 130	20	
Ethyl ether	ND	1.0	91	85	6.8	96	77	22.0	70 - 130	20	r
Ethyl tert-butyl ether	ND	1.0	102	97	5.0	102	85	18.2	70 - 130	20	
Ethylbenzene	ND	1.0	106	106	0.0	99	85	15.2	70 - 130	20	
Hexachlorobutadiene	ND	0.40	105	106	0.9	100	95	5.1	70 - 130	20	
Isopropylbenzene	ND	1.0	107	109	1.9	101	90	11.5	70 - 130	20	
m&p-Xylene	ND	1.0	107	106	0.9	99	86	14.1	70 - 130	20	
Methyl ethyl ketone	ND	5.0	115	115	0.0	122	98	21.8	40 - 160	20	r
Methyl t-butyl ether (MTBE)	ND	1.0	106	100	5.8	112	91	20.7	70 - 130	20	r
Methylene chloride	ND	1.0	100	92	8.3	103	79	26.4	70 - 130	20	r
Naphthalene	ND	1.0	114	114	0.0	118	105	11.7	70 - 130	20	
n-Butylbenzene	ND	1.0	113	113	0.0	105	96	9.0	70 - 130	20	
n-Propylbenzene	ND	1.0	108	111	2.7	101	90	11.5	70 - 130	20	
o-Xylene	ND	1.0	104	103	1.0	99	84	16.4	70 - 130	20	
p-Isopropyltoluene	ND	1.0	111	110	0.9	104	95	9.0	70 - 130	20	
sec-Butylbenzene	ND	1.0	111	113	1.8	104	96	8.0	70 - 130	20	
Styrene	ND	1.0	107	105	1.9	101	88	13.8	70 - 130	20	
tert-amyl methyl ether	ND	1.0	103	99	4.0	101	88	13.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	108	107	0.9	102	93	9.2	70 - 130	20	
Tetrachloroethene	ND	1.0	105	106	0.9	96	100	4.1	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	111	111	0.0	114	98	15.1	70 - 130	20	
Toluene	ND	1.0	104	100	3.9	98	83	16.6	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	99	95	4.1	103	79	26.4	70 - 130	20	r
trans-1,3-Dichloropropene	ND	0.40	109	106	2.8	99	89	10.6	70 - 130	20	
Trichloroethene	ND	1.0	104	103	1.0	90	92	2.2	70 - 130	20	
Trichlorofluoromethane	ND	1.0	119	116	2.6	115	91	23.3	70 - 130	20	r
Trichlorotrifluoroethane	ND	1.0	100	96	4.1	99	77	25.0	70 - 130	20	r
Vinyl chloride	ND	1.0	113	111	1.8	109	90	19.1	70 - 130	20	
% 1,2-dichlorobenzene-d4	99	%	100	99	1.0	101	99	2.0	70 - 130	20	
% Bromofluorobenzene	98	%	100	100	0.0	100	99	1.0	70 - 130	20	
% Dibromofluoromethane	96	%	96	93	3.2	102	94	8.2	70 - 130	20	
% Toluene-d8	100	%	100	101	1.0	100	100	0.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593684 (ug/L), QC Sample No: CJ29230 (CJ27914, CJ27916, CJ27918, CJ27920, CJ27926)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	105	105	0.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	102	98	4.0				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	101	97	4.0				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	101	98	3.0				70 - 130	20	
1,1-Dichloroethane	ND	1.0	100	98	2.0				70 - 130	20	
1,1-Dichloroethene	ND	1.0	100	97	3.0				70 - 130	20	
1,1-Dichloropropene	ND	1.0	102	100	2.0				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	104	102	1.9				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	100	97	3.0				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	103	99	4.0				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,4-Trimethylbenzene	ND	1.0	103	101	2.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	111	106	4.6				70 - 130	20
1,2-Dibromoethane	ND	1.0	103	100	3.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	100	98	2.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	98	97	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	104	101	2.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	100	98	2.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	101	99	2.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	99	98	1.0				70 - 130	20
1,4-dioxane	ND	100	100	103	3.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	90	89	1.1				70 - 130	20
2-Chlorotoluene	ND	1.0	106	102	3.8				70 - 130	20
2-Hexanone	ND	5.0	103	99	4.0				40 - 160	20
4-Chlorotoluene	ND	1.0	103	100	3.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	99	98	1.0				40 - 160	20
Acetone	ND	5.0	103	97	6.0				40 - 160	20
Benzene	ND	0.70	102	98	4.0				70 - 130	20
Bromobenzene	ND	1.0	102	98	4.0				70 - 130	20
Bromochloromethane	ND	1.0	101	96	5.1				70 - 130	20
Bromodichloromethane	ND	0.50	102	100	2.0				70 - 130	20
Bromoform	ND	1.0	107	104	2.8				70 - 130	20
Bromomethane	ND	1.0	99	101	2.0				40 - 160	20
Carbon Disulfide	ND	1.0	100	96	4.1				70 - 130	20
Carbon tetrachloride	ND	1.0	96	93	3.2				70 - 130	20
Chlorobenzene	ND	1.0	100	99	1.0				70 - 130	20
Chloroethane	ND	1.0	104	105	1.0				70 - 130	20
Chloroform	ND	1.0	98	98	0.0				70 - 130	20
Chloromethane	ND	1.0	102	100	2.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	99	2.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	102	99	3.0				70 - 130	20
Dibromochloromethane	ND	0.50	103	102	1.0				70 - 130	20
Dibromomethane	ND	1.0	100	99	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	114	111	2.7				40 - 160	20
Di-isopropyl ether	ND	1.0	98	95	3.1				70 - 130	20
Ethyl ether	ND	1.0	88	85	3.5				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	99	97	2.0				70 - 130	20
Ethylbenzene	ND	1.0	103	102	1.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	104	100	3.9				70 - 130	20
Isopropylbenzene	ND	1.0	104	100	3.9				70 - 130	20
m&p-Xylene	ND	1.0	104	103	1.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	103	98	5.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	101	98	3.0				70 - 130	20
Methylene chloride	ND	1.0	103	100	3.0				70 - 130	20
Naphthalene	ND	1.0	109	106	2.8				70 - 130	20
n-Butylbenzene	ND	1.0	106	102	3.8				70 - 130	20
n-Propylbenzene	ND	1.0	104	101	2.9				70 - 130	20
o-Xylene	ND	1.0	104	101	2.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	106	104	1.9				70 - 130	20
sec-Butylbenzene	ND	1.0	105	103	1.9				70 - 130	20
Styrene	ND	1.0	105	105	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	98	97	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	104	102	1.9				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Tetrachloroethene	ND	1.0	101	99	2.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	97	92	5.3				70 - 130	20
Toluene	ND	1.0	101	99	2.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	100	97	3.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	103	101	2.0				70 - 130	20
Trichloroethene	ND	1.0	102	99	3.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	105	104	1.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	92	88	4.4				70 - 130	20
Vinyl chloride	ND	1.0	109	105	3.7				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0				70 - 130	20
% Bromofluorobenzene	99	%	100	102	2.0				70 - 130	20
% Dibromofluoromethane	100	%	99	99	0.0				70 - 130	20
% Toluene-d8	101	%	100	100	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593833 (ug/L), QC Sample No: CJ30888 (CJ27927 (2X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	118	101	15.5				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	114	98	15.1				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	119	102	15.4				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	111	95	15.5				70 - 130	20
1,1-Dichloroethane	ND	1.0	106	93	13.1				70 - 130	20
1,1-Dichloroethene	ND	1.0	111	96	14.5				70 - 130	20
1,1-Dichloropropene	ND	1.0	117	101	14.7				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	115	98	16.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	124	106	15.7				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	112	96	15.4				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	115	100	14.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	140	116	18.8				70 - 130	20
1,2-Dibromoethane	ND	1.0	118	99	17.5				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	109	93	15.8				70 - 130	20
1,2-Dichloroethane	ND	1.0	110	93	16.7				70 - 130	20
1,2-Dichloropropane	ND	1.0	107	91	16.2				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	115	101	13.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	109	94	14.8				70 - 130	20
1,3-Dichloropropane	ND	1.0	113	98	14.2				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	109	94	14.8				70 - 130	20
1,4-dioxane	ND	100	111	99	11.4				40 - 160	20
2,2-Dichloropropane	ND	1.0	120	101	17.2				70 - 130	20
2-Chlorotoluene	ND	1.0	116	100	14.8				70 - 130	20
2-Hexanone	ND	5.0	124	106	15.7				40 - 160	20
4-Chlorotoluene	ND	1.0	112	97	14.4				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	121	101	18.0				40 - 160	20
Acetone	ND	5.0	107	92	15.1				40 - 160	20
Benzene	ND	0.70	110	95	14.6				70 - 130	20
Bromobenzene	ND	1.0	113	97	15.2				70 - 130	20
Bromochloromethane	ND	1.0	106	92	14.1				70 - 130	20
Bromodichloromethane	ND	0.50	113	97	15.2				70 - 130	20
Bromoform	ND	1.0	127	108	16.2				70 - 130	20

QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromomethane	ND	1.0	105	87	18.8				40 - 160	20
Carbon Disulfide	ND	1.0	105	92	13.2				70 - 130	20
Carbon tetrachloride	ND	1.0	109	111	1.8				70 - 130	20
Chlorobenzene	ND	1.0	110	94	15.7				70 - 130	20
Chloroethane	ND	1.0	109	96	12.7				70 - 130	20
Chloroform	ND	1.0	106	92	14.1				70 - 130	20
Chloromethane	ND	1.0	104	89	15.5				40 - 160	20
cis-1,3-Dichloropropene	ND	0.40	115	98	16.0				70 - 130	20
Dibromochloromethane	ND	0.50	119	100	17.4				70 - 130	20
Dibromomethane	ND	1.0	110	96	13.6				70 - 130	20
Dichlorodifluoromethane	ND	1.0	125	110	12.8				40 - 160	20
Di-isopropyl ether	ND	1.0	106	91	15.2				70 - 130	20
Ethyl ether	ND	1.0	96	82	15.7				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	109	93	15.8				70 - 130	20
Ethylbenzene	ND	1.0	115	99	15.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	118	99	17.5				70 - 130	20
Isopropylbenzene	ND	1.0	116	100	14.8				70 - 130	20
m&p-Xylene	ND	1.0	115	98	16.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	118	104	12.6				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	110	96	13.6				70 - 130	20
Methylene chloride	ND	1.0	106	91	15.2				70 - 130	20
Naphthalene	ND	1.0	126	108	15.4				70 - 130	20
n-Butylbenzene	ND	1.0	119	104	13.5				70 - 130	20
n-Propylbenzene	ND	1.0	116	102	12.8				70 - 130	20
o-Xylene	ND	1.0	113	96	16.3				70 - 130	20
p-Isopropyltoluene	ND	1.0	119	104	13.5				70 - 130	20
sec-Butylbenzene	ND	1.0	120	105	13.3				70 - 130	20
Styrene	ND	1.0	119	99	18.3				70 - 130	20
tert-amyl methyl ether	ND	1.0	112	96	15.4				70 - 130	20
tert-Butylbenzene	ND	1.0	117	102	13.7				70 - 130	20
Tetrachloroethene	ND	1.0	113	99	13.2				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	113	96	16.3				70 - 130	20
Toluene	ND	1.0	110	95	14.6				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	105	91	14.3				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	120	101	17.2				70 - 130	20
Trichloroethene	ND	1.0	112	96	15.4				70 - 130	20
Trichlorofluoromethane	ND	1.0	116	103	11.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	106	93	13.1				70 - 130	20
Vinyl chloride	ND	1.0	119	104	13.5				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	98	%	101	99	2.0				70 - 130	20
% Dibromofluoromethane	99	%	97	98	1.0				70 - 130	20
% Toluene-d8	100	%	101	100	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593828 (ug/L), QC Sample No: CJ31570 (CJ27921, CJ27922, CJ27923, CJ27924, CJ27925, CJ27929 (40X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	104	102	1.9				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	100	103	3.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1,2,2-Tetrachloroethane	ND	0.50	102	103	1.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	100	99	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	103	103	0.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	102	103	1.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	102	101	1.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	97	97	0.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	104	102	1.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	95	95	0.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	100	100	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	106	107	0.9				70 - 130	20
1,2-Dibromoethane	ND	1.0	104	102	1.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	94	96	2.1				70 - 130	20
1,2-Dichloroethane	ND	1.0	103	102	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	99	98	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	100	99	1.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	96	96	0.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	103	101	2.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	97	96	1.0				70 - 130	20
1,4-dioxane	ND	100	104	103	1.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	93	93	0.0				70 - 130	20
2-Chlorotoluene	ND	1.0	100	101	1.0				70 - 130	20
2-Hexanone	ND	5.0	109	107	1.9				40 - 160	20
4-Chlorotoluene	ND	1.0	100	99	1.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	107	106	0.9				40 - 160	20
Acetone	ND	5.0	114	111	2.7				40 - 160	20
Benzene	ND	0.70	101	101	0.0				70 - 130	20
Bromobenzene	ND	1.0	98	96	2.1				70 - 130	20
Bromochloromethane	ND	1.0	99	101	2.0				70 - 130	20
Bromodichloromethane	ND	0.50	101	101	0.0				70 - 130	20
Bromoform	ND	1.0	105	105	0.0				70 - 130	20
Bromomethane	ND	1.0	110	112	1.8				40 - 160	20
Carbon Disulfide	ND	1.0	101	102	1.0				70 - 130	20
Carbon tetrachloride	ND	1.0	95	101	6.1				70 - 130	20
Chlorobenzene	ND	1.0	99	98	1.0				70 - 130	20
Chloroethane	ND	1.0	119	119	0.0				70 - 130	20
Chloroform	ND	1.0	102	102	0.0				70 - 130	20
Chloromethane	ND	1.0	108	111	2.7				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	102	1.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	102	99	3.0				70 - 130	20
Dibromochloromethane	ND	0.50	103	102	1.0				70 - 130	20
Dibromomethane	ND	1.0	100	100	0.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	120	124	3.3				40 - 160	20
Di-isopropyl ether	ND	1.0	104	104	0.0				70 - 130	20
Ethyl ether	ND	1.0	101	97	4.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	100	101	1.0				70 - 130	20
Ethylbenzene	ND	1.0	100	101	1.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	89	91	2.2				70 - 130	20
Isopropylbenzene	ND	1.0	98	99	1.0				70 - 130	20
m&p-Xylene	ND	1.0	102	102	0.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	109	107	1.9				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	107	106	0.9				70 - 130	20
Methylene chloride	ND	1.0	104	104	0.0				70 - 130	20
Naphthalene	ND	1.0	103	104	1.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
n-Butylbenzene	ND	1.0	101	102	1.0				70 - 130	20
n-Propylbenzene	ND	1.0	98	99	1.0				70 - 130	20
o-Xylene	ND	1.0	100	99	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	101	101	0.0				70 - 130	20
sec-Butylbenzene	ND	1.0	101	100	1.0				70 - 130	20
Styrene	ND	1.0	102	102	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	96	95	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	99	99	0.0				70 - 130	20
Tetrachloroethene	ND	1.0	95	94	1.1				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	106	104	1.9				70 - 130	20
Toluene	ND	1.0	99	99	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	104	102	1.9				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	103	102	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	116	117	0.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	92	93	1.1				70 - 130	20
Vinyl chloride	ND	1.0	114	116	1.7				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	99	%	101	100	1.0				70 - 130	20
% Dibromofluoromethane	96	%	97	99	2.0				70 - 130	20
% Toluene-d8	100	%	100	101	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 592158 (ug/L), QC Sample No: CJ27612 (CJ27917, CJ27919, CJ27921, CJ27923, CJ27927)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	98	98	0.0				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	75	75	0.0				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	98	98	0.0				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	75	75	0.0				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	87	90	3.4				70 - 130	25
Benzene	ND	1.0	99	104	4.9				70 - 130	25
Ethyl Benzene	ND	1.0	91	96	5.3				70 - 130	25
MTBE	ND	1.0	108	111	2.7				70 - 130	25
Naphthalene	ND	5.0	104	104	0.0				70 - 130	25
Toluene	ND	1.0	95	100	5.1				70 - 130	25
m,p-Xylenes	ND	2.0	91	96	5.3				70 - 130	25
o-Xylene	ND	1.0	89	93	4.4				70 - 130	25
% 2,5-Dibromotoluene (PID)	91	%	94	94	0.0				70 - 130	25
% 2,5-Dibromotoluene (FID)	88	%	92	94	2.2				70 - 130	25

Comment:

This batch consists of a Blank, LCS and LCSD.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

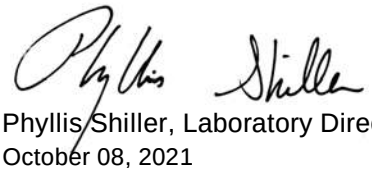
QA/QC Data

SDG I.D.: GCJ27912

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
October 08, 2021

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27912	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27912	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27912	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27912	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27912	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27912	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27912	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27912	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27912	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27912	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27912	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27913	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27913	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27913	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27913	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	33	1.0	5	5	ug/L
CJ27913	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27913	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27913	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	24	1.0	5	5	ug/L
CJ27913	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27913	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	1.0	5	5	ug/L
CJ27913	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27913	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	24	1.0	5	5	ug/L
CJ27913	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	1.0	5	5	ug/L
CJ27913	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	24	1.0	5	5	ug/L
CJ27913	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27913	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	33	1.0	5	5	ug/L
CJ27913	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	33	1.0	5	5	ug/L
CJ27913	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27913	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27913	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27914	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27914	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27914	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27914	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27914	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27914	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	26	1.0	5	5	ug/L
CJ27914	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27914	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	35	1.0	5	5	ug/L
CJ27914	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	1.0	5	5	ug/L
CJ27914	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	35	1.0	5	5	ug/L

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27914	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27914	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	35	1.0	5	5	ug/L
CJ27914	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	35	1.0	5	5	ug/L
CJ27914	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27914	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	26	1.0	5	5	ug/L
CJ27914	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	35	1.0	5	5	ug/L
CJ27914	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27914	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27914	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27915	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27915	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27915	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27915	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27915	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27915	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27915	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5.3	1.0	5	5	ug/L
CJ27915	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.3	1.0	5	5	ug/L
CJ27915	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27915	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.3	1.0	5	5	ug/L
CJ27915	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5.3	1.0	5	5	ug/L
CJ27915	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27915	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5.3	1.0	5	5	ug/L
CJ27915	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27915	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27915	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27916	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27916	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27916	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27916	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6.0	1.0	5	5	ug/L
CJ27916	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	22	1.0	20	20	ug/L
CJ27916	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27916	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27916	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27916	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	22	1.0	20	20	ug/L
CJ27916	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27916	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.0	1.0	5	5	ug/L
CJ27916	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	22	1.0	20	20	ug/L
CJ27916	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6.0	1.0	5	5	ug/L
CJ27916	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6.0	1.0	5	5	ug/L
CJ27916	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27916	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6.0	1.0	5	5	ug/L
CJ27916	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	22	1.0	20	20	ug/L
CJ27916	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27916	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27916	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27917	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27917	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27917	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27917	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27917	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	8.6	1.0	5	5	ug/L
CJ27917	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	23	1.0	20	20	ug/L
CJ27917	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27917	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27917	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27917	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	23	1.0	20	20	ug/L
CJ27917	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.6	1.0	5	5	ug/L
CJ27917	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	23	1.0	20	20	ug/L
CJ27917	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	8.6	1.0	5	5	ug/L
CJ27917	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27917	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	8.6	1.0	5	5	ug/L
CJ27917	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	23	1.0	20	20	ug/L
CJ27917	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	8.6	1.0	5	5	ug/L
CJ27917	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27917	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27917	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27918	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27918	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27918	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27918	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27918	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27918	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27918	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	14	1.0	5	5	ug/L
CJ27918	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27918	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	1.0	5	5	ug/L
CJ27918	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	14	1.0	5	5	ug/L
CJ27918	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	14	1.0	5	5	ug/L
CJ27918	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27918	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	14	1.0	5	5	ug/L
CJ27918	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27918	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27918	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27919	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27919	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27919	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27919	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27919	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27919	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27919	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	40	1.0	5	5	ug/L
CJ27919	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27919	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	40	1.0	5	5	ug/L
CJ27919	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	40	1.0	5	5	ug/L
CJ27919	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	40	1.0	5	5	ug/L
CJ27919	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27919	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	40	1.0	5	5	ug/L
CJ27919	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.40	0.20	0.3	0.3	ug/l
CJ27919	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.40	0.20	0.3	0.3	ug/l
CJ27919	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.40	0.20	0.3	0.3	ug/l
CJ27919	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27920	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27920	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27920	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27920	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27920	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27920	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27920	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	31	1.0	20	20	ug/L
CJ27920	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	110	10	5	5	ug/L
CJ27920	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	26	1.0	5	5	ug/L
CJ27920	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	10	5	5	ug/L
CJ27920	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	1.0	5	5	ug/L
CJ27920	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27920	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	31	1.0	20	20	ug/L
CJ27920	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	31	1.0	20	20	ug/L
CJ27920	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	110	10	5	5	ug/L
CJ27920	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	26	1.0	5	5	ug/L
CJ27920	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27920	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	110	10	5	5	ug/L
CJ27920	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	110	10	5	5	ug/L
CJ27920	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	31	1.0	20	20	ug/L
CJ27920	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27920	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27920	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27921	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27921	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27921	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27921	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27921	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	140	2.0	5	5	ug/L
CJ27921	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	45	1.0	5	5	ug/L
CJ27921	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	35	1.0	20	20	ug/L
CJ27921	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27921	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27921	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	35	1.0	20	20	ug/L
CJ27921	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27921	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	45	1.0	5	5	ug/L
CJ27921	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	2.0	5	5	ug/L
CJ27921	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	2.0	5	5	ug/L
CJ27921	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	35	1.0	20	20	ug/L
CJ27921	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	2.0	5	5	ug/L
CJ27921	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27921	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	45	1.0	5	5	ug/L
CJ27921	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	35	1.0	20	20	ug/L
CJ27921	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	2.0	5	5	ug/L
CJ27921	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5.3	0.20	0.3	0.3	ug/l
CJ27921	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.3	0.20	0.3	0.3	ug/l
CJ27921	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	5.3	0.20	0.3	0.3	ug/l
CJ27921	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27922	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27922	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27922	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27922	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	150	2.0	5	5	ug/L
CJ27922	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	53	1.0	5	5	ug/L
CJ27922	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	38	1.0	20	20	ug/L
CJ27922	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27922	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27922	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27922	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	38	1.0	20	20	ug/L
CJ27922	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	53	1.0	5	5	ug/L
CJ27922	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27922	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	2.0	5	5	ug/L
CJ27922	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	38	1.0	20	20	ug/L
CJ27922	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	53	1.0	50	50	ug/L

Friday, October 08, 2021

Sample Criteria Exceedances Report

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27922	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	2.0	5	5	ug/L
CJ27922	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27922	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150	2.0	5	5	ug/L
CJ27922	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	53	1.0	5	5	ug/L
CJ27922	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	38	1.0	20	20	ug/L
CJ27922	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	53	1.0	50	50	ug/L
CJ27922	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150	2.0	5	5	ug/L
CJ27922	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27922	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27922	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27923	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27923	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27923	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27923	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	44	1.0	20	20	ug/L
CJ27923	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27923	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27923	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	170	2.0	5	5	ug/L
CJ27923	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27923	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	51	1.0	5	5	ug/L
CJ27923	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	170	2.0	5	5	ug/L
CJ27923	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	51	1.0	5	5	ug/L
CJ27923	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	44	1.0	20	20	ug/L
CJ27923	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27923	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	170	2.0	5	5	ug/L
CJ27923	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	51	1.0	50	50	ug/L
CJ27923	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	44	1.0	20	20	ug/L
CJ27923	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	170	2.0	5	5	ug/L
CJ27923	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	51	1.0	5	5	ug/L
CJ27923	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27923	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	44	1.0	20	20	ug/L
CJ27923	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	170	2.0	5	5	ug/L
CJ27923	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	51	1.0	50	50	ug/L
CJ27923	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5.5	0.20	0.3	0.3	ug/l
CJ27923	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.5	0.20	0.3	0.3	ug/l
CJ27923	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	5.5	0.20	0.3	0.3	ug/l
CJ27923	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27924	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27924	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27924	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27924	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27924	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	45	1.0	20	20	ug/L
CJ27924	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	150	2.0	5	5	ug/L
CJ27924	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27924	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	46	1.0	5	5	ug/L
CJ27924	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27924	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	2.0	5	5	ug/L
CJ27924	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	46	1.0	5	5	ug/L
CJ27924	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	45	1.0	20	20	ug/L
CJ27924	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27924	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	45	1.0	20	20	ug/L
CJ27924	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	2.0	5	5	ug/L
CJ27924	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27924	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	46	1.0	5	5	ug/L
CJ27924	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150	2.0	5	5	ug/L
CJ27924	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150	2.0	5	5	ug/L
CJ27924	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	45	1.0	20	20	ug/L
CJ27924	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27924	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27924	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27925	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27925	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27925	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27925	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27925	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27925	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	41	1.0	5	5	ug/L
CJ27925	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	97	2.0	5	5	ug/L
CJ27925	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27925	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	41	1.0	5	5	ug/L
CJ27925	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27925	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	97	2.0	5	5	ug/L
CJ27925	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	97	2.0	5	5	ug/L
CJ27925	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	97	2.0	5	5	ug/L
CJ27925	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27925	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	41	1.0	5	5	ug/L
CJ27925	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	97	2.0	5	5	ug/L
CJ27925	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27925	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27925	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27926	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27926	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27926	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27926	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27926	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	27	1.0	5	5	ug/L
CJ27926	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	8.7	1.0	5	5	ug/L
CJ27926	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	10	1.0	2	2	ug/L
CJ27926	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27926	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27926	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	1.0	2	2	ug/L
CJ27926	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	1.0	5	5	ug/L
CJ27926	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.7	1.0	5	5	ug/L
CJ27926	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27926	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	10	1.0	2	2	ug/L
CJ27926	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	1.0	5	5	ug/L
CJ27926	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	8.7	1.0	5	5	ug/L
CJ27926	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	10	1.0	2	2	ug/L
CJ27926	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27926	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	27	1.0	5	5	ug/L
CJ27926	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	27	1.0	5	5	ug/L
CJ27926	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	10	1.0	2	2	ug/L
CJ27926	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27926	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ27926	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ27926	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.020	0.004	0.01	0.01	mg/L
CJ27926	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.020	0.004	0.01	0.01	mg/L
CJ27926	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.020	0.004	0.01	0.01	mg/L
CJ27926	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.018	0.004	0.01	0.01	mg/L
CJ27926	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.018	0.004	0.01	0.01	mg/L
CJ27926	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.018	0.004	0.01	0.01	mg/L
CJ27927	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27927	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	50		10	ug/L
CJ27927	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CJ27927	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ27927	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	4.9	2.0	2	2	ug/L
CJ27927	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	70	2.0	5	5	ug/L
CJ27927	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ27927	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.6	0.6	ug/L
CJ27927	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	300	5.0	20	20	ug/L
CJ27927	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00075	0.00075	ug/L
CJ27927	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.0075	0.0075	ug/L
CJ27927	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00033	0.00033	ug/L
CJ27927	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L

Friday, October 08, 2021

Sample Criteria Exceedances Report

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27927	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	4.9	2.0	2	2	ug/L
CJ27927	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	70	2.0	5	5	ug/L
CJ27927	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ27927	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	2.0	7	7	ug/L
CJ27927	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CJ27927	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	300	5.0	20	20	ug/L
CJ27927	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CJ27927	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	70	2.0	5	5	ug/L
CJ27927	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	4.9	2.0	2	2	ug/L
CJ27927	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	300	5.0	20	20	ug/L
CJ27927	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	4.9	2.0	2	2	ug/L
CJ27927	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	14	2.0	7	7	ug/L
CJ27927	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	70	2.0	5	5	ug/L
CJ27927	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	300	5.0	70	70	ug/L
CJ27927	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CJ27927	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CJ27927	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	300	5.0	20	20	ug/L
CJ27927	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	4.9	2.0	2	2	ug/L
CJ27927	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	70	2.0	5	5	ug/L
CJ27927	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	43	0.20	0.3	0.3	ug/l
CJ27927	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	43	0.20	0.3	0.3	ug/l
CJ27927	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	43	0.20	0.3	0.3	ug/l
CJ27927	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	0.3	0.3	ug/L
CJ27927	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.849	0.001	0.43	0.43	mg/L
CJ27927	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.872	0.001	0.43	0.43	mg/L
CJ27928	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ27928	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ27928	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ27928	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	47	1.0	5	5	ug/L
CJ27928	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ27928	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ27928	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ27928	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	77	1.0	5	5	ug/L
CJ27928	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	77	1.0	5	5	ug/L
CJ27928	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	47	1.0	5	5	ug/L
CJ27928	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ27928	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	77	1.0	5	5	ug/L
CJ27928	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ27928	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	77	1.0	5	5	ug/L
CJ27928	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	47	1.0	5	5	ug/L
CJ27928	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	77	1.0	5	5	ug/L

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27928	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.68	0.20	0.3	0.3	ug/l
CJ27928	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.68	0.20	0.3	0.3	ug/l
CJ27928	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.68	0.20	0.3	0.3	ug/l
CJ27928	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ27928	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.94	0.001	0.43	0.43	mg/L
CJ27928	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.94	0.001	0.43	0.43	mg/L
CJ27929	$8260GWR-WI	Hexachlorobutadiene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CJ27929	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	40		10	ug/L
CJ27929	$8260GWR-WI	1,4-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CJ27929	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	40		10	ug/L
CJ27929	$8260GWR-WI	Naphthalene	MA / CAM Protocol / SVOA AQ RL	ND	40		10	ug/L
CJ27929	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	40		10	ug/L
CJ27929	$8260GWR-WI	Vinyl chloride	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	Bromodichloromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	Bromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Bromobenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	tert-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Benzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	1000		10	ug/L
CJ27929	$8260GWR-WI	4-Methyl-2-pentanone	MA / CAM Protocol / VOA AQ RL	ND	200		10	ug/L
CJ27929	$8260GWR-WI	4-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	2-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	2,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	1,4-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	1,3-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Styrene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	2-Hexanone	MA / CAM Protocol / VOA AQ RL	ND	200		10	ug/L
CJ27929	$8260GWR-WI	Chlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	100		2	ug/L
CJ27929	$8260GWR-WI	Hexachlorobutadiene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	Ethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Dichlorodifluoromethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Dibromomethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	Dibromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	Isopropylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	Methyl ethyl ketone	MA / CAM Protocol / VOA AQ RL	ND	200		10	ug/L
CJ27929	$8260GWR-WI	Chloroform	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27929	$8260GWR-WI	Chloroethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	sec-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Methylene chloride	MA / CAM Protocol / VOA AQ RL	ND	200		2	ug/L
CJ27929	$8260GWR-WI	Carbon tetrachloride	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	200		2	ug/L
CJ27929	$8260GWR-WI	n-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	n-Propylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Bromomethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	o-Xylene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Bromoform	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	p-Isopropyltoluene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Chloromethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	1,1,2-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	1,2-Dibromoethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	1,2,4-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	1,1,1-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Trichlorotrifluoroethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	1,2,3-Trichloropropane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Toluene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	1,1-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CJ27929	$8260GWR-WI	Trichlorofluoromethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CJ27929	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	7	7	ug/L
CJ27929	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	5	5	ug/L
CJ27929	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	97	40	70	70	ug/L
CJ27929	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.6	0.6	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	3	3	ug/L
CJ27929	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	38	38	ug/L
CJ27929	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	7500	100	5	5	ug/L
CJ27929	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.47	0.47	ug/L

Friday, October 08, 2021

Sample Criteria Exceedances Report

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27929	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	8.3	8.3	ug/L
CJ27929	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	150	40	20	20	ug/L
CJ27929	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.00075	0.00075	ug/L
CJ27929	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.47	0.47	ug/L
CJ27929	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5600	100	5	5	ug/L
CJ27929	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.0075	0.0075	ug/L
CJ27929	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	0.00033	0.00033	ug/L
CJ27929	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	38	38	ug/L
CJ27929	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	3	3	ug/L
CJ27929	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	7	7	ug/L
CJ27929	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	4	4	ug/L
CJ27929	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.6	0.6	ug/L
CJ27929	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.5	0.5	ug/L
CJ27929	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5600	100	5	5	ug/L
CJ27929	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	3	3	ug/L
CJ27929	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.5	0.5	ug/L
CJ27929	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	3	3	ug/L
CJ27929	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	7	7	ug/L
CJ27929	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7500	100	5	5	ug/L
CJ27929	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	97	40	70	70	ug/L
CJ27929	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	40	20	20	ug/L
CJ27929	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	5	5	ug/L
CJ27929	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	4	4	ug/L
CJ27929	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.02	0.02	ug/L
CJ27929	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	30	20	7	7	ug/L
CJ27929	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27929	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5600	100	50	50	ug/L
CJ27929	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	7500	100	5	5	ug/L
CJ27929	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	10	10	ug/L
CJ27929	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	40	20	20	ug/L
CJ27929	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	9	9	ug/L
CJ27929	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	3	3	ug/L
CJ27929	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	6	6	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	7	7	ug/L
CJ27929	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7500	100	5	5	ug/L
CJ27929	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	0.02	0.02	ug/L
CJ27929	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	30	20	7	7	ug/L
CJ27929	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	5600	100	5	5	ug/L
CJ27929	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	97	40	70	70	ug/L
CJ27929	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	0.6	0.6	ug/L
CJ27929	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	3	3	ug/L
CJ27929	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150	40	70	70	ug/L
CJ27929	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	20	4	4	ug/L
CJ27929	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	10	10	ug/L
CJ27929	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	200	5	5	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	7500	100	5	5	ug/L
CJ27929	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150	40	20	20	ug/L
CJ27929	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	10	10	ug/L
CJ27929	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	5	5	ug/L
CJ27929	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	9	9	ug/L
CJ27929	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	7	7	ug/L
CJ27929	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	6	6	ug/L

Friday, October 08, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ27912 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ27929	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CJ27929	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	3	3	ug/L
CJ27929	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	5600	100	50	50	ug/L
CJ27929	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	7500	100	5000	5000	ug/L
CJ27929	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	4000	0.3	0.3	ug/L
CJ27929	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	4000	0.3	0.3	ug/L
CJ27929	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	4000	0.3	0.3	ug/L
CJ27929	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.986	0.001	0.43	0.43	mg/L
CJ27929	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.94	0.010	0.43	0.43	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ27912, CJ27913, CJ27914, CJ27915, CJ27916, CJ27917, CJ27918, CJ27919, CJ27920, CJ27921, CJ27922, CJ27923, CJ27924, CJ27925, CJ27926, CJ27927, CJ27928, CJ27929

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: Rashmi Makol

Date: Friday, October 08, 2021

Printed Name: Rashmi Makol

Position: Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 08, 2021

SDG I.D.: GCJ27912

SDG Comments

Metals Analysis:
The client requested a site specific list of elements which is shorter than the 6010 MCP list.

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GWP. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/17/21-1 Adam Werner, Chemist 09/17/21

CJ27919 (1X), CJ27921 (1X), CJ27923 (1X), CJ27927 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0917):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0917_11-DIOX_0917) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM34 09/24/21-1 Adam Werner, Chemist 09/24/21

CJ27928 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0924_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Environmental Laboratories, Inc.
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NY # 11301

MCP Certification Report

October 08, 2021

SDG I.D.: GCJ27912

522 - DIOXANE

Batch 593240 (CJ31559)

CJ27928

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

QC (Site Specific):

Batch 592174 (CJ27928)

CJ27919, CJ27921, CJ27923, CJ27927

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 592367 (Samples: CJ27917, CJ27919, CJ27921, CJ27923): -----

A trace amount of an analyte was found in blank but were not reported in the sample(s), therefore no bias is suspected. (C9 - Nonane)

QC Batch 593018 (Samples: CJ27927): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (C18 - Octadecane)

Instrument:

AU-FID3 09/20/21-1 Adam Werner, Chemist 09/20/21

CJ27917 (1X), CJ27923 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID3 09/23/21-1 Adam Werner, Chemist 09/23/21

CJ27927 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0810BI) RSD for the compound list was less than 25% except for the following compounds: None.

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MCP Certification Report

October 08, 2021

SDG I.D.: GCJ27912

EPH Narration

The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/17/21-1 Adam Werner, Chemist 09/17/21

CJ27919 (1X), CJ27921 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/20/21-1 Adam Werner, Chemist 09/20/21

CJ27917 (1X), CJ27923 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/22/21-1 Adam Werner, Chemist 09/22/21

CJ27927 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 592367 (CJ27610)

CJ27917, CJ27919, CJ27921, CJ27923

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

Batch 593018 (CJ31474)

CJ27927

All LCS recoveries were within 40 - 140 with the following exceptions: C18 - Octadecane(143%)
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/17/21-1 Greg Danielewski, Chemist 09/17/21

CJ27917 , CJ27920 , CJ27927 , CJ27928 , CJ27929

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 08, 2021

SDG I.D.: GCJ27912

Wet Chemistry Analysis

QC (Site Specific):

Batch 592492 (CJ27928)

CJ27917, CJ27920, CJ27927, CJ27928, CJ27929

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 592588 (CJ27928)

CJ27917, CJ27920, CJ27927, CJ27928, CJ27929

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/14/21-1 Brian Sheriden, Greg Danielewski, Chemist 09/14/21

CJ27917 , CJ27920 , CJ27927 , CJ27928 , CJ27929

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/15/21-1 Brian Sheriden, Greg Danielewski, Chemist 09/15/21

CJ27927 , CJ27928 , CJ27929

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 592075 (CJ27574)

CJ27917, CJ27920

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 592077 (CJ28254)

CJ27917

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 592283 (CJ29233)

CJ27927, CJ27928

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SDG I.D.: GCJ27912

IC

All LCS recoveries were within 90 - 110 with the following exceptions: None.

QC (Site Specific):

Batch 592076 (CJ27928)

CJ27927, CJ27928, CJ27929

All LCS recoveries were within 90 - 110 with the following exceptions: None.
All MS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/15/21 08:15 Emily Kolominskaya, Tina Hall, Chemist 09/15/21

CJ27917, CJ27920, CJ27921, CJ27925, CJ27926, CJ27927, CJ27928, CJ27929

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Site Specific):

Batch 591885 (CJ27928)

CJ27917, CJ27920, CJ27921, CJ27925, CJ27926, CJ27927, CJ27928, CJ27929

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 591889 (CJ27928)

CJ27917, CJ27920, CJ27921, CJ27925, CJ27926, CJ27927, CJ27928, CJ27929

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.

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ICP Metals Narration

All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM27 09/16/21-1 Wes Bryon, Chemist 09/16/21

CJ27917 (1X), CJ27919 (1X), CJ27921 (1X), CJ27923 (1X), CJ27927 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0706):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/0916_03-27_BNSIM18_0706) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: % Nitrobenzene-d5 27%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 592025 (CJ27741)

CJ27917, CJ27919, CJ27921, CJ27923, CJ27927

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

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SDG I.D.: GCJ27912

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 593727 (Samples: CJ27919, CJ27921, CJ27922, CJ27923, CJ27924, CJ27925, CJ27928): -----

The LCS/LCSD recovery is acceptable. One or more analytes in the site specific matrix spike recovery is below the method criteria, therefore a low bias is likely. (2,2-Dichloropropane)

The MS and/or the MSD recovery is above the upper range, therefore a slight high bias is possible. (Tetrachloroethene, Trichloroethene)

The MS/MSD RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (1,1,1-Trichloroethane, Bromomethane, Carbon Disulfide, Chloroethane, Chloroform, Dichlorodifluoromethane, Ethyl ether, Methyl ethyl ketone, Methyl t-butyl ether (MTBE), Methylene chloride, trans-1,2-Dichloroethene, Trichlorofluoromethane, Trichlorotrifluoroethane)

QC Batch 593833 (Samples: CJ27927): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,2-Dibromo-3-chloropropane)

Instrument:

CHEM23 09/22/21-1 Michael Hahn, Chemist 09/22/21

CJ27917 (1X), CJ27920 (10X), CJ27927 (5X), CJ27929 (100X)

Initial Calibration Evaluation (CHEM23/VOA23_092121):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.072 (0.1), Tetrachloroethene 0.161 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_03-VOA23_092121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 26%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.067 (0.1), Tetrachloroethene 0.178 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/22/21-2 Michael Hahn, Chemist 09/22/21

CJ27912 (1X), CJ27913 (1X), CJ27915 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092121):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.072 (0.1), Tetrachloroethene 0.161 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

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Continuing Calibration Verification (CHEM23/0922_34-VOA23_092121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
93% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 2,2-Dichloropropane 21%L (20%), Di-isopropyl ether 21%L (20%), Trichlorofluoromethane 26%H (20%), Trichlorotrifluoroethane 21%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.083 (0.1), Tetrachloroethene 0.177 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/24/21-2 Michael Hahn, Chemist 09/24/21

CJ27914 (1X), CJ27916 (1X), CJ27918 (1X), CJ27920 (1X), CJ27926 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0924_51-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.084 (0.1), Tetrachloroethene 0.154 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/25/21-1 Michael Hahn, Chemist 09/25/21

CJ27919 (1X), CJ27921 (2X), CJ27922 (2X), CJ27923 (2X), CJ27924 (2X), CJ27925 (2X), CJ27928 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0925_03-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 23%H (20%), Di-isopropyl ether 24%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.088 (0.1), Tetrachloroethene 0.166 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/27/21-1 Michael Hahn, Chemist 09/27/21

CJ27927 (2X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.

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VOA Narration

The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0927_03-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 29%H (20%), Dichlorodifluoromethane 35%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.075 (0.1), Tetrachloroethene 0.172 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/27/21-2 Michael Hahn, Chemist 09/27/21

CJ27921 (1X), CJ27922 (1X), CJ27923 (1X), CJ27924 (1X), CJ27925 (1X), CJ27929 (40X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0927_35-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Acetone 22%H (20%), Chloroethane 21%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 593226 (CJ27035) CHEM23 9/22/2021-1

CJ27917(1X), CJ27920(10X), CJ27927(5X), CJ27929(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593271 (CJ27912) CHEM23 9/22/2021-2

CJ27912(1X), CJ27913(1X), CJ27915(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

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SDG I.D.: GCJ27912

VOA Narration

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593684 (CJ29230) CHEM23 9/24/2021-2

CJ27914(1X), CJ27916(1X), CJ27918(1X), CJ27920(1X), CJ27926(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593828 (CJ31570) CHEM23 9/27/2021-2

CJ27921(1X), CJ27922(1X), CJ27923(1X), CJ27924(1X), CJ27925(1X), CJ27929(40X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593833 (CJ30888) CHEM23 9/27/2021-1

CJ27927(2X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2-Dibromo-3-chloropropane(140%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 593727 (CJ27928) CHEM23 9/25/2021-1

CJ27919(1X), CJ27921(2X), CJ27922(2X), CJ27923(2X), CJ27924(2X), CJ27925(2X), CJ27928(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: 2,2-Dichloropropane(66%)
All MS/MSD RPDs were less than 20% with the following exceptions: 1,1,1-Trichloroethane(21.3%), Bromomethane(22.2%), Carbon Disulfide(20.7%), Chloroethane(28.6%), Chloroform(21.2%), Dichlorodifluoromethane(21.1%), Ethyl ether(22.0%), Methyl ethyl ketone(21.8%), Methyl t-butyl ether (MTBE)(20.7%), Methylene chloride(26.4%), trans-1,2-Dichloroethene(26.4%), Trichlorofluoromethane(23.3%), Trichlorotrifluoroethane(25.0%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD

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October 08, 2021

SDG I.D.: GCJ27912

VOA Narration

compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/14/21-2 Raman Makol, Chemist 09/14/21

CJ27917 (1X), CJ27919 (1X), CJ27921 (1X), CJ27923 (1X), CJ27927 (1X)

Initial Calibration Evaluation (PIDFID/VPH_090221_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 592158 (CJ27612)

CJ27917(1X), CJ27919(1X), CJ27921(1X), CJ27923(1X), CJ27927(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 2.3 °C Pg of

CHAIN OF CUSTODY RECORD

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Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature Date:

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
27912	21A-TB02-091321-1	GW	9/13/21	0805	2							X									
27913	21A-AE106S-091321-1	GW	9/13/21	1630	3							X									
27914	21A-AE106M-091321-1	GW	9/13/21	1535	3							X									
27915	21A-AE106R1-091321-1	GW	9/13/21	1440	3							X									
27916	21A-AE106R2-091321-1	GW	9/13/21	1445	3							X									
27917	21A-AE106R3-091321-1	GW	9/13/21	1450	5	4		4				X		X	X	X	X	X	X	X	
27918	21A-AE106R4-091321-1	GW	9/13/21	1455	3	1						X									
27919	21A-AE106R5-091321-1	GW	9/13/21	1500	5	4						X	X	X	X						
27920	21A-AE105R1-091321-1	GW	9/13/21	1355	3	1		4				X					X	X	X	X	
27921	21A-AE105R2-091321-1	GW	9/13/21	1405	5	4		2				X	X	X	X	X					
27922	21A-AE105R3-091321-1	GW	9/13/21	1415	3							X									
27923	21A-AE105R4-091321-1	GW	9/13/21	1425	5	4						X	X	X	X						

Relinquished by:	Accepted by:	Date:	Time:
	9-14-21	9-15-21	13:50
		9/14/21	15:44

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other:

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

Temp 2.3 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/14/21

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
27924	21A-AE105R6-091321-1	GW	9/13/21	1435	3							X									
27925	21A-TRC301R2-091321-1	GW	9/13/21	1620	3			2				X				X					
27926	21A-TRC301R4-091321-1	GW	9/13/21	1515	3			2				X				X					
27927	21A-AE219R6-091421-1	GW	9/14/21	1140	5	5		8	4			X	X	X	X	X	X	X	X	X	
27928	21A-AE103D-091421-1	GW	9/14/21	1045	9	6		4	12			X	X			X	X	X	X	X	MS/MSD
	~~21A-AE~~ (DD)		9/14/21																		
27929	21A-GZA105R-091421-1	GW	9/14/21	1140	3	1		4				X					X	X	X	X	

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-14-21	13:50
	[signature]	9/14/21	15:44

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

PHOENIX
Environmental Laboratories, Inc.

Thursday, October 14, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.25**
SDG ID: **GCJ29227**
Sample ID#s: CJ29227 - CJ29236

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 14, 2021

SDG I.D.: GCJ29227

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver.2:
This report has been revised to include MS/MSD values for VPH and metals per the chain of custody.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 14, 2021

SDG I.D.: GCJ29227

Project ID: LOCKHEED WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-TRC101-091421-1	CJ29227	GROUND WATER
21A-GZA12-091421-1	CJ29228	GROUND WATER
21A-GZA101R-091421-1	CJ29229	GROUND WATER
21A-TB01-091421-1	CJ29230	GROUND WATER
21A-GZA105D-091521-1	CJ29231	GROUND WATER
21A-GZA105D-091521-2	CJ29232	GROUND WATER
21A-AE3-091521-1	CJ29233	GROUND WATER
21A-AE102M-091521-1	CJ29234	GROUND WATER
21A-AE102D-091521-1	CJ29235	GROUND WATER
21A-GZA105S-091521-1	CJ29236	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 14, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/21	15:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/15/21	17:29
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ29227
Phoenix ID: CJ29227

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-TRC101-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	10.2	0.011	mg/L	1	09/16/21	TH	SW6010D
Manganese (Dissolved)	2.22	0.011	mg/L	10	09/18/21	TH	SW6010D
Iron	11.6	0.010	mg/L	1	09/16/21	EK	SW6010D
Manganese	2.33	0.010	mg/L	10	09/18/21	TH	SW6010D
Chloride	611	50.0	mg/L	10	09/16/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/16/21 03:02	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/16/21 00:24	BS/GD	E300.0
Sulfate	< 5.0	5.0	mg/L	1	09/16/21	BS/GD	E300.0
Sulfide	0.44	0.05	mg/L	1	09/17/21	GD	SM4500S-D-11
Total Organic Carbon	7.3	1.0	mg/L	1	09/20/21	BJA	SM5310B-11
EPH Extraction	Completed				09/17/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/15/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/16/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/15/21	AG	SW3005A
Total Metals Digestion	Completed				09/15/21		
MA Petroleum Hydrocarbon (VPH)	Completed				09/17/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	1.1	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29227

Client ID: 21A-TRC101-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	3.1	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	9.0	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	13	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	11	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	14	1.0	ug/L	1	09/25/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Tetrachloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C	
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C	
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C	
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C	
Trichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C	
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C	
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C	
Vinyl chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	102		%	1	09/25/21	MH	70 - 130 %	
% Bromofluorobenzene	101		%	1	09/25/21	MH	70 - 130 %	
% Dibromofluoromethane	96		%	1	09/25/21	MH	70 - 130 %	
% Toluene-d8	100		%	1	09/25/21	MH	70 - 130 %	
Oxygenates& Dioxane								
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)	
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)	
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)	
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)	
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)	
Semivolatiles by SIM, PAH								
2-Methylnaphthalene	0.86	0.49	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Acenaphthene	ND	0.49	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Acenaphthylene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Anthracene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Benz(a)anthracene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Benzo(a)pyrene	ND	0.19	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Benzo(ghi)perylene	0.03	0.02	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Chrysene	ND	0.05	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Dibenz(a,h)anthracene	0.03	0.02	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Fluoranthene	ND	0.49	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Fluorene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Naphthalene	ND	0.49	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Phenanthrene	ND	0.49	ug/L	1	09/17/21	WB	SW8270D (SIM)	
Pyrene	ND	0.07	ug/L	1	09/17/21	WB	SW8270D (SIM)	
QA/QC Surrogates								
% 2-Fluorobiphenyl	65		%	1	09/17/21	WB	40 - 140 %	
% Nitrobenzene-d5	78		%	1	09/17/21	WB	40 - 140 %	
% Terphenyl-d14	39		%	1	09/17/21	WB	40 - 140 %	3
MA EPH Aliphatic/Aromatic Ranges								
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/18/21	AW	MAEPH 5/2019	
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/18/21	AW	MAEPH 5/2019	
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/18/21	AW	MAEPH 5/2019	

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29227
Client ID: 21A-TRC101-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/18/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/18/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	76		%	1	09/18/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	94		%	1	09/18/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	97		%	1	09/18/21	AW	40 - 140 %
% o-terphenyl (aromatic)	91		%	1	09/18/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	770	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	520	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	240	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Ethyl Benzene	5.8	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
o-Xylene	1.3	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	108		%	1	09/17/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	103		%	1	09/17/21	RM	70 - 130 %

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Semi-Volatile Comment:
Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 14, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Ver 2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 14, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/21	15:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/15/21	17:29
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ29227
Phoenix ID: CJ29228

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-GZA12-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/16/21	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/16/21	TH	SW6010D
Iron (Dissolved)	0.015	0.011	mg/L	1	09/16/21	TH	SW6010D
Manganese (Dissolved)	0.325	0.001	mg/L	1	09/16/21	TH	SW6010D
Iron	0.058	0.010	mg/L	1	09/16/21	EK	SW6010D
Manganese	0.316	0.001	mg/L	1	09/16/21	EK	SW6010D
Chloride	623	50.0	mg/L	10	09/16/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/16/21 03:11	BS/GD	E300.0
Nitrate as Nitrogen	9.17	0.50	mg/L	10	09/16/21 03:11	BS/GD	E300.0
Sulfate	31.0	5.0	mg/L	1	09/16/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/17/21	GD	SM4500S-D-11
Total Organic Carbon	1.3	1.0	mg/L	1	09/20/21	BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/15/21	AG	SW3005A
Total Metals Digestion	Completed				09/15/21		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29228

Client ID: 21A-GZA12-091421-1

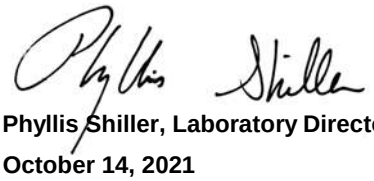
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	0.52	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	09/17/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	70		%	1	09/17/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/16/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 14, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 14, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/21	14:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/15/21	17:29
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ29227
Phoenix ID: CJ29229

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-GZA101R-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/16/21	EK	SW6010D
Arsenic (Dissolved)	0.004	0.004	mg/L	1	09/16/21	TH	SW6010D
Iron (Dissolved)	17.2	0.011	mg/L	1	09/16/21	TH	SW6010D
Manganese (Dissolved)	6.66	0.011	mg/L	10	09/18/21	TH	SW6010D
Iron	16.8	0.010	mg/L	1	09/16/21	EK	SW6010D
Manganese	6.87	0.010	mg/L	10	09/18/21	TH	SW6010D
Chloride	1160	125	mg/L	25	09/16/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.100	0.100	mg/L	25	09/16/21 03:20	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/16/21 00:42	BS/GD	E300.0
Sulfate	56.7	5.0	mg/L	1	09/16/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/20/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/20/21	BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/15/21	AG	SW3005A
Total Metals Digestion	Completed				09/15/21		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29229

Client ID: 21A-GZA101R-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	4.8	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	220	10	ug/L	10	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29229
Client ID: 21A-GZA101R-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	110	10	ug/L	10	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/25/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	100		%	10	09/27/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	97		%	10	09/27/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	98		%	10	09/27/21	MH	70 - 130 %
% Toluene-d8 (10x)	99		%	10	09/27/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 14, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 14, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/15/21	17:29
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ29227
Phoenix ID: CJ29230

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-TB01-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29230

Client ID: 21A-TB01-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29230

Client ID: 21A-TB01-091421-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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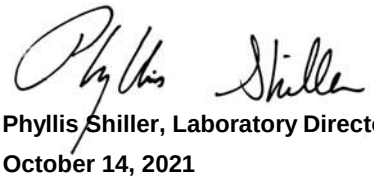
If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 14, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 14, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/21	10:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/15/21	17:29
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ29227
Phoenix ID: CJ29231

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-GZA105D-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	2.73	0.011	mg/L	1	09/16/21	TH	SW6010D
Manganese (Dissolved)	2.02	0.001	mg/L	1	09/16/21	TH	SW6010D
Iron	3.07	0.010	mg/L	1	09/16/21	EK	SW6010D
Manganese	1.93	0.001	mg/L	1	09/16/21	EK	SW6010D
Chloride	701	50.0	mg/L	10	09/17/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/17/21 03:40	BS/GD	E300.0
Nitrate as Nitrogen	0.45	0.05	mg/L	1	09/16/21 23:32	BS/GD	E300.0
Sulfate	19.6	5.0	mg/L	1	09/16/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/20/21	GD	SM4500S-D-11
Total Organic Carbon	1.3	1.0	mg/L	1	09/20/21	BJA	SM5310B-11
EPH Extraction	Completed				09/17/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/15/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/16/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/15/21	AG	SW3005A
Total Metals Digestion	Completed				09/15/21		
MA Petroleum Hydrocarbon (VPH)	Completed				09/16/21	CMG	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	1.3	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	1.0	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29231

Client ID: 21A-GZA105D-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	33	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Tetrachloroethene	17	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	38	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	8.4	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	0.02	0.02	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/17/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/17/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/17/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	65		%	1	09/17/21	WB	40 - 140 %
% Nitrobenzene-d5	79		%	1	09/17/21	WB	40 - 140 %
% Terphenyl-d14	72		%	1	09/17/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	0.65	0.20	ug/l	1	09/17/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	72		%	1	09/17/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/16/21	G/G	

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/18/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/18/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/18/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/18/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/18/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	55		%	1	09/18/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	84		%	1	09/18/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	89		%	1	09/18/21	AW	40 - 140 %
% o-terphenyl (aromatic)	65		%	1	09/18/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	104		%	1	09/16/21	CMG	70 - 130 %
% 2,5-Dibromotoluene (PID)	104		%	1	09/16/21	CMG	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

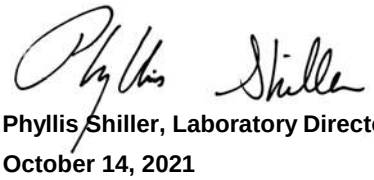
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 14, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 14, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/21	10:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/15/21	17:29
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ29227
Phoenix ID: CJ29232

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-GZA105D-091521-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	2.56	0.011	mg/L	1	09/16/21	TH	SW6010D
Manganese (Dissolved)	2.00	0.001	mg/L	1	09/16/21	TH	SW6010D
Iron	3.03	0.010	mg/L	1	09/16/21	EK	SW6010D
Manganese	1.94	0.001	mg/L	1	09/16/21	EK	SW6010D
Chloride	715	50.0	mg/L	10	09/16/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/16/21 23:41	BS/GD	E300.0
Nitrate as Nitrogen	0.48	0.05	mg/L	1	09/16/21 07:24	BS/GD	E300.0
Sulfate	20.1	5.0	mg/L	1	09/16/21	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/20/21	GD	SM4500S-D-11
Total Organic Carbon	1.4	1.0	mg/L	1	09/20/21	BJA	SM5310B-11
EPH Extraction	Completed				09/20/21	JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/15/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/16/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/15/21	AG	SW3005A
Total Metals Digestion	Completed				09/15/21		
MA Petroleum Hydrocarbon (VPH)	Completed				09/17/21	CMG	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	1.4	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	1.1	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29232

Client ID: 21A-GZA105D-091521-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	35	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Tetrachloroethene	19	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	42	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Vinyl chloride	9.4	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/27/21	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/27/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/17/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/17/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/17/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	64		%	1	09/17/21	WB	40 - 140 %
% Nitrobenzene-d5	82		%	1	09/17/21	WB	40 - 140 %
% Terphenyl-d14	71		%	1	09/17/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	0.70	0.20	ug/l	1	09/20/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	101		%	1	09/20/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/17/21	G/G	

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/21/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/21/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/21/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/21/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/21/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	103		%	1	09/21/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	94		%	1	09/21/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	103		%	1	09/21/21	AW	40 - 140 %
% o-terphenyl (aromatic)	100		%	1	09/21/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	110		%	1	09/17/21	CMG	70 - 130 %
% 2,5-Dibromotoluene (PID)	101		%	1	09/17/21	CMG	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

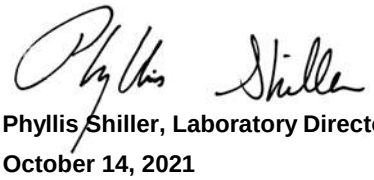
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 14, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 14, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/21	9:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/15/21	17:29
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ29227
Phoenix ID: CJ29233

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE3-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.034	0.004	mg/L	1	09/16/21	EK	SW6010D
Arsenic (Dissolved)	0.034	0.004	mg/L	1	09/16/21	TH	SW6010D
Iron (Dissolved)	14.3	0.011	mg/L	1	09/16/21	TH	SW6010D
Manganese (Dissolved)	2.21	0.011	mg/L	10	09/18/21	TH	SW6010D
Iron	13.7	0.010	mg/L	1	09/16/21	EK	SW6010D
Manganese	2.18	0.010	mg/L	10	09/18/21	TH	SW6010D
Chloride	459	50.0	mg/L	10	09/16/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/16/21 23:50	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/16/21 07:33	BS/GD	E300.0
Sulfate	< 5.0	5.0	mg/L	1	09/16/21	BS/GD	E300.0
Sulfide	0.21	0.05	mg/L	1	09/20/21	GD	SM4500S-D-11
Total Organic Carbon	3.8	1.0	mg/L	1	09/20/21	BJA	SM5310B-11
Client MS/MSD	Completed				09/25/21		
EPH Extraction	Completed				09/21/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/15/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/16/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/15/21	AG	SW3005A
Total Metals Digestion	Completed				09/15/21		
MA Petroleum Hydrocarbon (VPH)	Completed				09/16/21	CMG	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29233

Client ID: 21A-AE3-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	4.8	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	7.5	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	6.9	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	13	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
sec-Butylbenzene	8.7	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	6.5	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	3.5	0.47	ug/L	1	09/17/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/17/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	0.03	0.02	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/17/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	0.03	0.02	ug/L	1	09/17/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/17/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)
Naphthalene	4.3	0.47	ug/L	1	09/17/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/17/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/17/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	09/17/21	WB	40 - 140 %
% Nitrobenzene-d5	74		%	1	09/17/21	WB	40 - 140 %
% Terphenyl-d14	68		%	1	09/17/21	WB	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	09/23/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	09/23/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/23/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/23/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	190	ug/L	1	09/23/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	50		%	1	09/23/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	97		%	1	09/23/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	92		%	1	09/23/21	AW	40 - 140 %
% o-terphenyl (aromatic)	85		%	1	09/23/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	870	100	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	620	100	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	250	100	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
Naphthalene	8.9	5.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
o-Xylene	1.6	1.0	ug/L	1	09/16/21	CMG	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	106		%	1	09/16/21	CMG	70 - 130 %
% 2,5-Dibromotoluene (PID)	104		%	1	09/16/21	CMG	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

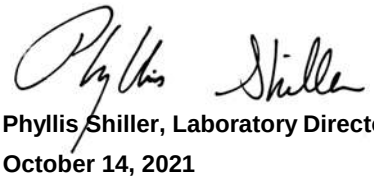
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 14, 2021

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 14, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/21	10:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/15/21	17:29
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ29227
Phoenix ID: CJ29234

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE102M-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.013	0.004	mg/L	1	09/16/21	EK	SW6010D
Arsenic (Dissolved)	0.015	0.004	mg/L	1	09/16/21	TH	SW6010D
Iron (Dissolved)	2.41	0.011	mg/L	1	09/16/21	TH	SW6010D
Manganese (Dissolved)	13.2	0.011	mg/L	10	09/18/21	TH	SW6010D
Iron	2.27	0.010	mg/L	1	09/16/21	EK	SW6010D
Manganese	13.9	0.010	mg/L	10	09/18/21	TH	SW6010D
Chloride	689	50.0	mg/L	10	09/17/21	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/17/21 00:20	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/16/21 07:42	BS/GD	E300.0
Sulfate	7.7	5.0	mg/L	1	09/16/21	BS/GD	E300.0
Sulfide	0.06	0.05	mg/L	1	09/20/21	GD	SM4500S-D-11
Total Organic Carbon	2.2	1.0	mg/L	1	09/20/21	BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/15/21	AG	SW3005A
Total Metals Digestion	Completed				09/15/21		

Volatiles

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	2.2	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	1.3	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29234

Client ID: 21A-AE102M-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	49	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	2.9	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	10	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	23	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	13	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	99		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.73	0.20	ug/l	1	09/20/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	99		%	1	09/20/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/17/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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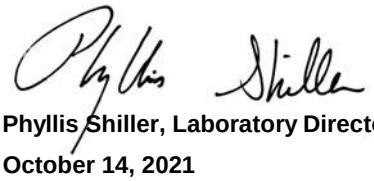

Phyllis Shiller, Laboratory Director
October 14, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 14, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/21	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/15/21	17:29
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ29227
Phoenix ID: CJ29235

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE102D-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	8.7	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	1.1	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29235

Client ID: 21A-AE102D-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	77	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	1.3	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	4.4	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	2.7	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	29	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Vinyl chloride	33	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)

Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	5.3	0.20	ug/l	1	09/20/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	94		%	1	09/20/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/17/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 14, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 14, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/21	13:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/15/21	17:29
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ29227
Phoenix ID: CJ29236

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-GZA105S-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.156	0.004	mg/L	1	09/16/21	EK	SW6010D
Arsenic (Dissolved)	0.170	0.004	mg/L	1	09/16/21	TH	SW6010D
EPH Extraction	Completed				09/20/21	JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/15/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/16/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/15/21	AG	SW3005A
Total Metals Digestion	Completed				09/15/21		
MA Petroleum Hydrocarbon (VPH)	Completed				09/17/21	CMG	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/25/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29236

Client ID: 21A-GZA105S-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/25/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/25/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
tert-Butylbenzene	1.9	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/25/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/25/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/25/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	ND	1.0	ug/L	1	09/25/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/25/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/25/21	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/25/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/25/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/25/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/25/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/17/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/17/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/17/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/17/21	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	09/17/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/17/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	67		%	1	09/17/21	WB	40 - 140 %
% Nitrobenzene-d5	72		%	1	09/17/21	WB	40 - 140 %
% Terphenyl-d14	72		%	1	09/17/21	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/21/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/21/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/21/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/21/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/21/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	83		%	1	09/21/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	90		%	1	09/21/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	103		%	1	09/21/21	AW	40 - 140 %
% o-terphenyl (aromatic)	84		%	1	09/21/21	AW	40 - 140 %

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ29236
Client ID: 21A-GZA105S-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	190	100	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	130	100	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
Ethyl Benzene	1.5	1.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/17/21	CMG	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	107		%	1	09/17/21	CMG	70 - 130 %
% 2,5-Dibromotoluene (PID)	106		%	1	09/17/21	CMG	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 14, 2021
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 14, 2021

QA/QC Data

SDG I.D.: GCJ29227

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 592054 (mg/L), QC Sample No: CJ29233 (CJ29227, CJ29228, CJ29229, CJ29231, CJ29232, CJ29233, CJ29234, CJ29236)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.034	0.035	2.90	102	99.8	2.2	101	102	1.0	80 - 120	20
Iron	BRL	0.010	13.7	13.8	0.70	99.0	99.4	0.4	77.0	90.0	15.6	80 - 120	20
Manganese	BRL	0.001	2.18	2.15	1.40	99.2	99.7	0.5	99.0	105	5.9	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 592047 (mg/L), QC Sample No: CJ29233 (CJ29227, CJ29228, CJ29229, CJ29231, CJ29232, CJ29233, CJ29234, CJ29236)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.034	0.034	0	95.5	93.9	1.7	93.8	95.3	1.6	80 - 120	20
Iron	BRL	0.011	14.3	14.3	0	98.5	96.2	2.4	98.4	89.2	9.8	80 - 120	20
Manganese	BRL	0.001	2.21	2.23	0.90	99.8	97.8	2.0	92.5	93.0	0.5	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 14, 2021

QA/QC Data

SDG I.D.: GCJ29227

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 592492 (mg/L), QC Sample No: CJ27928 (CJ29227, CJ29228)														
Sulfide	BRL	0.05	<0.05	0.07	NC	104			98.7			90 - 110	20	
Comment:														
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.														
QA/QC Batch 592776 (mg/L), QC Sample No: CJ29233 (CJ29229, CJ29231, CJ29232, CJ29233, CJ29234)														
Sulfide	BRL	0.05	0.21	0.21	NC	102			90.1			90 - 110	20	
Comment:														
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.														
QA/QC Batch 592838 (mg/L), QC Sample No: CJ29233 (CJ29227, CJ29228, CJ29229, CJ29231, CJ29232, CJ29233, CJ29234)														
Total Organic Carbon	BRL	1.0	3.8	3.9	NC	102			100			85 - 115	20	
Comment:														
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.														
QA/QC Batch 592076 (mg/L), QC Sample No: CJ27928 (CJ29227, CJ29228, CJ29229)														
Chloride	BRL	5.0	848	852	0.50	97.3			99.4			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	5.09	5.10	0.20	90.3			110			90 - 110	20	
Nitrite as Nitrogen	BRL	0.01	<0.100	<0.25	NC	99.2			97.5			90 - 110	20	
Sulfate	BRL	5.0	36.2	35.1	3.10	95.3			97.9			90 - 110	20	
QA/QC Batch 592282 (mg/L), QC Sample No: CJ29126 (CJ29232, CJ29233, CJ29234)														
Chloride	BRL	5.0	26.3	26.4	0.40	97.6			99.8			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.39	0.38	2.60	91.6			89.2			90 - 110	20	m
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	92.2			109			90 - 110	20	
Sulfate	BRL	5.0	12.5	12.1	NC	96.4			96.6			90 - 110	20	
QA/QC Batch 592283 (mg/L), QC Sample No: CJ29233 (CJ29233, CJ29234)														
Chloride	BRL	5.0	459	460	0.20	98.7			99.0			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	<0.05	<0.05	NC	91.0			85.5			90 - 110	20	m
Nitrite as Nitrogen	BRL	0.01	<0.040	<0.10	NC	93.8			106			90 - 110	20	
Sulfate	BRL	5.0	<5.0	<5.0	NC	96.2			92.9			90 - 110	20	
QA/QC Batch 592522 (mg/L), QC Sample No: CJ30700 (CJ29231)														
Chloride	BRL	5.0	66.1	66.1	0	97.7			99.1			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.32	0.31	3.20	90.0			89.4			90 - 110	20	m
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	91.5			102			90 - 110	20	
Sulfate	BRL	5.0	5.1	<5.0	NC	97.3			93.6			90 - 110	20	
QA/QC Batch 592523 (mg/L), QC Sample No: CJ30936 (CJ29231, CJ29232, CJ29233)														
Chloride	BRL	5.0	50.8	50.9	0.20	97.3			97.8			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	1.46	1.47	0.70	90.7			87.6			90 - 110	20	m
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	91.3			101			90 - 110	20	
Sulfate	BRL	5.0	9.5	9.1	NC	97.1			93.8			90 - 110	20	

m = This parameter is outside laboratory MS/MSD specified recovery limits.

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QA/QC Report

October 14, 2021

QA/QC Data

SDG I.D.: GCJ29227

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 592174 (ug/l), QC Sample No: CJ27928 (CJ29228, CJ29231)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	75	76	1.3	77	79	2.6	70 - 130	20
% 1,4-dioxane-d8	71	%	74	70	5.6	71	71	0.0	70 - 130	20
QA/QC Batch 592430 (ug/l), QC Sample No: CJ29232 (CJ29232, CJ29234, CJ29235)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	78	80	2.5	83			70 - 130	20
% 1,4-dioxane-d8	100	%	114	114	0.0	111			70 - 130	20
QA/QC Batch 592367 (ug/L), QC Sample No: CJ27610 (CJ29227, CJ29231)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	66	67	1.5				40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	94	98	4.2				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	89	92	3.3				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	82	84	2.4				40 - 140	25
C9 - Nonane	11	10	41	45	9.3				40 - 140	25
C-10 Decane	ND	10	55	56	1.8				40 - 140	25
C12 - Dodecane	ND	10	56	56	0.0				40 - 140	25
C14 - Tetradecane	ND	10	69	70	1.4				40 - 140	25
C16 - Hexadecane	ND	10	79	79	0.0				40 - 140	25
C18 - Octadecane	ND	10	93	94	1.1				40 - 140	25
C19 - Nonadecane	ND	10	91	93	2.2				40 - 140	25
C20 - Eicosane	ND	10	90	92	2.2				40 - 140	25
C22 - Docosane	ND	10	93	95	2.1				40 - 140	25
C24 - Tetracosane	ND	10	95	97	2.1				40 - 140	25
C26 - Hexacosane	ND	10	95	97	2.1				40 - 140	25
C28 - Octacosane	ND	10	98	103	5.0				40 - 140	25
C30 - Tricotane	ND	10	95	98	3.1				40 - 140	25
C36 - Hexatriacontane	ND	10	95	107	11.9				40 - 140	25
% 1-chlorooctadecane (aliphatic)	71	%	86	93	7.8				40 - 140	25
% o-terphenyl (aromatic)	85	%	85	90	5.7				40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	94	%	107	103	3.8				40 - 140	25
% 2-Bromonaphthalene (Fractionati	94	%	108	101	6.7				40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 592625 (ug/L), QC Sample No: CJ29232 (CJ29232, CJ29236)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	61	61	0.0				40 - 140	25

QA/QC Data

SDG I.D.: GCJ29227

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	87	87	0.0				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	87	90	3.4				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	76	76	0.0				40 - 140	25	
C9 - Nonane	ND	10	37	39	5.3				40 - 140	25	l
C-10 Decane	ND	10	51	51	0.0				40 - 140	25	
C12 - Dodecane	ND	10	53	53	0.0				40 - 140	25	
C14 - Tetradecane	ND	10	66	65	1.5				40 - 140	25	
C16 - Hexadecane	ND	10	74	73	1.4				40 - 140	25	
C18 - Octadecane	ND	10	86	86	0.0				40 - 140	25	
C19 - Nonadecane	ND	10	85	85	0.0				40 - 140	25	
C20 - Eicosane	ND	10	84	84	0.0				40 - 140	25	
C22 - Docosane	ND	10	86	86	0.0				40 - 140	25	
C24 - Tetracosane	ND	10	88	88	0.0				40 - 140	25	
C26 - Hexacosane	ND	10	88	88	0.0				40 - 140	25	
C28 - Octacosane	ND	10	89	89	0.0				40 - 140	25	
C30 - Tricotane	ND	10	85	85	0.0				40 - 140	25	
C36 - Hexatriacontane	ND	10	87	91	4.5				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	79	%	93	90	3.3				40 - 140	25	
% o-terphenyl (aromatic)	92	%	85	88	3.5				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	101	%	96	102	6.1				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	94	%	114	120	5.1				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 592843 (ug/L), QC Sample No: CJ29233 (CJ29233)

MAEPH - Ground Water

C9-C18 Aliphatic Hydrocarbons 1*	ND	100	81	97	18.0	58	71	20.2	40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	110	134	19.7	80	100	22.2	40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	67	68	1.5	71	78	9.4	40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	98	118	18.5	71	88	21.4	40 - 140	25	
C9 - Nonane	ND	10	50	64	24.6	35	44	22.8	40 - 140	25	m
C-10 Decane	ND	10	67	83	21.3	49	60	20.2	40 - 140	25	
C12 - Dodecane	ND	10	74	90	19.5	53	64	18.8	40 - 140	25	
C14 - Tetradecane	ND	10	87	102	15.9	63	76	18.7	40 - 140	25	
C16 - Hexadecane	ND	10	97	115	17.0	70	86	20.5	40 - 140	25	
C18 - Octadecane	ND	10	113	131	14.8	80	100	22.2	40 - 140	25	
C19 - Nonadecane	ND	10	108	127	16.2	78	96	20.7	40 - 140	25	
C20 - Eicosane	ND	10	108	126	15.4	77	95	20.9	40 - 140	25	
C22 - Docosane	ND	10	111	129	15.0	79	98	21.5	40 - 140	25	
C24 - Tetracosane	ND	10	113	133	16.3	82	101	20.8	40 - 140	25	
C26 - Hexacosane	ND	10	111	132	17.3	80	99	21.2	40 - 140	25	
C28 - Octacosane	ND	10	112	135	18.6	81	101	22.0	40 - 140	25	
C30 - Tricotane	ND	10	108	133	20.7	77	98	24.0	40 - 140	25	
C36 - Hexatriacontane	ND	10	111	154	32.5	83	114	31.5	40 - 140	25	l,r
% 1-chlorooctadecane (aliphatic)	70	%	76	89	15.8	75	96	24.6	40 - 140	25	
% o-terphenyl (aromatic)	74	%	72	74	2.7	74	79	6.5	40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	74	%	77	75	2.6	75	83	10.1	40 - 140	25	

QA/QC Data

SDG I.D.: GCJ29227

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
% 2-Bromonaphthalene (Fractionati	77	%		77	77	0.0	72	81	11.8	40 - 140	25	
% 2-Methylnaphthalene BT		%		0	0	NC				0 - 5		
% Naphthalene BT		%		0	0	NC				0 - 5		

Comment:

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 592277 (ug/L), QC Sample No: CJ29233 (CJ29227, CJ29231, CJ29232, CJ29233, CJ29236)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50		77	76	1.3	71	79	10.7	40 - 140	20	
Acenaphthene	ND	0.50		73	83	12.8	77	75	2.6	40 - 140	20	
Acenaphthylene	ND	0.10		16	66	122.0	59	46	24.8	40 - 140	20	l,r
Anthracene	ND	0.10		72	81	11.8	74	73	1.4	40 - 140	20	
Benz(a)anthracene	ND	0.02		64	84	27.0	66	63	4.7	40 - 140	20	r
Benzo(a)pyrene	ND	0.02		49	62	23.4	44	42	4.7	40 - 140	20	r
Benzo(b)fluoranthene	ND	0.02		89	86	3.4	56	56	0.0	40 - 140	20	
Benzo(ghi)perylene	ND	0.02		64	69	7.5	42	38	10.0	40 - 140	20	m
Benzo(k)fluoranthene	ND	0.02		75	82	8.9	53	50	5.8	40 - 140	20	
Chrysene	ND	0.02		68	83	19.9	63	61	3.2	40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02		89	81	9.4	48	48	0.0	40 - 140	20	
Fluoranthene	ND	0.50		77	93	18.8	83	81	2.4	40 - 140	20	
Fluorene	ND	0.10		80	84	4.9	78	79	1.3	40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02		72	81	11.8	48	44	8.7	40 - 140	20	
Naphthalene	ND	0.50		80	79	1.3	74	88	17.3	40 - 140	20	
Phenanthrene	ND	0.06		87	91	4.5	85	86	1.2	40 - 140	20	
Pyrene	ND	0.07		53	92	53.8	79	65	19.4	40 - 140	20	r
% 2-Fluorobiphenyl	72	%		70	74	5.6	66	69	4.4	40 - 140	20	
% Nitrobenzene-d5	80	%		72	78	8.0	71	81	13.2	40 - 140	20	
% Terphenyl-d14	76	%		59	74	22.6	56	56	0.0	40 - 140	20	r

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 593727 (ug/L), QC Sample No: CJ27928 (CJ29227, CJ29228, CJ29231, CJ29234, CJ29235, CJ29236)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0		107	106	0.9	101	89	12.6	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0		108	106	1.9	104	84	21.3	70 - 130	20	r
1,1,2,2-Tetrachloroethane	ND	0.50		111	111	0.0	110	100	9.5	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0		103	103	0.0	103	90	13.5	70 - 130	20	
1,1-Dichloroethane	ND	1.0		103	100	3.0	97	86	12.0	70 - 130	20	
1,1-Dichloroethene	ND	1.0		105	100	4.9	104	86	18.9	70 - 130	20	
1,1-Dichloropropene	ND	1.0		111	109	1.8	103	88	15.7	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0		107	104	2.8	102	93	9.2	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0		115	115	0.0	109	101	7.6	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0		102	100	2.0	98	88	10.8	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0		105	105	0.0	106	91	15.2	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0		120	121	0.8	122	112	8.5	70 - 130	20	
1,2-Dibromoethane	ND	1.0		108	107	0.9	106	94	12.0	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0		99	97	2.0	96	86	11.0	70 - 130	20	
1,2-Dichloroethane	ND	1.0		106	102	3.8	103	90	13.5	70 - 130	20	
1,2-Dichloropropane	ND	1.0		102	99	3.0	98	83	16.6	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0		107	107	0.0	100	89	11.6	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0		101	100	1.0	96	84	13.3	70 - 130	20	
1,3-Dichloropropane	ND	1.0		108	105	2.8	104	93	11.2	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0		100	98	2.0	96	85	12.2	70 - 130	20	

QA/QC Data

SDG I.D.: GCJ29227

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,4-dioxane	ND	100	107	112	4.6	95	104	9.0	40 - 160	20	
2,2-Dichloropropane	ND	1.0	111	105	5.6	80	66	19.2	70 - 130	20	m
2-Chlorotoluene	ND	1.0	106	106	0.0	98	88	10.8	70 - 130	20	
2-Hexanone	ND	5.0	118	119	0.8	120	110	8.7	40 - 160	20	
4-Chlorotoluene	ND	1.0	105	103	1.9	98	87	11.9	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	115	117	1.7	115	104	10.0	40 - 160	20	
Acetone	ND	5.0	107	103	3.8	123	101	19.6	40 - 160	20	
Benzene	ND	0.70	104	101	2.9	98	83	16.6	70 - 130	20	
Bromobenzene	ND	1.0	104	103	1.0	99	88	11.8	70 - 130	20	
Bromochloromethane	ND	1.0	99	96	3.1	100	82	19.8	70 - 130	20	
Bromodichloromethane	ND	0.50	105	102	2.9	100	86	15.1	70 - 130	20	
Bromoform	ND	1.0	114	114	0.0	108	98	9.7	70 - 130	20	
Bromomethane	ND	1.0	100	94	6.2	90	72	22.2	40 - 160	20	r
Carbon Disulfide	ND	1.0	102	96	6.1	96	78	20.7	70 - 130	20	r
Carbon tetrachloride	ND	1.0	99	116	15.8	103	97	6.0	70 - 130	20	
Chlorobenzene	ND	1.0	103	100	3.0	96	84	13.3	70 - 130	20	
Chloroethane	ND	1.0	105	96	9.0	112	84	28.6	70 - 130	20	r
Chloroform	ND	1.0	103	97	6.0	99	80	21.2	70 - 130	20	r
Chloromethane	ND	1.0	104	99	4.9	93	77	18.8	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	101	97	4.0	99	98	1.0	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	107	103	3.8	96	84	13.3	70 - 130	20	
Dibromochloromethane	ND	0.50	108	106	1.9	103	92	11.3	70 - 130	20	
Dibromomethane	ND	1.0	104	102	1.9	102	90	12.5	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	122	122	0.0	110	89	21.1	40 - 160	20	r
Di-isopropyl ether	ND	1.0	102	98	4.0	100	83	18.6	70 - 130	20	
Ethyl ether	ND	1.0	91	85	6.8	96	77	22.0	70 - 130	20	r
Ethyl tert-butyl ether	ND	1.0	102	97	5.0	102	85	18.2	70 - 130	20	
Ethylbenzene	ND	1.0	106	106	0.0	99	85	15.2	70 - 130	20	
Hexachlorobutadiene	ND	0.40	105	106	0.9	100	95	5.1	70 - 130	20	
Isopropylbenzene	ND	1.0	107	109	1.9	101	90	11.5	70 - 130	20	
m&p-Xylene	ND	1.0	107	106	0.9	99	86	14.1	70 - 130	20	
Methyl ethyl ketone	ND	5.0	115	115	0.0	122	98	21.8	40 - 160	20	r
Methyl t-butyl ether (MTBE)	ND	1.0	106	100	5.8	112	91	20.7	70 - 130	20	r
Methylene chloride	ND	1.0	100	92	8.3	103	79	26.4	70 - 130	20	r
Naphthalene	ND	1.0	114	114	0.0	118	105	11.7	70 - 130	20	
n-Butylbenzene	ND	1.0	113	113	0.0	105	96	9.0	70 - 130	20	
n-Propylbenzene	ND	1.0	108	111	2.7	101	90	11.5	70 - 130	20	
o-Xylene	ND	1.0	104	103	1.0	99	84	16.4	70 - 130	20	
p-Isopropyltoluene	ND	1.0	111	110	0.9	104	95	9.0	70 - 130	20	
sec-Butylbenzene	ND	1.0	111	113	1.8	104	96	8.0	70 - 130	20	
Styrene	ND	1.0	107	105	1.9	101	88	13.8	70 - 130	20	
tert-amyl methyl ether	ND	1.0	103	99	4.0	101	88	13.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	108	107	0.9	102	93	9.2	70 - 130	20	
Tetrachloroethene	ND	1.0	105	106	0.9	96	100	4.1	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	111	111	0.0	114	98	15.1	70 - 130	20	
Toluene	ND	1.0	104	100	3.9	98	83	16.6	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	99	95	4.1	103	79	26.4	70 - 130	20	r
trans-1,3-Dichloropropene	ND	0.40	109	106	2.8	99	89	10.6	70 - 130	20	
Trichloroethene	ND	1.0	104	103	1.0	90	92	2.2	70 - 130	20	
Trichlorofluoromethane	ND	1.0	119	116	2.6	115	91	23.3	70 - 130	20	r
Trichlorotrifluoroethane	ND	1.0	100	96	4.1	99	77	25.0	70 - 130	20	r
Vinyl chloride	ND	1.0	113	111	1.8	109	90	19.1	70 - 130	20	
% 1,2-dichlorobenzene-d4	99	%	100	99	1.0	101	99	2.0	70 - 130	20	

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% Bromofluorobenzene	98	%		100	100	0.0	100	99	1.0	70 - 130	20
% Dibromofluoromethane	96	%		96	93	3.2	102	94	8.2	70 - 130	20
% Toluene-d8	100	%		100	101	1.0	100	100	0.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593684 (ug/L), QC Sample No: CJ29230 (CJ29229, CJ29230)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0		105	105	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0		102	98	4.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50		101	97	4.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0		101	98	3.0				70 - 130	20
1,1-Dichloroethane	ND	1.0		100	98	2.0				70 - 130	20
1,1-Dichloroethene	ND	1.0		100	97	3.0				70 - 130	20
1,1-Dichloropropene	ND	1.0		102	100	2.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0		104	102	1.9				70 - 130	20
1,2,3-Trichloropropane	ND	1.0		100	97	3.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0		103	99	4.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0		103	101	2.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0		111	106	4.6				70 - 130	20
1,2-Dibromoethane	ND	1.0		103	100	3.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0		99	97	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0		100	98	2.0				70 - 130	20
1,2-Dichloropropane	ND	1.0		98	97	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0		104	101	2.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0		100	98	2.0				70 - 130	20
1,3-Dichloropropane	ND	1.0		101	99	2.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0		99	98	1.0				70 - 130	20
1,4-dioxane	ND	100		100	103	3.0				40 - 160	20
2,2-Dichloropropane	ND	1.0		90	89	1.1				70 - 130	20
2-Chlorotoluene	ND	1.0		106	102	3.8				70 - 130	20
2-Hexanone	ND	5.0		103	99	4.0				40 - 160	20
4-Chlorotoluene	ND	1.0		103	100	3.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0		99	98	1.0				40 - 160	20
Acetone	ND	5.0		103	97	6.0				40 - 160	20
Benzene	ND	0.70		102	98	4.0				70 - 130	20
Bromobenzene	ND	1.0		102	98	4.0				70 - 130	20
Bromochloromethane	ND	1.0		101	96	5.1				70 - 130	20
Bromodichloromethane	ND	0.50		102	100	2.0				70 - 130	20
Bromoform	ND	1.0		107	104	2.8				70 - 130	20
Bromomethane	ND	1.0		99	101	2.0				40 - 160	20
Carbon Disulfide	ND	1.0		100	96	4.1				70 - 130	20
Carbon tetrachloride	ND	1.0		96	93	3.2				70 - 130	20
Chlorobenzene	ND	1.0		100	99	1.0				70 - 130	20
Chloroethane	ND	1.0		104	105	1.0				70 - 130	20
Chloroform	ND	1.0		98	98	0.0				70 - 130	20
Chloromethane	ND	1.0		102	100	2.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0		101	99	2.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40		102	99	3.0				70 - 130	20
Dibromochloromethane	ND	0.50		103	102	1.0				70 - 130	20
Dibromomethane	ND	1.0		100	99	1.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dichlorodifluoromethane	ND	1.0	114	111	2.7				40 - 160	20
Di-isopropyl ether	ND	1.0	98	95	3.1				70 - 130	20
Ethyl ether	ND	1.0	88	85	3.5				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	99	97	2.0				70 - 130	20
Ethylbenzene	ND	1.0	103	102	1.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	104	100	3.9				70 - 130	20
Isopropylbenzene	ND	1.0	104	100	3.9				70 - 130	20
m&p-Xylene	ND	1.0	104	103	1.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	103	98	5.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	101	98	3.0				70 - 130	20
Methylene chloride	ND	1.0	103	100	3.0				70 - 130	20
Naphthalene	ND	1.0	109	106	2.8				70 - 130	20
n-Butylbenzene	ND	1.0	106	102	3.8				70 - 130	20
n-Propylbenzene	ND	1.0	104	101	2.9				70 - 130	20
o-Xylene	ND	1.0	104	101	2.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	106	104	1.9				70 - 130	20
sec-Butylbenzene	ND	1.0	105	103	1.9				70 - 130	20
Styrene	ND	1.0	105	105	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	98	97	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	104	102	1.9				70 - 130	20
Tetrachloroethene	ND	1.0	101	99	2.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	97	92	5.3				70 - 130	20
Toluene	ND	1.0	101	99	2.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	100	97	3.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	103	101	2.0				70 - 130	20
Trichloroethene	ND	1.0	102	99	3.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	105	104	1.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	92	88	4.4				70 - 130	20
Vinyl chloride	ND	1.0	109	105	3.7				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0				70 - 130	20
% Bromofluorobenzene	99	%	100	102	2.0				70 - 130	20
% Dibromofluoromethane	100	%	99	99	0.0				70 - 130	20
% Toluene-d8	101	%	100	100	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593728 (ug/L), QC Sample No: CJ29233 (CJ29233)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	107	106	0.9	101	87	14.9	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	108	106	1.9	100	82	19.8	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	111	111	0.0	113	101	11.2	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	103	103	0.0	114	103	10.1	70 - 130	20
1,1-Dichloroethane	ND	1.0	103	100	3.0	95	79	18.4	70 - 130	20
1,1-Dichloroethene	ND	1.0	105	100	4.9	97	81	18.0	70 - 130	20
1,1-Dichloropropene	ND	1.0	111	109	1.8	102	85	18.2	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	107	104	2.8	105	93	12.1	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	115	115	0.0	109	95	13.7	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	102	100	2.0	100	91	9.4	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	105	105	0.0	99	87	12.9	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	120	121	0.8	123	115	6.7	70 - 130	20

QA/QC Data

SDG I.D.: GCJ29227

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2-Dibromoethane	ND	1.0	108	107	0.9	104	92	12.2	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	99	97	2.0	96	86	11.0	70 - 130	20	
1,2-Dichloroethane	ND	1.0	106	102	3.8	102	88	14.7	70 - 130	20	
1,2-Dichloropropane	ND	1.0	102	99	3.0	95	81	15.9	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	107	107	0.0	100	87	13.9	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	101	100	1.0	95	84	12.3	70 - 130	20	
1,3-Dichloropropane	ND	1.0	108	105	2.8	104	91	13.3	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	100	98	2.0	94	83	12.4	70 - 130	20	
1,4-dioxane	ND	100	107	112	4.6	101	96	5.1	40 - 160	20	
2,2-Dichloropropane	ND	1.0	111	105	5.6	78	64	19.7	70 - 130	20	m
2-Chlorotoluene	ND	1.0	106	106	0.0	99	86	14.1	70 - 130	20	
2-Hexanone	ND	5.0	118	119	0.8	117	103	12.7	40 - 160	20	
4-Chlorotoluene	ND	1.0	105	103	1.9	96	83	14.5	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	115	117	1.7	118	104	12.6	40 - 160	20	
Acetone	ND	5.0	107	103	3.8	124	113	9.3	40 - 160	20	
Benzene	ND	0.70	104	101	2.9	96	81	16.9	70 - 130	20	
Bromobenzene	ND	1.0	104	103	1.0	97	86	12.0	70 - 130	20	
Bromochloromethane	ND	1.0	99	96	3.1	98	84	15.4	70 - 130	20	
Bromodichloromethane	ND	0.50	105	102	2.9	99	86	14.1	70 - 130	20	
Bromoform	ND	1.0	114	114	0.0	106	95	10.9	70 - 130	20	
Bromomethane	ND	1.0	100	94	6.2	85	74	13.8	40 - 160	20	
Carbon Disulfide	ND	1.0	102	96	6.1	90	75	18.2	70 - 130	20	
Carbon tetrachloride	ND	1.0	99	116	15.8	101	83	19.6	70 - 130	20	
Chlorobenzene	ND	1.0	103	100	3.0	96	82	15.7	70 - 130	20	
Chloroethane	ND	1.0	105	96	9.0	97	82	16.8	70 - 130	20	
Chloroform	ND	1.0	103	97	6.0	94	80	16.1	70 - 130	20	
Chloromethane	ND	1.0	104	99	4.9	88	74	17.3	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	101	97	4.0	94	79	17.3	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	107	103	3.8	96	83	14.5	70 - 130	20	
Dibromochloromethane	ND	0.50	108	106	1.9	101	89	12.6	70 - 130	20	
Dibromomethane	ND	1.0	104	102	1.9	100	89	11.6	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	122	122	0.0	95	82	14.7	40 - 160	20	
Di-isopropyl ether	ND	1.0	102	98	4.0	98	83	16.6	70 - 130	20	
Ethyl ether	ND	1.0	91	85	6.8	90	76	16.9	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	102	97	5.0	98	86	13.0	70 - 130	20	
Ethylbenzene	ND	1.0	106	106	0.0	97	83	15.6	70 - 130	20	
Hexachlorobutadiene	ND	0.40	105	106	0.9	103	93	10.2	70 - 130	20	
Isopropylbenzene	ND	1.0	107	109	1.9	102	87	15.9	70 - 130	20	
m&p-Xylene	ND	1.0	107	106	0.9	98	84	15.4	70 - 130	20	
Methyl ethyl ketone	ND	5.0	115	115	0.0	117	101	14.7	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	106	100	5.8	104	91	13.3	70 - 130	20	
Methylene chloride	ND	1.0	100	92	8.3	93	81	13.8	70 - 130	20	
Naphthalene	ND	1.0	114	114	0.0	121	107	12.3	70 - 130	20	
n-Butylbenzene	ND	1.0	113	113	0.0	104	92	12.2	70 - 130	20	
n-Propylbenzene	ND	1.0	108	111	2.7	97	83	15.6	70 - 130	20	
o-Xylene	ND	1.0	104	103	1.0	97	84	14.4	70 - 130	20	
p-Isopropyltoluene	ND	1.0	111	110	0.9	104	92	12.2	70 - 130	20	
sec-Butylbenzene	ND	1.0	111	113	1.8	102	91	11.4	70 - 130	20	
Styrene	ND	1.0	107	105	1.9	99	86	14.1	70 - 130	20	
tert-amyl methyl ether	ND	1.0	103	99	4.0	99	87	12.9	70 - 130	20	
tert-Butylbenzene	ND	1.0	108	107	0.9	100	87	13.9	70 - 130	20	
Tetrachloroethene	ND	1.0	105	106	0.9	97	83	15.6	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	111	111	0.0	109	94	14.8	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Toluene	ND	1.0	104	100	3.9	95	80	17.1	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	99	95	4.1	93	78	17.5	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	109	106	2.8	100	88	12.8	70 - 130	20
Trichloroethene	ND	1.0	104	103	1.0	96	81	16.9	70 - 130	20
Trichlorofluoromethane	ND	1.0	119	116	2.6	104	88	16.7	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	100	96	4.1	91	78	15.4	70 - 130	20
Vinyl chloride	ND	1.0	113	111	1.8	101	83	19.6	70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	100	99	1.0	100	100	0.0	70 - 130	20
% Bromofluorobenzene	98	%	100	100	0.0	102	101	1.0	70 - 130	20
% Dibromofluoromethane	96	%	96	93	3.2	99	96	3.1	70 - 130	20
% Toluene-d8	100	%	100	101	1.0	100	100	0.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593833 (ug/L), QC Sample No: CJ30888 (CJ29229 (10X) , CJ29232)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	118	101	15.5				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	114	98	15.1				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	119	102	15.4				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	111	95	15.5				70 - 130	20
1,1-Dichloroethane	ND	1.0	106	93	13.1				70 - 130	20
1,1-Dichloroethene	ND	1.0	111	96	14.5				70 - 130	20
1,1-Dichloropropene	ND	1.0	117	101	14.7				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	115	98	16.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	124	106	15.7				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	112	96	15.4				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	115	100	14.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	140	116	18.8				70 - 130	20
1,2-Dibromoethane	ND	1.0	118	99	17.5				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	109	93	15.8				70 - 130	20
1,2-Dichloroethane	ND	1.0	110	93	16.7				70 - 130	20
1,2-Dichloropropane	ND	1.0	107	91	16.2				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	115	101	13.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	109	94	14.8				70 - 130	20
1,3-Dichloropropane	ND	1.0	113	98	14.2				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	109	94	14.8				70 - 130	20
1,4-dioxane	ND	100	111	99	11.4				40 - 160	20
2,2-Dichloropropane	ND	1.0	120	101	17.2				70 - 130	20
2-Chlorotoluene	ND	1.0	116	100	14.8				70 - 130	20
2-Hexanone	ND	5.0	124	106	15.7				40 - 160	20
4-Chlorotoluene	ND	1.0	112	97	14.4				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	121	101	18.0				40 - 160	20
Acetone	ND	5.0	107	92	15.1				40 - 160	20
Benzene	ND	0.70	110	95	14.6				70 - 130	20
Bromobenzene	ND	1.0	113	97	15.2				70 - 130	20
Bromochloromethane	ND	1.0	106	92	14.1				70 - 130	20
Bromodichloromethane	ND	0.50	113	97	15.2				70 - 130	20
Bromoform	ND	1.0	127	108	16.2				70 - 130	20
Bromomethane	ND	1.0	105	87	18.8				40 - 160	20
Carbon Disulfide	ND	1.0	105	92	13.2				70 - 130	20
Carbon tetrachloride	ND	1.0	109	111	1.8				70 - 130	20

QA/QC Data

SDG I.D.: GCJ29227

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chlorobenzene	ND	1.0	110	94	15.7				70 - 130	20
Chloroethane	ND	1.0	109	96	12.7				70 - 130	20
Chloroform	ND	1.0	106	92	14.1				70 - 130	20
Chloromethane	ND	1.0	104	89	15.5				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	108	93	14.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	115	98	16.0				70 - 130	20
Dibromochloromethane	ND	0.50	119	100	17.4				70 - 130	20
Dibromomethane	ND	1.0	110	96	13.6				70 - 130	20
Dichlorodifluoromethane	ND	1.0	125	110	12.8				40 - 160	20
Di-isopropyl ether	ND	1.0	106	91	15.2				70 - 130	20
Ethyl ether	ND	1.0	96	82	15.7				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	109	93	15.8				70 - 130	20
Ethylbenzene	ND	1.0	115	99	15.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	118	99	17.5				70 - 130	20
Isopropylbenzene	ND	1.0	116	100	14.8				70 - 130	20
m&p-Xylene	ND	1.0	115	98	16.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	118	104	12.6				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	110	96	13.6				70 - 130	20
Methylene chloride	ND	1.0	106	91	15.2				70 - 130	20
Naphthalene	ND	1.0	126	108	15.4				70 - 130	20
n-Butylbenzene	ND	1.0	119	104	13.5				70 - 130	20
n-Propylbenzene	ND	1.0	116	102	12.8				70 - 130	20
o-Xylene	ND	1.0	113	96	16.3				70 - 130	20
p-Isopropyltoluene	ND	1.0	119	104	13.5				70 - 130	20
sec-Butylbenzene	ND	1.0	120	105	13.3				70 - 130	20
Styrene	ND	1.0	119	99	18.3				70 - 130	20
tert-amyl methyl ether	ND	1.0	112	96	15.4				70 - 130	20
tert-Butylbenzene	ND	1.0	117	102	13.7				70 - 130	20
Tetrachloroethene	ND	1.0	113	99	13.2				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	113	96	16.3				70 - 130	20
Toluene	ND	1.0	110	95	14.6				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	105	91	14.3				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	120	101	17.2				70 - 130	20
Trichloroethene	ND	1.0	112	96	15.4				70 - 130	20
Trichlorofluoromethane	ND	1.0	116	103	11.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	106	93	13.1				70 - 130	20
Vinyl chloride	ND	1.0	119	104	13.5				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	98	%	101	99	2.0				70 - 130	20
% Dibromofluoromethane	99	%	97	98	1.0				70 - 130	20
% Toluene-d8	100	%	101	100	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 592407 (ug/L), QC Sample No: CJ29233 (CJ29231, CJ29232, CJ29233, CJ29236)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	105	110	4.7	108	117	8.0	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	93	100	7.3	104	108	3.8	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	105	110	4.7	108	117	8.0	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	93	100	7.3	104	108	3.8	70 - 130	25

QA/QC Data

SDG I.D.: GCJ29227

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
C9-C10 Aromatic Hydrocarbons *1	ND	100	97	99	2.0	111	120	7.8	70 - 130	25
Benzene	ND	1.0	92	93	1.1	94	101	7.2	70 - 130	25
Ethyl Benzene	ND	1.0	92	94	2.2	112	121	7.7	70 - 130	25
MTBE	ND	1.0	95	97	2.1	92	101	9.3	70 - 130	25
Naphthalene	ND	5.0	95	98	3.1	91	97	6.4	70 - 130	25
Toluene	ND	1.0	94	95	1.1	97	105	7.9	70 - 130	25
m,p-Xylenes	ND	2.0	94	95	1.1	96	104	8.0	70 - 130	25
o-Xylene	ND	1.0	91	93	2.2	92	100	8.3	70 - 130	25
% 2,5-Dibromotoluene (PID)	97	%	99	102	3.0	104	101	2.9	70 - 130	25
% 2,5-Dibromotoluene (FID)	108	%	102	108	5.7	103	100	3.0	70 - 130	25
QA/QC Batch 592657 (ug/L), QC Sample No: CJ30902 (CJ29227)										
Volatile Petroleum Hydrocarbons - Ground Water										
Unadjusted C5-C8 Aliphatics (*1)	ND	100	105	108	2.8				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	99	100	1.0				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	105	108	2.8				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	99	100	1.0				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	97	97	0.0				70 - 130	25
Benzene	ND	1.0	92	92	0.0				70 - 130	25
Ethyl Benzene	ND	1.0	93	93	0.0				70 - 130	25
MTBE	ND	1.0	98	99	1.0				70 - 130	25
Naphthalene	ND	5.0	94	95	1.1				70 - 130	25
Toluene	ND	1.0	94	94	0.0				70 - 130	25
m,p-Xylenes	ND	2.0	94	94	0.0				70 - 130	25
o-Xylene	ND	1.0	91	91	0.0				70 - 130	25
% 2,5-Dibromotoluene (PID)	94	%	99	100	1.0				70 - 130	25
% 2,5-Dibromotoluene (FID)	100	%	101	103	2.0				70 - 130	25

Comment:

This batch consists of a Blank, LCS and LCSD.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 14, 2021

Thursday, October 14, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ29227 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ29227	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ29227	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ29227	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ29227	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ29227	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ29227	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ29227	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ29227	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ29227	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ29227	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ29227	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ29227	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED WILMINGTO	240	100	200	200	ug/L
CJ29227	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	240	100	200	200	ug/L
CJ29227	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	240	100	200	200	ug/L
CJ29227	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.22	0.011	0.43	0.43	mg/L
CJ29227	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.33	0.010	0.43	0.43	mg/L
CJ29228	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ29228	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ29228	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ29228	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ29228	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ29228	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ29228	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ29228	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ29228	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ29229	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ29229	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ29229	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ29229	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ29229	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ29229	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ29229	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	110	10	5	5	ug/L
CJ29229	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	220	10	5	5	ug/L
CJ29229	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	10	5	5	ug/L
CJ29229	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	220	10	5	5	ug/L
CJ29229	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ29229	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	110	10	5	5	ug/L
CJ29229	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	220	10	50	50	ug/L
CJ29229	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	220	10	5	5	ug/L
CJ29229	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L

Thursday, October 14, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ29227 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ29229	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	110	10	5	5	ug/L
CJ29229	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	220	10	50	50	ug/L
CJ29229	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	110	10	5	5	ug/L
CJ29229	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ29229	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ29229	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ29229	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	17.2	0.011	14	14	mg/L
CJ29229	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	6.66	0.011	0.43	0.43	mg/L
CJ29229	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED WILMINGTO	16.8	0.010	14	14	mg/L
CJ29229	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	6.87	0.010	0.43	0.43	mg/L
CJ29230	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ29230	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ29230	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ29230	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ29230	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ29230	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ29230	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ29230	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ29230	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ29230	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ29230	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ29231	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ29231	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ29231	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ29231	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	38	1.0	5	5	ug/L
CJ29231	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	33	1.0	20	20	ug/L
CJ29231	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	17	1.0	5	5	ug/L
CJ29231	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ29231	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	8.4	1.0	2	2	ug/L
CJ29231	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ29231	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ29231	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	38	1.0	5	5	ug/L
CJ29231	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.4	1.0	2	2	ug/L
CJ29231	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ29231	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	1.0	20	20	ug/L
CJ29231	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	17	1.0	5	5	ug/L
CJ29231	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	8.4	1.0	2	2	ug/L
CJ29231	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	1.0	20	20	ug/L
CJ29231	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	38	1.0	5	5	ug/L
CJ29231	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	8.4	1.0	2	2	ug/L

Thursday, October 14, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ29227 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ29231	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ29231	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	38	1.0	5	5	ug/L
CJ29231	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	17	1.0	5	5	ug/L
CJ29231	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	33	1.0	20	20	ug/L
CJ29231	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	8.4	1.0	2	2	ug/L
CJ29231	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	38	1.0	5	5	ug/L
CJ29231	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.65	0.20	0.3	0.3	ug/l
CJ29231	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.65	0.20	0.3	0.3	ug/l
CJ29231	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.65	0.20	0.3	0.3	ug/l
CJ29231	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ29231	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.02	0.001	0.43	0.43	mg/L
CJ29231	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.93	0.001	0.43	0.43	mg/L
CJ29232	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ29232	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ29232	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ29232	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	9.4	1.0	2	2	ug/L
CJ29232	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	42	1.0	5	5	ug/L
CJ29232	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	19	1.0	5	5	ug/L
CJ29232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	35	1.0	20	20	ug/L
CJ29232	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ29232	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ29232	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ29232	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ29232	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	19	1.0	5	5	ug/L
CJ29232	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	42	1.0	5	5	ug/L
CJ29232	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.4	1.0	2	2	ug/L
CJ29232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	35	1.0	20	20	ug/L
CJ29232	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	42	1.0	5	5	ug/L
CJ29232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	35	1.0	20	20	ug/L
CJ29232	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	9.4	1.0	2	2	ug/L
CJ29232	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	19	1.0	5	5	ug/L
CJ29232	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ29232	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	42	1.0	5	5	ug/L
CJ29232	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	9.4	1.0	2	2	ug/L
CJ29232	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	9.4	1.0	2	2	ug/L
CJ29232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	35	1.0	20	20	ug/L
CJ29232	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	42	1.0	5	5	ug/L
CJ29232	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.70	0.20	0.3	0.3	ug/l
CJ29232	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.70	0.20	0.3	0.3	ug/l
CJ29232	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.70	0.20	0.3	0.3	ug/l
CJ29232	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L

Thursday, October 14, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ29227 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ29232	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.00	0.001	0.43	0.43	mg/L
CJ29232	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.94	0.001	0.43	0.43	mg/L
CJ29233	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ29233	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ29233	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ29233	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ29233	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ29233	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ29233	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ29233	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ29233	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ29233	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ29233	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ29233	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED WILMINGTO	250	100	200	200	ug/L
CJ29233	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	250	100	200	200	ug/L
CJ29233	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	250	100	200	200	ug/L
CJ29233	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.034	0.004	0.01	0.01	mg/L
CJ29233	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.034	0.004	0.01	0.01	mg/L
CJ29233	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.034	0.004	0.01	0.01	mg/L
CJ29233	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.034	0.004	0.01	0.01	mg/L
CJ29233	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.034	0.004	0.01	0.01	mg/L
CJ29233	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.034	0.004	0.01	0.01	mg/L
CJ29233	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	14.3	0.011	14	14	mg/L
CJ29233	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.21	0.011	0.43	0.43	mg/L
CJ29233	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.18	0.010	0.43	0.43	mg/L
CJ29234	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ29234	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ29234	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ29234	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	10	1.0	5	5	ug/L
CJ29234	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ29234	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ29234	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	13	1.0	2	2	ug/L
CJ29234	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	49	1.0	20	20	ug/L
CJ29234	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	23	1.0	5	5	ug/L
CJ29234	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ29234	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	1.0	2	2	ug/L
CJ29234	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	23	1.0	5	5	ug/L
CJ29234	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ29234	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	1.0	5	5	ug/L
CJ29234	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	49	1.0	20	20	ug/L

Thursday, October 14, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ29227 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ29234	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	1.0	2	2	ug/L
CJ29234	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	23	1.0	5	5	ug/L
CJ29234	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	49	1.0	20	20	ug/L
CJ29234	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	23	1.0	5	5	ug/L
CJ29234	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ29234	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	1.0	5	5	ug/L
CJ29234	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	13	1.0	2	2	ug/L
CJ29234	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	23	1.0	5	5	ug/L
CJ29234	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	49	1.0	20	20	ug/L
CJ29234	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	13	1.0	2	2	ug/L
CJ29234	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.73	0.20	0.3	0.3	ug/l
CJ29234	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.73	0.20	0.3	0.3	ug/l
CJ29234	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.73	0.20	0.3	0.3	ug/l
CJ29234	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ29234	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.013	0.004	0.01	0.01	mg/L
CJ29234	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.013	0.004	0.01	0.01	mg/L
CJ29234	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.013	0.004	0.01	0.01	mg/L
CJ29234	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.015	0.004	0.01	0.01	mg/L
CJ29234	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.015	0.004	0.01	0.01	mg/L
CJ29234	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.015	0.004	0.01	0.01	mg/L
CJ29234	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	13.2	0.011	0.43	0.43	mg/L
CJ29234	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	13.9	0.010	0.43	0.43	mg/L
CJ29235	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ29235	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ29235	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ29235	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ29235	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ29235	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ29235	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	77	1.0	20	20	ug/L
CJ29235	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	33	1.0	2	2	ug/L
CJ29235	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	29	1.0	5	5	ug/L
CJ29235	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ29235	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	77	1.0	20	20	ug/L
CJ29235	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	29	1.0	5	5	ug/L
CJ29235	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	1.0	2	2	ug/L
CJ29235	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	1.0	2	2	ug/L
CJ29235	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	29	1.0	5	5	ug/L
CJ29235	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	77	1.0	20	20	ug/L
CJ29235	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	29	1.0	5	5	ug/L
CJ29235	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ29235	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	33	1.0	2	2	ug/L

Thursday, October 14, 2021

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ29227 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ29235	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	77	1.0	70	70	ug/L
CJ29235	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	33	1.0	2	2	ug/L
CJ29235	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	29	1.0	5	5	ug/L
CJ29235	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	77	1.0	20	20	ug/L
CJ29235	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.3	0.20	0.3	0.3	ug/l
CJ29235	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.3	0.20	0.3	0.3	ug/l
CJ29235	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	5.3	0.20	0.3	0.3	ug/l
CJ29235	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ29236	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CJ29236	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CJ29236	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CJ29236	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ29236	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ29236	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ29236	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ29236	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ29236	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ29236	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ29236	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ29236	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.156	0.004	0.01	0.01	mg/L
CJ29236	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.156	0.004	0.01	0.01	mg/L
CJ29236	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.156	0.004	0.01	0.01	mg/L
CJ29236	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.170	0.004	0.01	0.01	mg/L
CJ29236	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.170	0.004	0.01	0.01	mg/L
CJ29236	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.170	0.004	0.01	0.01	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ29227, CJ29228, CJ29229, CJ29230, CJ29231, CJ29232, CJ29233, CJ29234, CJ29235, CJ29236

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☑ Yes ☐ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: Rashmi Makol

Date: Thursday, October 14, 2021

Printed Name: Rashmi Makol

Position: Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 14, 2021

SDG I.D.: GCJ29227

SDG Comments

Metals Analysis:
The client requested a site specific list of elements which is shorter than the 6010 MCP list.

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GWP. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/17/21-1 Adam Werner, Chemist 09/17/21

CJ29228 (1X), CJ29231 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0917):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0917_11-DIOX_0917) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM34 09/20/21-1 Adam Werner, Chemist 09/20/21

CJ29232 (1X), CJ29234 (1X), CJ29235 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0920_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

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MCP Certification Report

October 14, 2021

SDG I.D.: GCJ29227

522 - DIOXANE

Batch 592174 (CJ27928)

CJ29228, CJ29231

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Batch 592430 (CJ29232)

CJ29232, CJ29234, CJ29235

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

AU-FID3 09/23/21-1 Adam Werner, Chemist 09/23/21

CJ29233 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/17/21-1 Adam Werner, Chemist 09/17/21

CJ29227 (1X), CJ29231 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/20/21-1 Adam Werner, Chemist 09/20/21

CJ29232 (1X), CJ29236 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/22/21-1 Adam Werner, Chemist 09/22/21

CJ29233 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 592367 (CJ27610)

CJ29227, CJ29231

All LCS recoveries were within 40 - 140 with the following exceptions: None.

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SDG I.D.: GCJ29227

EPH Narration

All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

Batch 592625 (CJ29232)

CJ29232, CJ29236

All LCS recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(37%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(39%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QC (Site Specific):

Batch 592843 (CJ29233)

CJ29233

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: C36 - Hexatriacontane(154%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: C36 - Hexatriacontane(32.5%)
All MS recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(35%)
All MSD recoveries were within 40 - 140 with the following exceptions: None.
All MS/MSD RPDs were less than 25% with the following exceptions: C36 - Hexatriacontane(31.5%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/17/21-1 Greg Danielewski, Chemist 09/17/21

CJ29227 , CJ29228

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

BECKMAN DU720 09/20/21-1 Greg Danielewski, Chemist 09/20/21

CJ29229 , CJ29231 , CJ29232 , CJ29233 , CJ29234

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

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SDG I.D.: GCJ29227

Wet Chemistry Analysis

Batch 592492 (CJ27928)

CJ29227, CJ29228

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

QC (Site Specific):

Batch 592776 (CJ29233)

CJ29229, CJ29231, CJ29232, CJ29233, CJ29234

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 592838 (CJ29233)

CJ29227, CJ29228, CJ29229, CJ29231, CJ29232, CJ29233, CJ29234

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/15/21-1 Brian Sheriden, Greg Danielewski, Chemist 09/15/21

CJ29227 , CJ29228 , CJ29229 , CJ29232 , CJ29233 , CJ29234

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/16/21-2 Brian Sheriden, Greg Danielewski, Chemist 09/16/21

CJ29231 , CJ29232 , CJ29233 , CJ29234

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 592076 (CJ27928)

CJ29227, CJ29228, CJ29229

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 592282 (CJ29126)

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SDG I.D.: GCJ29227

IC

CJ29232, CJ29233, CJ29234

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 592522 (CJ30700)

CJ29231

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 592523 (CJ30936)

CJ29231, CJ29232, CJ29233

All LCS recoveries were within 90 - 110 with the following exceptions: None.

QC (Site Specific):

Batch 592283 (CJ29233)

CJ29233, CJ29234

All LCS recoveries were within 90 - 110 with the following exceptions: None.
All MS recoveries were within 90 - 110 with the following exceptions: Nitrate as Nitrogen(85.5%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/16/21 09:08 Emily Kolominskaya, Chemist 09/16/21

CJ29227, CJ29228, CJ29229, CJ29231, CJ29232, CJ29233, CJ29234, CJ29236

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/16/21 08:29 Tina Hall, Chemist 09/16/21

CJ29227, CJ29228, CJ29229, CJ29231, CJ29232, CJ29233, CJ29234, CJ29236

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

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Certification Report

October 14, 2021

SDG I.D.: GCJ29227

ICP Metals Narration

BLUE 09/18/21 07:56 Tina Hall, Chemist 09/18/21

CJ29227, CJ29229, CJ29233, CJ29234

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Site Specific):

Batch 592047 (CJ29233)

CJ29227, CJ29228, CJ29229, CJ29231, CJ29232, CJ29233, CJ29234, CJ29236

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 592054 (CJ29233)

CJ29227, CJ29228, CJ29229, CJ29231, CJ29232, CJ29233, CJ29234, CJ29236

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM33 09/17/21-1 Wes Bryon, Chemist 09/17/21

CJ29227 (1X), CJ29231 (1X), CJ29232 (1X), CJ29233 (1X), CJ29236 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0915):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0917_06-33_PAHSIM_0915) (MCP Compliance):

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MCP Certification Report

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SDG I.D.: GCJ29227

SVOASIM Narration

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Site Specific):

Batch 592277 (CJ29233)

CJ29227, CJ29231, CJ29232, CJ29233, CJ29236

All LCS recoveries were within 40 - 140 with the following exceptions: Acenaphthylene(16%)
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: % Terphenyl-d14(22.6%), Acenaphthylene(122.0%), Benz(a)anthracene(27.0%), Benzo(a)pyrene(23.4%), Pyrene(53.8%)
All MS recoveries were within 40 - 140 with the following exceptions: None.
All MSD recoveries were within 40 - 140 with the following exceptions: Benzo(ghi)perylene(38%)
All MS/MSD RPDs were less than 20% with the following exceptions: Acenaphthylene(24.8%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/24/21-2 Michael Hahn, Chemist 09/24/21

CJ29229 (1X), CJ29230 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0924_51-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.084 (0.1), Tetrachloroethene 0.154 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

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SDG I.D.: GCJ29227

VOA Narration

CHEM23 09/25/21-1 Michael Hahn, Chemist 09/25/21

CJ29227 (1X), CJ29228 (1X), CJ29231 (1X), CJ29233 , CJ29234 (1X), CJ29235 (1X), CJ29236 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0925_03-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 23%H (20%), Di-isopropyl ether 24%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.088 (0.1), Tetrachloroethene 0.166 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/25/21-2 Michael Hahn, Chemist 09/25/21

CJ29233 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0925_03-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 23%H (20%), Di-isopropyl ether 24%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.088 (0.1), Tetrachloroethene 0.166 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/27/21-1 Michael Hahn, Chemist 09/27/21

CJ29229 (10X), CJ29232 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0927_03-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 29%H (20%), Dichlorodifluoromethane 35%H

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SDG I.D.: GCJ29227

VOA Narration

(20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.075 (0.1), Tetrachloroethene 0.172 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 593684 (CJ29230) CHEM23 9/24/2021-2

CJ29229(1X), CJ29230(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593727 (CJ27928) CHEM23 9/25/2021-1

CJ29227(1X), CJ29228(1X), CJ29231(1X), CJ29234(1X), CJ29235(1X), CJ29236(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593833 (CJ30888) CHEM23 9/27/2021-1

CJ29229(10X), CJ29232(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2-Dibromo-3-chloropropane(140%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 593728 (CJ29233) CHEM23 9/25/2021-2

CJ29233(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: 2,2-Dichloropropane(64%)
All MS/MSD RPDs were less than 20% with the following exceptions: None.
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.

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SDG I.D.: GCJ29227

VOA Narration

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/16/21-1 Caleb Githinji, Chemist 09/16/21

CJ29231 (1X), CJ29232 (1X), CJ29233 (1X), CJ29236 (1X)

Initial Calibration Evaluation (PIDFID/VPH_091621_T):
The following compounds exceeded %RSD criteria: None.

PIDFID 09/17/21-1 Raman Makol, Chemist 09/17/21

CJ29227 (1X)

Initial Calibration Evaluation (PIDFID/VPH_091621_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 592657 (CJ30902)

CJ29227(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

QC (Site Specific):

Batch 592407 (CJ29233)

CJ29231(1X), CJ29232(1X), CJ29233(1X), CJ29236(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 25% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

Temp 2.1 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/15/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
29227	21A-TRC101-091421-1	GW	9/14/21	1500	5	4		4				X		X	X		X	X	X	X	
29228	21A-GZA12-091421-1	GW	9/14/21	1525	3	B2		4				X	X			X	X	X	X	X	
29229	21A-GZA101R-091421-1	GW	9/14/21	1405	3	1		4				X				X	X	X	X	X	
29230	21A-TB01-091421-1	GW	9/14/21	0800	2							X		~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~	VOCs only
29231	21A-GZA105D-091521-1	GW	9/15/21	1005	5	5		4				X	X	X	X		X	X	X	X	
29232	21A-GZA105D-091521-2	GW	9/15/21	1010	5	5		4				X	X	X	X		X	X	X	X	
29233	21A-AE3-091521-1	GW	9/15/21	0955	15	12		12				X		X	X	X	X	X	X	X	MS/MSD
29234	21A-AE102M-091521-1	GW	9/15/21	1040	3	2		4				X	X			X	X	X	X	X	
29235	21A-AE102D-091521-1	GW	9/15/21	1350	3	1						X	X								
29236	21A-GZA105S-091521-1	GW	9/15/21	1340	5	3		2				X		X	X	X					

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9/15/21	14:30
[signature]	[signature]	9/15/21	17:29

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Tuesday, October 12, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: LOCKHEED WILMINGTON MA 60552044.25
SDG ID: GCJ30888
Sample ID#s: CJ30888 - CJ30897

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 12, 2021

SDG I.D.: GCJ30888

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Sample CJ30892, CJ30893, and CJ30897
Sample(s) required a dilution for Volatiles due to the presence of target and/or non-target compounds. This resulted in elevated reporting limits that exceed the requested criteria for one or more analytes.

CJ30897 required an additional dilution for Trichloroethene and was analyzed past hold time for Volatiles (SW8260C).

Environmental Laboratories, Inc.
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Sample Id Cross Reference

October 12, 2021

SDG I.D.: GCJ30888

Project ID: LOCKHEED WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-TB01-091521-1	CJ30888	GROUND WATER
21A-AE04-091521-1	CJ30889	GROUND WATER
21A-AE102S-091521-1	CJ30890	GROUND WATER
21A-EB02-091621-1	CJ30891	GROUND WATER
21A-AE101R5-091621-1	CJ30892	GROUND WATER
21A-AE101R6-091621-1	CJ30893	GROUND WATER
21A-GZA102S-091621-1	CJ30894	GROUND WATER
21A-AE103S-091621-1	CJ30895	GROUND WATER
21A-AE103M-091621-1	CJ30896	GROUND WATER
21A-TRC401R-091621-1	CJ30897	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/16/21	18:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ30888
Phoenix ID: CJ30888

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-TB01-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30888

Client ID: 21A-TB01-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/27/21	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/27/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30888

Client ID: 21A-TB01-091521-1

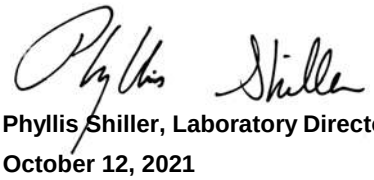
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 12, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/21	14:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/16/21	18:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ30888
Phoenix ID: CJ30889

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE04-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/21/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/16/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/21/21	P/D	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/17/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30889

Client ID: 21A-AE04-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	2.1	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/28/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	99		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/22/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/22/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/22/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/22/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/22/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/22/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/22/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/22/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/22/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/22/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	64		%	1	09/22/21	WB	40 - 140 %
% Nitrobenzene-d5	66		%	1	09/22/21	WB	40 - 140 %
% Terphenyl-d14	51		%	1	09/22/21	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/22/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/22/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/22/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/22/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/22/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	72		%	1	09/22/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	97		%	1	09/22/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	111		%	1	09/22/21	AW	40 - 140 %
% o-terphenyl (aromatic)	98		%	1	09/22/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30889

Client ID: 21A-AE04-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	102		%	1	09/17/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	102		%	1	09/17/21	RM	70 - 130 %

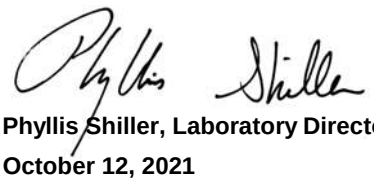
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 12, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/21	14:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/16/21	18:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ30888
Phoenix ID: CJ30890

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE102S-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30890

Client ID: 21A-AE102S-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	4.8	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	2.3	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	2.0	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	2.3	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30890

Client ID: 21A-AE102S-091521-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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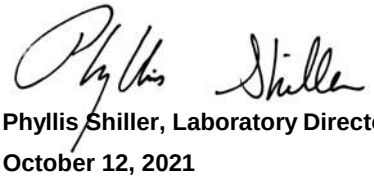

Phyllis Shiller, Laboratory Director

October 12, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	9:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/16/21	18:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ30888
Phoenix ID: CJ30891

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-EB02-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30891

Client ID: 21A-EB02-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/27/21	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/27/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30891

Client ID: 21A-EB02-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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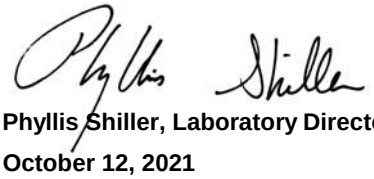

Phyllis Shiller, Laboratory Director

October 12, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	9:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/16/21	18:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ30888
Phoenix ID: CJ30892

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE101R5-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,1-Dichloroethane	56	20	ug/L	20	09/27/21	MH	SW8260C
1,1-Dichloroethene	16	10	ug/L	20	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/27/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/27/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/27/21	MH	SW8260C
Acetone	ND	500	ug/L	20	09/27/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30892

Client ID: 21A-AE101R5-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	09/27/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/27/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/27/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/27/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	1600	20	ug/L	20	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/27/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/27/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/27/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/27/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/27/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Tetrachloroethene	670	20	ug/L	20	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/27/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	23	20	ug/L	20	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/27/21	MH	SW8260C
Trichloroethene	2400	100	ug/L	100	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
Vinyl chloride	20	10	ug/L	20	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/27/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/27/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	09/27/21	MH	70 - 130 %
% Toluene-d8 (20x)	100		%	20	09/27/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	09/28/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	99		%	100	09/28/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	97		%	100	09/28/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	101		%	100	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
Diethyl ether	ND	20	ug/L	20	09/27/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/27/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	18	0.20	ug/l	1	09/20/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	99		%	1	09/20/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/17/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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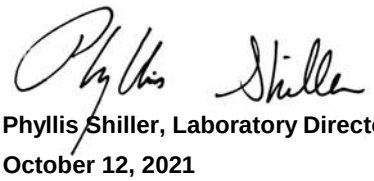

Phyllis Shiller, Laboratory Director
October 12, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	10:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/16/21	18:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ30888
Phoenix ID: CJ30893

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE101R6-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
1,1-Dichloroethane	51	10	ug/L	10	09/28/21	MH	SW8260C
1,1-Dichloroethene	17	10	ug/L	10	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/28/21	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/28/21	MH	SW8260C
Acetone	ND	250	ug/L	10	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30893

Client ID: 21A-AE101R6-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/28/21	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/28/21	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/28/21	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/28/21	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	1500	20	ug/L	20	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/28/21	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/28/21	MH	SW8260C
Methylene chloride	ND	50	ug/L	10	09/28/21	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/28/21	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
Styrene	ND	10	ug/L	10	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/28/21	MH	SW8260C
Tetrachloroethene	170	10	ug/L	10	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/28/21	MH	SW8260C
Toluene	ND	10	ug/L	10	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	66	10	ug/L	10	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/28/21	MH	SW8260C
Trichloroethene	1800	20	ug/L	20	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/28/21	MH	SW8260C
Vinyl chloride	340	10	ug/L	10	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	09/28/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	98		%	10	09/28/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	98		%	10	09/28/21	MH	70 - 130 %
% Toluene-d8 (10x)	99		%	10	09/28/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/27/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/27/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	98		%	20	09/27/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	101		%	20	09/27/21	MH	70 - 130 %
Oxygenates& Dioxane							
Diethyl ether	ND	10	ug/L	10	09/28/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/28/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	9.2	0.20	ug/l	1	09/20/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	98		%	1	09/20/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/17/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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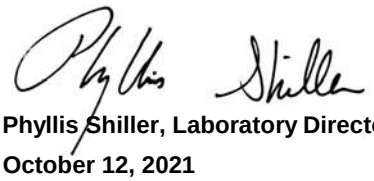

Phyllis Shiller, Laboratory Director
October 12, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	11:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/16/21	18:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ30888
Phoenix ID: CJ30894

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-GZA102S-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/21/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/16/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/21/21	P/D	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/17/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/27/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	100		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/27/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/22/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/22/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/22/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/22/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/22/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/22/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/22/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/22/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/22/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/22/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/22/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	67		%	1	09/22/21	WB	40 - 140 %
% Nitrobenzene-d5	52		%	1	09/22/21	WB	40 - 140 %
% Terphenyl-d14	52		%	1	09/22/21	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/22/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/22/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/22/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/22/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/22/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	82		%	1	09/22/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	104		%	1	09/22/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	110		%	1	09/22/21	AW	40 - 140 %
% o-terphenyl (aromatic)	110		%	1	09/22/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30894
Client ID: 21A-GZA102S-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/17/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	102		%	1	09/17/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	103		%	1	09/17/21	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

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Phyllis Shiller, Laboratory Director
October 12, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	9:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/16/21	18:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ30888
Phoenix ID: CJ30895

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE103S-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.175	0.004	mg/L	1	09/21/21	EK	SW6010D
Arsenic (Dissolved)	0.140	0.004	mg/L	1	09/20/21	CPP	SW6010D
Dissolved Metals Preparation	Completed				09/17/21	AG	SW3005A
Total Metals Digestion	Completed				09/20/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30895

Client ID: 21A-AE103S-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/27/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	102		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/27/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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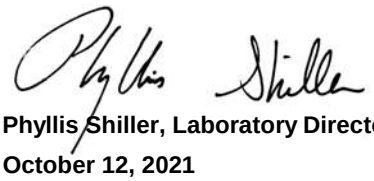

Phyllis Shiller, Laboratory Director
October 12, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	10:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/16/21	18:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ30888
Phoenix ID: CJ30896

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE103M-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30896

Client ID: 21A-AE103M-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30896

Client ID: 21A-AE103M-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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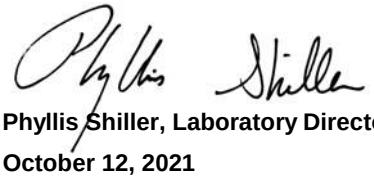

Phyllis Shiller, Laboratory Director

October 12, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	11:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/16/21	18:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ30888
Phoenix ID: CJ30897

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-TRC401R-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				09/16/21		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,1-Dichloroethane	63	20	ug/L	20	09/27/21	MH	SW8260C
1,1-Dichloroethene	12	10	ug/L	20	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/27/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/27/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/27/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ30897

Client ID: 21A-TRC401R-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	500	ug/L	20	09/27/21	MH	SW8260C
Benzene	ND	10	ug/L	20	09/27/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/27/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/27/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/27/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	64	20	ug/L	20	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/27/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/27/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/27/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	09/27/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/27/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Styrene	ND	20	ug/L	20	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/27/21	MH	SW8260C
Tetrachloroethene	1300	20	ug/L	20	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/27/21	MH	SW8260C
Toluene	ND	20	ug/L	20	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/27/21	MH	SW8260C
Trichloroethene	2100	50	ug/L	50	10/01/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/27/21	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	09/27/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/27/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/27/21	MH	70 - 130 %
% Toluene-d8 (20x)	100		%	20	09/27/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	99		%	50	10/01/21	MH	70 - 130 %
% Bromofluorobenzene (50x)	97		%	50	10/01/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (50x)	102		%	50	10/01/21	MH	70 - 130 %
% Toluene-d8 (50x)	99		%	50	10/01/21	MH	70 - 130 %

Oxygenates& Dioxane

1,4-dioxane	ND	2000	ug/L	20	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/27/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/27/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 12, 2021

QA/QC Data

SDG I.D.: GCJ30888

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 592467 (mg/L), QC Sample No: CJ29907 (CJ30895)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	97.1	97.1	0.0	97.5			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 592754 (mg/L), QC Sample No: CJ30868 (CJ30895)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	98.9	99.6	0.7	98.1			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 12, 2021

QA/QC Data

SDG I.D.: GCJ30888

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 592430 (ug/l), QC Sample No: CJ29232 (CJ30892, CJ30893)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	78	80	2.5	83			70 - 130	20	
% 1,4-dioxane-d8	100	%	114	114	0.0	111			70 - 130	20	
QA/QC Batch 592843 (ug/L), QC Sample No: CJ29233 (CJ30889, CJ30894)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	81	97	18.0	58	71	20.2	40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	110	134	19.7	80	100	22.2	40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	67	68	1.5	71	78	9.4	40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	98	118	18.5	71	88	21.4	40 - 140	25	
C9 - Nonane	ND	10	50	64	24.6	35	44	22.8	40 - 140	25	m
C-10 Decane	ND	10	67	83	21.3	49	60	20.2	40 - 140	25	
C12 - Dodecane	ND	10	74	90	19.5	53	64	18.8	40 - 140	25	
C14 - Tetradecane	ND	10	87	102	15.9	63	76	18.7	40 - 140	25	
C16 - Hexadecane	ND	10	97	115	17.0	70	86	20.5	40 - 140	25	
C18 - Octadecane	ND	10	113	131	14.8	80	100	22.2	40 - 140	25	
C19 - Nonadecane	ND	10	108	127	16.2	78	96	20.7	40 - 140	25	
C20 - Eicosane	ND	10	108	126	15.4	77	95	20.9	40 - 140	25	
C22 - Docosane	ND	10	111	129	15.0	79	98	21.5	40 - 140	25	
C24 - Tetracosane	ND	10	113	133	16.3	82	101	20.8	40 - 140	25	
C26 - Hexacosane	ND	10	111	132	17.3	80	99	21.2	40 - 140	25	
C28 - Octacosane	ND	10	112	135	18.6	81	101	22.0	40 - 140	25	
C30 - Tricotane	ND	10	108	133	20.7	77	98	24.0	40 - 140	25	
C36 - Hexatriacontane	ND	10	111	154	32.5	83	114	31.5	40 - 140	25	l,r
% 1-chlorooctadecane (aliphatic)	70	%	76	89	15.8	75	96	24.6	40 - 140	25	
% o-terphenyl (aromatic)	74	%	72	74	2.7	74	79	6.5	40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	74	%	77	75	2.6	75	83	10.1	40 - 140	25	
% 2-Bromonaphthalene (Fractionati	77	%	77	77	0.0	72	81	11.8	40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 592935 (ug/L), QC Sample No: CJ30632 (CJ30889, CJ30894)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	78	77	1.3				40 - 140	20	
Acenaphthene	ND	0.50	81	83	2.4				40 - 140	20	
Acenaphthylene	ND	0.10	75	77	2.6				40 - 140	20	
Anthracene	ND	0.10	84	82	2.4				40 - 140	20	
Benz(a)anthracene	ND	0.02	87	83	4.7				40 - 140	20	
Benzo(a)pyrene	ND	0.02	82	74	10.3				40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	85	79	7.3				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzo(ghi)perylene	ND	0.02	82	77	6.3				40 - 140	20
Benzo(k)fluoranthene	ND	0.02	88	82	7.1				40 - 140	20
Chrysene	ND	0.02	83	80	3.7				40 - 140	20
Dibenz(a,h)anthracene	ND	0.02	92	83	10.3				40 - 140	20
Fluoranthene	ND	0.50	91	89	2.2				40 - 140	20
Fluorene	ND	0.10	83	85	2.4				40 - 140	20
Indeno(1,2,3-cd)pyrene	ND	0.02	92	83	10.3				40 - 140	20
Naphthalene	ND	0.50	74	73	1.4				40 - 140	20
Phenanthrene	ND	0.06	76	75	1.3				40 - 140	20
Pyrene	ND	0.07	92	90	2.2				40 - 140	20
% 2-Fluorobiphenyl	72	%	70	71	1.4				40 - 140	20
% Nitrobenzene-d5	81	%	74	72	2.7				40 - 140	20
% Terphenyl-d14	84	%	85	81	4.8				40 - 140	20

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 593833 (ug/L), QC Sample No: CJ30888 (CJ30888, CJ30891, CJ30892 (20X) , CJ30893 (20X) , CJ30894, CJ30895)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	118	101	15.5				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	114	98	15.1				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	119	102	15.4				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	111	95	15.5				70 - 130	20
1,1-Dichloroethane	ND	1.0	106	93	13.1				70 - 130	20
1,1-Dichloroethene	ND	1.0	111	96	14.5				70 - 130	20
1,1-Dichloropropene	ND	1.0	117	101	14.7				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	115	98	16.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	124	106	15.7				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	112	96	15.4				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	115	100	14.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	140	116	18.8				70 - 130	20
1,2-Dibromoethane	ND	1.0	118	99	17.5				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	109	93	15.8				70 - 130	20
1,2-Dichloroethane	ND	1.0	110	93	16.7				70 - 130	20
1,2-Dichloropropane	ND	1.0	107	91	16.2				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	115	101	13.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	109	94	14.8				70 - 130	20
1,3-Dichloropropane	ND	1.0	113	98	14.2				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	109	94	14.8				70 - 130	20
1,4-dioxane	ND	100	111	99	11.4				40 - 160	20
2,2-Dichloropropane	ND	1.0	120	101	17.2				70 - 130	20
2-Chlorotoluene	ND	1.0	116	100	14.8				70 - 130	20
2-Hexanone	ND	5.0	124	106	15.7				40 - 160	20
4-Chlorotoluene	ND	1.0	112	97	14.4				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	121	101	18.0				40 - 160	20
Acetone	ND	5.0	107	92	15.1				40 - 160	20
Benzene	ND	0.70	110	95	14.6				70 - 130	20
Bromobenzene	ND	1.0	113	97	15.2				70 - 130	20
Bromochloromethane	ND	1.0	106	92	14.1				70 - 130	20
Bromodichloromethane	ND	0.50	113	97	15.2				70 - 130	20
Bromoform	ND	1.0	127	108	16.2				70 - 130	20
Bromomethane	ND	1.0	105	87	18.8				40 - 160	20
Carbon Disulfide	ND	1.0	105	92	13.2				70 - 130	20

QA/QC Data

SDG I.D.: GCJ30888

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Carbon tetrachloride	ND	1.0	109	111	1.8				70 - 130	20	
Chlorobenzene	ND	1.0	110	94	15.7				70 - 130	20	
Chloroethane	ND	1.0	109	96	12.7				70 - 130	20	
Chloroform	ND	1.0	106	92	14.1				70 - 130	20	
Chloromethane	ND	1.0	104	89	15.5				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	108	93	14.9				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	115	98	16.0				70 - 130	20	
Dibromochloromethane	ND	0.50	119	100	17.4				70 - 130	20	
Dibromomethane	ND	1.0	110	96	13.6				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	125	110	12.8				40 - 160	20	
Di-isopropyl ether	ND	1.0	106	91	15.2				70 - 130	20	
Ethyl ether	ND	1.0	96	82	15.7				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	109	93	15.8				70 - 130	20	
Ethylbenzene	ND	1.0	115	99	15.0				70 - 130	20	
Hexachlorobutadiene	ND	0.40	118	99	17.5				70 - 130	20	
Isopropylbenzene	ND	1.0	116	100	14.8				70 - 130	20	
m&p-Xylene	ND	1.0	115	98	16.0				70 - 130	20	
Methyl ethyl ketone	ND	5.0	118	104	12.6				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	110	96	13.6				70 - 130	20	
Methylene chloride	ND	1.0	106	91	15.2				70 - 130	20	
Naphthalene	ND	1.0	126	108	15.4				70 - 130	20	
n-Butylbenzene	ND	1.0	119	104	13.5				70 - 130	20	
n-Propylbenzene	ND	1.0	116	102	12.8				70 - 130	20	
o-Xylene	ND	1.0	113	96	16.3				70 - 130	20	
p-Isopropyltoluene	ND	1.0	119	104	13.5				70 - 130	20	
sec-Butylbenzene	ND	1.0	120	105	13.3				70 - 130	20	
Styrene	ND	1.0	119	99	18.3				70 - 130	20	
tert-amyl methyl ether	ND	1.0	112	96	15.4				70 - 130	20	
tert-Butylbenzene	ND	1.0	117	102	13.7				70 - 130	20	
Tetrachloroethene	ND	1.0	113	99	13.2				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	113	96	16.3				70 - 130	20	
Toluene	ND	1.0	110	95	14.6				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	105	91	14.3				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	120	101	17.2				70 - 130	20	
Trichloroethene	ND	1.0	112	96	15.4				70 - 130	20	
Trichlorofluoromethane	ND	1.0	116	103	11.9				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	106	93	13.1				70 - 130	20	
Vinyl chloride	ND	1.0	119	104	13.5				70 - 130	20	
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0				70 - 130	20	
% Bromofluorobenzene	98	%	101	99	2.0				70 - 130	20	
% Dibromofluoromethane	99	%	97	98	1.0				70 - 130	20	
% Toluene-d8	100	%	101	100	1.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593847 (ug/L), QC Sample No: CJ30897 (CJ30897 (20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	118	101	15.5	111	117	5.3	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	114	98	15.1	122	131	7.1	70 - 130	20	m
1,1,2,2-Tetrachloroethane	ND	0.50	119	102	15.4	107	116	8.1	70 - 130	20	

QA/QC Data

SDG I.D.: GCJ30888

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1,2-Trichloroethane	ND	1.0	111	95	15.5	106	112	5.5	70 - 130	20	
1,1-Dichloroethane	ND	1.0	106	93	13.1	116	122	5.0	70 - 130	20	
1,1-Dichloroethene	ND	1.0	111	96	14.5	129	133	3.1	70 - 130	20	m
1,1-Dichloropropene	ND	1.0	117	101	14.7	123	128	4.0	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	115	98	16.0	102	109	6.6	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	124	106	15.7	106	114	7.3	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	112	96	15.4	100	107	6.8	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	115	100	14.0	110	118	7.0	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	140	116	18.8	107	115	7.2	70 - 130	20	l
1,2-Dibromoethane	ND	1.0	118	99	17.5	106	112	5.5	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	93	15.8	105	109	3.7	70 - 130	20	
1,2-Dichloroethane	ND	1.0	110	93	16.7	111	117	5.3	70 - 130	20	
1,2-Dichloropropane	ND	1.0	107	91	16.2	108	115	6.3	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	115	101	13.0	113	119	5.2	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	109	94	14.8	104	110	5.6	70 - 130	20	
1,3-Dichloropropane	ND	1.0	113	98	14.2	107	113	5.5	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	109	94	14.8	103	109	5.7	70 - 130	20	
1,4-dioxane	ND	100	111	99	11.4	105	109	3.7	40 - 160	20	
2,2-Dichloropropane	ND	1.0	120	101	17.2	97	100	3.0	70 - 130	20	
2-Chlorotoluene	ND	1.0	116	100	14.8	110	117	6.2	70 - 130	20	
2-Hexanone	ND	5.0	124	106	15.7	109	117	7.1	40 - 160	20	
4-Chlorotoluene	ND	1.0	112	97	14.4	108	114	5.4	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	121	101	18.0	109	119	8.8	40 - 160	20	
Acetone	ND	5.0	107	92	15.1	117	127	8.2	40 - 160	20	
Benzene	ND	0.70	110	95	14.6	112	119	6.1	70 - 130	20	
Bromobenzene	ND	1.0	113	97	15.2	104	112	7.4	70 - 130	20	
Bromochloromethane	ND	1.0	106	92	14.1	109	115	5.4	70 - 130	20	
Bromodichloromethane	ND	0.50	113	97	15.2	111	117	5.3	70 - 130	20	
Bromoform	ND	1.0	127	108	16.2	109	116	6.2	70 - 130	20	
Bromomethane	ND	1.0	105	87	18.8	117	120	2.5	40 - 160	20	
Carbon Disulfide	ND	1.0	105	92	13.2	118	126	6.6	70 - 130	20	
Carbon tetrachloride	ND	1.0	109	111	1.8	142	130	8.8	70 - 130	20	m
Chlorobenzene	ND	1.0	110	94	15.7	106	112	5.5	70 - 130	20	
Chloroethane	ND	1.0	109	96	12.7	140	140	0.0	70 - 130	20	m
Chloroform	ND	1.0	106	92	14.1	113	120	6.0	70 - 130	20	
Chloromethane	ND	1.0	104	89	15.5	123	125	1.6	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	108	93	14.9	111	120	7.8	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	115	98	16.0	104	111	6.5	70 - 130	20	
Dibromochloromethane	ND	0.50	119	100	17.4	107	113	5.5	70 - 130	20	
Dibromomethane	ND	1.0	110	96	13.6	106	114	7.3	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	125	110	12.8	145	147	1.4	40 - 160	20	
Di-isopropyl ether	ND	1.0	106	91	15.2	113	118	4.3	70 - 130	20	
Ethyl ether	ND	1.0	96	82	15.7	104	109	4.7	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	109	93	15.8	108	114	5.4	70 - 130	20	
Ethylbenzene	ND	1.0	115	99	15.0	113	118	4.3	70 - 130	20	
Hexachlorobutadiene	ND	0.40	118	99	17.5	110	113	2.7	70 - 130	20	
Isopropylbenzene	ND	1.0	116	100	14.8	112	119	6.1	70 - 130	20	
m&p-Xylene	ND	1.0	115	98	16.0	114	118	3.4	70 - 130	20	
Methyl ethyl ketone	ND	5.0	118	104	12.6	118	121	2.5	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	110	96	13.6	113	121	6.8	70 - 130	20	
Methylene chloride	ND	1.0	106	91	15.2	113	119	5.2	70 - 130	20	
Naphthalene	ND	1.0	126	108	15.4	107	114	6.3	70 - 130	20	
n-Butylbenzene	ND	1.0	119	104	13.5	120	123	2.5	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
n-Propylbenzene	ND	1.0	116	102	12.8	113	119	5.2	70 - 130	20	
o-Xylene	ND	1.0	113	96	16.3	110	113	2.7	70 - 130	20	
p-Isopropyltoluene	ND	1.0	119	104	13.5	116	123	5.9	70 - 130	20	
sec-Butylbenzene	ND	1.0	120	105	13.3	119	126	5.7	70 - 130	20	
Styrene	ND	1.0	119	99	18.3	112	117	4.4	70 - 130	20	
tert-amyl methyl ether	ND	1.0	112	96	15.4	100	107	6.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	117	102	13.7	115	120	4.3	70 - 130	20	
Tetrachloroethene	ND	1.0	113	99	13.2	NC	NC	NC	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	113	96	16.3	110	118	7.0	70 - 130	20	
Toluene	ND	1.0	110	95	14.6	110	117	6.2	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	105	91	14.3	118	125	5.8	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	120	101	17.2	106	114	7.3	70 - 130	20	
Trichlorofluoromethane	ND	1.0	116	103	11.9	153	158	3.2	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	106	93	13.1	123	125	1.6	70 - 130	20	
Vinyl chloride	ND	1.0	119	104	13.5	140	144	2.8	70 - 130	20	m
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0	101	101	0.0	70 - 130	20	
% Bromofluorobenzene	98	%	101	99	2.0	101	100	1.0	70 - 130	20	
% Dibromofluoromethane	99	%	97	98	1.0	101	98	3.0	70 - 130	20	
% Toluene-d8	100	%	101	100	1.0	101	102	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 594454 (ug/L), QC Sample No: CJ30897 (CJ30897 (50X))

Volatiles - Ground Water

Trichloroethene	ND	1.0	112	96	15.4	NC	NC	NC	70 - 130	20	
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0	101	101	0.0	70 - 130	20	
% Bromofluorobenzene	98	%	101	99	2.0	101	100	1.0	70 - 130	20	
% Dibromofluoromethane	99	%	97	98	1.0	101	98	3.0	70 - 130	20	
% Toluene-d8	100	%	101	100	1.0	101	102	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593886 (ug/L), QC Sample No: CJ32390 (CJ30889, CJ30890, CJ30892 (100X) , CJ30893 (10X) , CJ30896)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	105	104	1.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	111	109	1.8				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	101	105	3.9				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	98	102	4.0				70 - 130	20	
1,1-Dichloroethane	ND	1.0	106	104	1.9				70 - 130	20	
1,1-Dichloroethene	ND	1.0	122	118	3.3				70 - 130	20	
1,1-Dichloropropene	ND	1.0	116	109	6.2				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	100	99	1.0				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	110	104	5.6				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	98	97	1.0				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	107	103	3.8				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	102	105	2.9				70 - 130	20	
1,2-Dibromoethane	ND	1.0	100	102	2.0				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	104	105	1.0				70 - 130	20	
1,2-Dichloropropane	ND	1.0	101	102	1.0				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ30888

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,3,5-Trimethylbenzene	ND	1.0	109	103	5.7				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	99	98	1.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	101	103	2.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	20
1,4-dioxane	ND	100	108	110	1.8				40 - 160	20
2,2-Dichloropropane	ND	1.0	115	108	6.3				70 - 130	20
2-Chlorotoluene	ND	1.0	106	103	2.9				70 - 130	20
2-Hexanone	ND	5.0	102	109	6.6				40 - 160	20
4-Chlorotoluene	ND	1.0	106	101	4.8				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	103	111	7.5				40 - 160	20
Acetone	ND	5.0	108	117	8.0				40 - 160	20
Benzene	ND	0.70	105	103	1.9				70 - 130	20
Bromobenzene	ND	1.0	100	98	2.0				70 - 130	20
Bromochloromethane	ND	1.0	99	99	0.0				70 - 130	20
Bromodichloromethane	ND	0.50	103	103	0.0				70 - 130	20
Bromoform	ND	1.0	104	107	2.8				70 - 130	20
Bromomethane	ND	1.0	124	117	5.8				40 - 160	20
Carbon Disulfide	ND	1.0	120	114	5.1				70 - 130	20
Carbon tetrachloride	ND	1.0	114	108	5.4				70 - 130	20
Chlorobenzene	ND	1.0	101	100	1.0				70 - 130	20
Chloroethane	ND	1.0	138	131	5.2				70 - 130	20
Chloroform	ND	1.0	103	104	1.0				70 - 130	20
Chloromethane	ND	1.0	118	115	2.6				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	101	0.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	103	104	1.0				70 - 130	20
Dibromochloromethane	ND	0.50	101	103	2.0				70 - 130	20
Dibromomethane	ND	1.0	100	101	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	146	138	5.6				40 - 160	20
Di-isopropyl ether	ND	1.0	104	106	1.9				70 - 130	20
Ethyl ether	ND	1.0	101	107	5.8				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	98	101	3.0				70 - 130	20
Ethylbenzene	ND	1.0	108	104	3.8				70 - 130	20
Hexachlorobutadiene	ND	0.40	108	100	7.7				70 - 130	20
Isopropylbenzene	ND	1.0	110	102	7.5				70 - 130	20
m&p-Xylene	ND	1.0	109	105	3.7				70 - 130	20
Methyl ethyl ketone	ND	5.0	103	115	11.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	107	113	5.5				70 - 130	20
Methylene chloride	ND	1.0	111	114	2.7				70 - 130	20
Naphthalene	ND	1.0	102	105	2.9				70 - 130	20
n-Butylbenzene	ND	1.0	120	112	6.9				70 - 130	20
n-Propylbenzene	ND	1.0	111	105	5.6				70 - 130	20
o-Xylene	ND	1.0	104	100	3.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	113	106	6.4				70 - 130	20
sec-Butylbenzene	ND	1.0	118	110	7.0				70 - 130	20
Styrene	ND	1.0	107	104	2.8				70 - 130	20
tert-amyl methyl ether	ND	1.0	94	96	2.1				70 - 130	20
tert-Butylbenzene	ND	1.0	111	103	7.5				70 - 130	20
Tetrachloroethene	ND	1.0	106	104	1.9				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	101	112	10.3				70 - 130	20
Toluene	ND	1.0	105	102	2.9				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	116	112	3.5				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	105	107	1.9				70 - 130	20
Trichloroethene	ND	1.0	107	101	5.8				70 - 130	20

QA/QC Data

SDG I.D.: GCJ30888

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Trichlorofluoromethane	ND	1.0	149	140	6.2				70 - 130	20	l
Trichlorotrifluoroethane	ND	1.0	118	113	4.3				70 - 130	20	
Vinyl chloride	ND	1.0	137	129	6.0				70 - 130	20	l
% 1,2-dichlorobenzene-d4	101	%	100	101	1.0				70 - 130	20	
% Bromofluorobenzene	97	%	101	101	0.0				70 - 130	20	
% Dibromofluoromethane	95	%	94	97	3.1				70 - 130	20	
% Toluene-d8	101	%	101	101	0.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 592657 (ug/L), QC Sample No: CJ30902 (CJ30889, CJ30894)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	105	108	2.8				70 - 130	25	
Unadjusted C9-C12 Aliphatics (*1)	ND	100	99	100	1.0				70 - 130	25	
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	105	108	2.8				70 - 130	25	
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	99	100	1.0				70 - 130	25	
C9-C10 Aromatic Hydrocarbons *1	ND	100	97	97	0.0				70 - 130	25	
Benzene	ND	1.0	92	92	0.0				70 - 130	25	
Ethyl Benzene	ND	1.0	93	93	0.0				70 - 130	25	
MTBE	ND	1.0	98	99	1.0				70 - 130	25	
Naphthalene	ND	5.0	94	95	1.1				70 - 130	25	
Toluene	ND	1.0	94	94	0.0				70 - 130	25	
m,p-Xylenes	ND	2.0	94	94	0.0				70 - 130	25	
o-Xylene	ND	1.0	91	91	0.0				70 - 130	25	
% 2,5-Dibromotoluene (PID)	94	%	99	100	1.0				70 - 130	25	
% 2,5-Dibromotoluene (FID)	100	%	101	103	2.0				70 - 130	25	

Comment:

This batch consists of a Blank, LCS and LCSD.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 12, 2021

Tuesday, October 12, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ30888 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ30888	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ30888	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ30888	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ30888	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ30888	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ30888	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ30888	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ30888	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ30889	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ30889	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ30889	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ30889	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ30889	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ30889	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ30889	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ30889	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ30890	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ30890	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ30890	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ30890	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.3	1.0	2	2	ug/L
CJ30890	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ30890	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CJ30890	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CJ30890	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ30890	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.3	1.0	2	2	ug/L
CJ30890	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.3	1.0	2	2	ug/L
CJ30890	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ30890	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ30890	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ30891	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ30891	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ30891	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ30891	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ30891	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ30891	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ30891	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ30891	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ30892	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	670	20	5	5	ug/L
CJ30892	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L

Tuesday, October 12, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ30888 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ30892	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CJ30892	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CJ30892	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CJ30892	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2400	100	5	5	ug/L
CJ30892	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CJ30892	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CJ30892	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CJ30892	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	5	5	ug/L
CJ30892	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1600	20	20	20	ug/L
CJ30892	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CJ30892	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CJ30892	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CJ30892	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CJ30892	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	20	10	2	2	ug/L
CJ30892	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CJ30892	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CJ30892	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CJ30892	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CJ30892	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1600	20	20	20	ug/L
CJ30892	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ30892	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ30892	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ30892	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	670	20	5	5	ug/L
CJ30892	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ30892	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ30892	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	10	7	7	ug/L
CJ30892	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ30892	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ30892	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2400	100	5	5	ug/L
CJ30892	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L

Tuesday, October 12, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ30888 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ30892	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	10	2	2	ug/L
CJ30892	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ30892	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ30892	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1600	20	20	20	ug/L
CJ30892	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2400	100	5	5	ug/L
CJ30892	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	670	20	50	50	ug/L
CJ30892	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ30892	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	20	10	2	2	ug/L
CJ30892	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ30892	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ30892	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ30892	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ30892	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	670	20	5	5	ug/L
CJ30892	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2400	100	5	5	ug/L
CJ30892	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	20	10	2	2	ug/L
CJ30892	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	16	10	7	7	ug/L
CJ30892	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ30892	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ30892	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ30892	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1600	20	70	70	ug/L
CJ30892	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	20	10	2	2	ug/L
CJ30892	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1600	20	20	20	ug/L
CJ30892	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ30892	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L

Tuesday, October 12, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ30888 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ30892	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ30892	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ30892	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ30892	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ30892	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	670	20	50	50	ug/L
CJ30892	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2400	100	5	5	ug/L
CJ30892	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	18	0.20	0.3	0.3	ug/l
CJ30892	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	18	0.20	0.3	0.3	ug/l
CJ30892	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	18	0.20	0.3	0.3	ug/l
CJ30893	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	38	38	ug/L
CJ30893	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.47	0.47	ug/L
CJ30893	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	4	4	ug/L
CJ30893	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.6	0.6	ug/L
CJ30893	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	3	3	ug/L
CJ30893	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	38	38	ug/L
CJ30893	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	340	10	2	2	ug/L
CJ30893	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CJ30893	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	170	10	5	5	ug/L
CJ30893	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1800	20	5	5	ug/L
CJ30893	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CJ30893	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.00033	0.00033	ug/L
CJ30893	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.47	0.47	ug/L
CJ30893	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CJ30893	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	3	3	ug/L
CJ30893	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1500	20	20	20	ug/L
CJ30893	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1500	20	20	20	ug/L
CJ30893	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ30893	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	17	10	7	7	ug/L
CJ30893	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CJ30893	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CJ30893	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CJ30893	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CJ30893	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	170	10	5	5	ug/L
CJ30893	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1800	20	5	5	ug/L
CJ30893	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ30893	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	340	10	2	2	ug/L

Tuesday, October 12, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ30888 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ30893	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CJ30893	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CJ30893	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	170	10	50	50	ug/L
CJ30893	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CJ30893	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1800	20	5	5	ug/L
CJ30893	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	340	10	2	2	ug/L
CJ30893	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1500	20	20	20	ug/L
CJ30893	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1800	20	5	5	ug/L
CJ30893	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	17	10	7	7	ug/L
CJ30893	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	340	10	2	2	ug/L
CJ30893	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	170	10	5	5	ug/L
CJ30893	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1500	20	70	70	ug/L
CJ30893	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CJ30893	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CJ30893	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CJ30893	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CJ30893	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CJ30893	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	170	10	50	50	ug/L
CJ30893	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1500	20	20	20	ug/L
CJ30893	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1800	20	5	5	ug/L
CJ30893	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CJ30893	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CJ30893	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	340	10	2	2	ug/L
CJ30893	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	9.2	0.20	0.3	0.3	ug/l
CJ30893	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.2	0.20	0.3	0.3	ug/l
CJ30893	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	9.2	0.20	0.3	0.3	ug/l
CJ30894	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ30894	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ30894	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ30894	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ30894	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ30894	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ30894	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ30894	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Tuesday, October 12, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ30888 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ30895	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ30895	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ30895	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ30895	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ30895	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ30895	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ30895	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ30895	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ30895	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.175	0.004	0.01	0.01	mg/L
CJ30895	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.175	0.004	0.01	0.01	mg/L
CJ30895	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.175	0.004	0.01	0.01	mg/L
CJ30895	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.140	0.004	0.01	0.01	mg/L
CJ30895	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.140	0.004	0.01	0.01	mg/L
CJ30895	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.140	0.004	0.01	0.01	mg/L
CJ30896	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ30896	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ30896	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ30896	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ30896	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ30896	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ30896	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ30896	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ30897	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CJ30897	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CJ30897	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CJ30897	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CJ30897	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CJ30897	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CJ30897	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CJ30897	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	64	20	20	20	ug/L
CJ30897	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CJ30897	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CJ30897	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CJ30897	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	5	5	ug/L
CJ30897	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1300	20	5	5	ug/L
CJ30897	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L

Tuesday, October 12, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ30888 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ30897	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2100	50	5	5	ug/L
CJ30897	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CJ30897	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CJ30897	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CJ30897	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ30897	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ30897	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	20	5	5	ug/L
CJ30897	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ30897	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	10	7	7	ug/L
CJ30897	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ30897	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ30897	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ30897	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ30897	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2100	50	5	5	ug/L
CJ30897	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	64	20	20	20	ug/L
CJ30897	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ30897	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ30897	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ30897	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	20	50	50	ug/L
CJ30897	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2100	50	5	5	ug/L
CJ30897	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	64	20	20	20	ug/L
CJ30897	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ30897	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L

Tuesday, October 12, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ30888 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ30897	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ30897	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2100	50	5	5	ug/L
CJ30897	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ30897	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ30897	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ30897	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ30897	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	10	7	7	ug/L
CJ30897	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ30897	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	20	5	5	ug/L
CJ30897	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ30897	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2100	50	5	5	ug/L
CJ30897	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ30897	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ30897	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	20	50	50	ug/L
CJ30897	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	64	20	20	20	ug/L
CJ30897	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ30897	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ30897	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ30897	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CJ30897	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ30897	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ30888, CJ30889, CJ30890, CJ30891, CJ30892, CJ30893, CJ30894, CJ30895, CJ30896, CJ30897

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☐ Yes ☑ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Tuesday, October 12, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 12, 2021

SDG I.D.: GCJ30888

SDG Comments

CJ30895 - The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Sample CJ30892, CJ30893, and CJ30897
Sample(s) required a dilution for Volatiles due to the presence of target and/or non-target compounds. This resulted in elevated reporting limits that exceed the requested criteria for one or more analytes.

CJ30897 required an additional dilution for Trichloroethene and was analyzed past hold time for Volatiles (SW8260C).

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/20/21-1 Adam Werner, Chemist 09/20/21

CJ30892 (1X), CJ30893 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0920_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 592430 (CJ29232)

CJ30892, CJ30893

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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NY # 11301

MCP Certification Report

October 12, 2021

SDG I.D.: GCJ30888

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 592843 (Samples: CJ30889, CJ30894): -----

The LCSD recovery is above the upper range for one analyte that was not reported in the sample(s). No significant bias is suspected. (C36 - Hexatriacontane)

The LCS/LCSD RPD exceeds the method criteria for one analyte. This analyte was not reported in the sample(s). No significant variability is suspected. (C36 - Hexatriacontane)

Instrument:

AU-FID4 09/22/21-1 Adam Werner, Chemist 09/22/21

CJ30889 (1X), CJ30894 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 592843 (CJ29233)

CJ30889, CJ30894

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: C36 - Hexatriacontane(154%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: C36 - Hexatriacontane(32.5%)
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/20/21 08:34 Cindy Pearce, Emily Kolominskaya, Chemist 09/20/21

CJ30895

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS 09/21/21 08:04 Cindy Pearce, Emily Kolominskaya, Chemist 09/21/21

CJ30895

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

October 12, 2021

SDG I.D.: GCJ30888

ICP Metals Narration

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 592467 (CJ29907)

CJ30895

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 592754 (CJ30868)

CJ30895

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM27 09/22/21-1 Wes Bryon, Chemist 09/22/21

CJ30889 (1X), CJ30894 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0706):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/0922_03-27_BNSIM18_0706) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 592935 (CJ30632)

CJ30889, CJ30894

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 12, 2021

SDG I.D.: GCJ30888

SVOASIM Narration

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 593833 (Samples: CJ30888, CJ30891, CJ30892, CJ30893, CJ30894, CJ30895): -----

The LCS recovery is above the upper range for one analyte that was not reported in the sample(s). No significant bias is suspected. (1,2-Dibromo-3-chloropropane)

QC Batch 593847 (Samples: CJ30897): -----

The LCS recovery is above the upper range for one analyte that was not reported in the sample(s). No significant bias is suspected. (1,2-Dibromo-3-chloropropane)

The MS and/or the MSD recovery is above the upper range for analytes that were not reported in the sample(s). No significant bias is suspected. (1,1,1-Trichloroethane, Carbon tetrachloride, Chloroethane, Trichlorofluoromethane, Vinyl chloride)

The MSD recovery is above the upper range, therefore a high bias is possible. (1,1-Dichloroethene)

QC Batch 593886 (Samples: CJ30889, CJ30890, CJ30892, CJ30893, CJ30896): -----

The LCS/LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Chloroethane, Trichlorofluoromethane)

The LCS recovery is above the upper range, therefore a high bias is possible. (Vinyl chloride)

Instrument:

CHEM23 09/27/21-1 Michael Hahn, Chemist 09/27/21

CJ30888 (1X), CJ30891 (1X), CJ30892 (20X), CJ30893 (20X), CJ30894 (1X), CJ30895 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0927_03-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 29%H (20%), Dichlorodifluoromethane 35%H

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 12, 2021

SDG I.D.: GCJ30888

VOA Narration

(20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.075 (0.1), Tetrachloroethene 0.172 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/27/21-3 Michael Hahn, Chemist 09/27/21

CJ30897 (1X, 20X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0927_03-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 29%H (20%), Dichlorodifluoromethane 35%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.075 (0.1), Tetrachloroethene 0.172 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/28/21-1 Michael Hahn, Chemist 09/28/21

CJ30889 (1X), CJ30890 (1X), CJ30892 (100X), CJ30893 (10X), CJ30896 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0928_02-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
92% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Acetone 24%H (20%), Carbon Disulfide 22%H (20%), Chloroethane 26%H (20%), Trichlorofluoromethane 36%H (20%), Trichlorotrifluoroethane 25%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.163 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/30/21-3 Michael Hahn, Chemist 09/30/21

CJ30897 (50X)

Initial Calibration Evaluation (CHEM23/VOA23_093021P):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

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MCP Certification Report

October 12, 2021

SDG I.D.: GCJ30888

VOA Narration

Continuing Calibration Verification (CHEM23/0930_22-VOA23_093021P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 593833 (CJ30888) CHEM23 9/27/2021-1

CJ30888(1X), CJ30891(1X), CJ30892(20X), CJ30893(20X), CJ30894(1X), CJ30895(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2-Dibromo-3-chloropropane(140%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593886 (CJ32390) CHEM23 9/28/2021-1

CJ30889(1X), CJ30890(1X), CJ30892(100X), CJ30893(10X), CJ30896(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Chloroethane(138%), Trichlorofluoromethane(149%), Vinyl chloride(137%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Chloroethane(131%), Trichlorofluoromethane(140%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 593847 (CJ30897) CHEM23 9/27/2021-3

CJ30897(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2-Dibromo-3-chloropropane(140%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: Carbon tetrachloride(142%), Chloroethane(140%), Trichlorofluoromethane(153%), Vinyl chloride(140%)
All MSD recoveries were within 70 - 130 with the following exceptions: 1,1,1-Trichloroethane(131%), 1,1-Dichloroethene(133%), Chloroethane(140%), Trichlorofluoromethane(158%), Vinyl chloride(144%)
All MS/MSD RPDs were less than 20% with the following exceptions: None.
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

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NY # 11301

MCP Certification Report

October 12, 2021

SDG I.D.: GCJ30888

VOA Narration

Batch 594454 (CJ30897) CHEM23 9/27/2021-3

CJ30897(50X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/17/21-1 Raman Makol, Chemist 09/17/21

CJ30889 (1X), CJ30894 (1X)

Initial Calibration Evaluation (PIDFID/VPH_091621_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 592657 (CJ30902)

CJ30889(1X), CJ30894(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 20 C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX *Environmental Laboratories, Inc.*

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/16/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
30888	21A-TB01-091521-1	GW	9/15/21	0800	2							X									
30889	21A-AE04-091521-1	GW	9/15/21	1455	5	3						X		X	X						
30890	21A-AE102S-091521-1	GW	9/15/21	1455	3							X									
30891	21A-EB02-091621-1	GW	9/16/21	0930	3							X									
30892	21A-AE101RS-091621-1	GW	9/16/21	0945	3	1						X	X								
30893	21A-AE101RG-091621-1	GW	9/16/21	1020	2	1						X	X								
30894	21A-GZA102S-091621-1	GW	9/16/21	1115	5	3						X		X	X						
30895	21A-AE103S-091621-1	GW	9/16/21	0945	3			2				X				X					
30896	21A-AE103M-091621-1	GW	9/16/21	1020	3							X									
30897	21A-TRC401R-091621-1	GW	9/16/21	1125	9							X									MS/MSD

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-16-21	12:45
		9/16/21	18:03

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

Wednesday, October 06, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.25**
SDG ID: **GCJ31565**
Sample ID#s: CJ31565 - CJ31582

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
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NY # 11301

SDG Comments

October 06, 2021

SDG I.D.: GCJ31565

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver. 2:
This report has been revised to correct the client ID for sample CJ31580 per the chain of custody.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 06, 2021

SDG I.D.: GCJ31565

Project ID: LOCKHEED WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-TB01-091621-1	CJ31565	GROUND WATER
21A-AE112R1-091621-1	CJ31566	GROUND WATER
21A-AE112R2-091621-1	CJ31567	GROUND WATER
21A-AE112R3-091621-1	CJ31568	GROUND WATER
21A-AE112R4-091621-1	CJ31569	GROUND WATER
21A-AE112R5-091621-1	CJ31570	GROUND WATER
21A-AE112R5-091621-2	CJ31571	GROUND WATER
21A-AE112R6-091621-1	CJ31572	GROUND WATER
21A-STM8R1-091621-1	CJ31573	GROUND WATER
21A-STM8R1-091621-2	CJ31574	GROUND WATER
21A-EB01-091621-1	CJ31575	GROUND WATER
21A-AE112R7-091621-1	CJ31576	GROUND WATER
21A-AE105S-091721-1	CJ31577	GROUND WATER
21A-AE105M-091721-1	CJ31578	GROUND WATER
21A-AE105D-091721-1	CJ31579	GROUND WATER
21A-PS2S-091721-1	CJ31580	GROUND WATER
21A-PS2M-091721-1	CJ31581	GROUND WATER
21A-PS2D-091721-1	CJ31582	GROUND WATER

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31565

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-TB01-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31565

Client ID: 21A-TB01-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/27/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/27/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31565

Client ID: 21A-TB01-091621-1

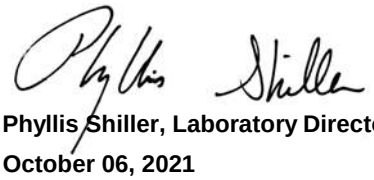
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	12:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31566

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE112R1-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/21/21	CPP	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/21/21	CPP	SW6010D
Dissolved Metals Preparation	Completed				09/20/21	AG	SW3005A
Total Metals Digestion	Completed				09/20/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31566

Client ID: 21A-AE112R1-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/27/21	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31566
Client ID: 21A-AE112R1-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	100		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/27/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 06, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	12:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31567

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE112R2-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/27/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/27/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31567

Client ID: 21A-AE112R2-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/27/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/27/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/27/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/27/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/27/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/27/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/27/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/27/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/27/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/27/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/27/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31567

Client ID: 21A-AE112R2-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/27/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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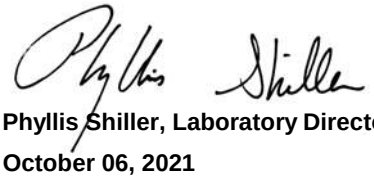


Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	13:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31568

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE112R3-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31568

Client ID: 21A-AE112R3-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	3.8	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	1.2	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31568

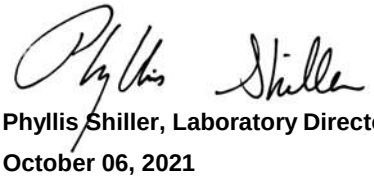
Client ID: 21A-AE112R3-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	13:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31569

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE112R4-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31569

Client ID: 21A-AE112R4-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	7.6	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	1.2	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	1.0	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31569

Client ID: 21A-AE112R4-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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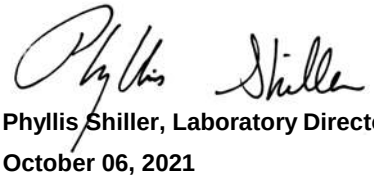


Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	13:07
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31570

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE112R5-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31570

Client ID: 21A-AE112R5-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	11	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	5.6	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	100		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31570

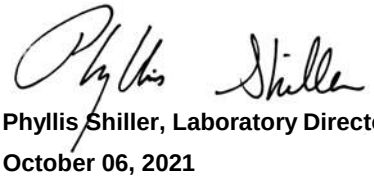
Client ID: 21A-AE112R5-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	13:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31571

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE112R5-091621-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31571

Client ID: 21A-AE112R5-091621-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	12	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	5.5	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31571

Client ID: 21A-AE112R5-091621-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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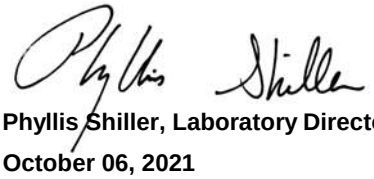


Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	13:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31572

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE112R6-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/21/21	CPP	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/21/21	CPP	SW6010D
Iron (Dissolved)	3.35	0.011	mg/L	1	09/21/21	CPP	SW6010D
Manganese (Dissolved)	1.24	0.001	mg/L	1	09/21/21	CPP	SW6010D
Iron	3.77	0.010	mg/L	1	09/21/21	CPP	SW6010D
Manganese	1.34	0.001	mg/L	1	09/21/21	CPP	SW6010D
Chloride	237	25.0	mg/L	5	09/18/21	BS/EG	E300.0
Nitrite as Nitrogen	< 0.020	0.020	mg/L	5	09/18/21 04:58	BS/EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/18/21 01:03	BS/EG	E300.0
Sulfate	9.9	5.0	mg/L	1	09/18/21	BS/EG	E300.0
Sulfide	0.07	0.05	mg/L	1	09/20/21	GD	SM4500S-D-11
Total Organic Carbon	2.0	1.0	mg/L	1	09/21/21	BJA	SM5310B-11
EPH Extraction	Completed				09/22/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/17/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/22/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/20/21	AG	SW3005A
Total Metals Digestion	Completed				09/20/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/20/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31572

Client ID: 21A-AE112R6-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	9.3	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	1.5	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/23/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/23/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/23/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	63		%	1	09/23/21	WB	40 - 140 %
% Nitrobenzene-d5	53		%	1	09/23/21	WB	40 - 140 %
% Terphenyl-d14	72		%	1	09/23/21	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31572
Client ID: 21A-AE112R6-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	62		%	1	09/23/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	95		%	1	09/23/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	89		%	1	09/23/21	AW	40 - 140 %
% o-terphenyl (aromatic)	85		%	1	09/23/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	99		%	1	09/20/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	103		%	1	09/20/21	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 06, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Ver 2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31573

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-STM8R1-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.011	0.004	mg/L	1	09/21/21	CPP	SW6010D
Arsenic (Dissolved)	0.007	0.004	mg/L	1	09/21/21	CPP	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	09/21/21	CPP	SW6010D
Manganese (Dissolved)	0.162	0.001	mg/L	1	09/21/21	CPP	SW6010D
Iron	0.090	0.010	mg/L	1	09/21/21	CPP	SW6010D
Manganese	0.188	0.001	mg/L	1	09/21/21	CPP	SW6010D
Chloride	81.9	10.0	mg/L	2	09/18/21	BS/EG	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/18/21 01:13	BS/EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/18/21 01:13	BS/EG	E300.0
Sulfate	22.0	5.0	mg/L	1	09/18/21	BS/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/20/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/21/21	BJA	SM5310B-11
EPH Extraction	Completed				09/24/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/17/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/22/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/20/21	AG	SW3005A
Total Metals Digestion	Completed				09/20/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/20/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31573

Client ID: 21A-STM8R1-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	1.8	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/23/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/23/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/23/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	49		%	1	09/23/21	WB	40 - 140 %
% Nitrobenzene-d5	40		%	1	09/23/21	WB	40 - 140 %
% Terphenyl-d14	25		%	1	09/23/21	WB	40 - 140 % 3
1,4-dioxane							
1,4-dioxane	0.36	0.20	ug/l	1	09/24/21	AW	SW8270DSIM
QA/QC Surrogates							

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 1,4-dioxane-d8	84		%	1	09/24/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/23/21	G/G	

MA EPH Aliphatic/Aromatic Ranges

C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/24/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/24/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/24/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	61		%	1	09/24/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	93		%	1	09/24/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	92		%	1	09/24/21	AW	40 - 140 %
% o-terphenyl (aromatic)	71		%	1	09/24/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	103		%	1	09/20/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	105		%	1	09/20/21	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 06, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31574

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-STM8R1-091621-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.011	0.004	mg/L	1	09/22/21	TH	SW6010D
Arsenic (Dissolved)	0.011	0.004	mg/L	1	09/21/21	CPP	SW6010D
Iron (Dissolved)	0.013	0.011	mg/L	1	09/21/21	CPP	SW6010D
Manganese (Dissolved)	0.163	0.001	mg/L	1	09/21/21	CPP	SW6010D
Iron	0.164	0.010	mg/L	1	09/22/21	TH	SW6010D
Manganese	0.210	0.001	mg/L	1	09/22/21	TH	SW6010D
Chloride	81.0	10.0	mg/L	2	09/18/21	BS/EG	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/18/21 01:22	BS/EG	E300.0
Nitrate as Nitrogen	0.08	0.05	mg/L	1	09/18/21 01:22	BS/EG	E300.0
Sulfate	23.1	5.0	mg/L	1	09/18/21	BS/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/23/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/21/21	BJA	SM5310B-11
EPH Extraction	Completed				09/22/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/17/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/22/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/20/21	AG	SW3005A
Total Metals Digestion	Completed				09/21/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/20/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31574

Client ID: 21A-STM8R1-091621-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	1.9	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.49	ug/L	1	09/23/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.49	ug/L	1	09/23/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/23/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/23/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/23/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/23/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.49	ug/L	1	09/23/21	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/23/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/23/21	WB	SW8270D (SIM)
Naphthalene	ND	0.49	ug/L	1	09/23/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.49	ug/L	1	09/23/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/23/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	54		%	1	09/23/21	WB	40 - 140 %
% Nitrobenzene-d5	47		%	1	09/23/21	WB	40 - 140 %
% Terphenyl-d14	72		%	1	09/23/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	0.38	0.20	ug/l	1	09/24/21	AW	SW8270DSIM
QA/QC Surrogates							

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 1,4-dioxane-d8	85		%	1	09/24/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/23/21	G/G	

MA EPH Aliphatic/Aromatic Ranges

C11-C22 Aromatic Hydrocarbons 1,2	ND	240	ug/L	1	09/23/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	250	ug/L	1	09/23/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	250	ug/L	1	09/23/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	250	ug/L	1	09/23/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	240	ug/L	1	09/23/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	46		%	1	09/23/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	105		%	1	09/23/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	100		%	1	09/23/21	AW	40 - 140 %
% o-terphenyl (aromatic)	101		%	1	09/23/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	99		%	1	09/20/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	101		%	1	09/20/21	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

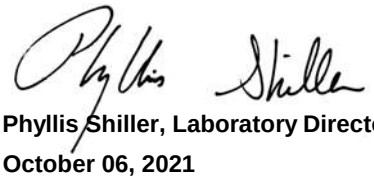
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 06, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	14:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31575

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-EB01-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/22/21	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/21/21	CPP	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	09/21/21	CPP	SW6010D
Manganese (Dissolved)	< 0.001	0.001	mg/L	1	09/21/21	CPP	SW6010D
Iron	< 0.010	0.010	mg/L	1	09/22/21	TH	SW6010D
Manganese	< 0.001	0.001	mg/L	1	09/22/21	TH	SW6010D
Chloride	< 5.0	5.0	mg/L	1	09/18/21	BS/EG	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/18/21 01:31	BS/EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/18/21 01:31	BS/EG	E300.0
Sulfate	< 5.0	5.0	mg/L	1	09/18/21	BS/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/23/21	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/21/21	BJA	SM5310B-11
EPH Extraction	Completed				09/22/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/17/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/22/21	P/D	SW3520C
Dissolved Metals Preparation	Completed				09/20/21	AG	SW3005A
Total Metals Digestion	Completed				09/21/21	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/20/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31575

Client ID: 21A-EB01-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/23/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/23/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/23/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/23/21	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/23/21	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/23/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	09/23/21	WB	40 - 140 %
% Nitrobenzene-d5	64		%	1	09/23/21	WB	40 - 140 %
% Terphenyl-d14	73		%	1	09/23/21	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	09/24/21	AW	SW8270DSIM
QA/QC Surrogates							

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 1,4-dioxane-d8	86		%	1	09/24/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/23/21	G/G	

MA EPH Aliphatic/Aromatic Ranges

C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
Total TPH 1,2*	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	64		%	1	09/23/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	95		%	1	09/23/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	98		%	1	09/23/21	AW	40 - 140 %
% o-terphenyl (aromatic)	100		%	1	09/23/21	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
o-Xylene	ND	1.0	ug/L	1	09/20/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	93		%	1	09/20/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	95		%	1	09/20/21	RM	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31575

Client ID: 21A-EB01-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

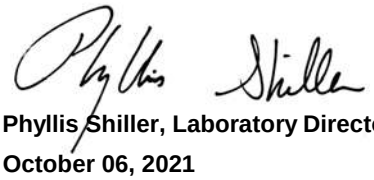
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/21	13:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31576

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE112R7-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31576

Client ID: 21A-AE112R7-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	15	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	104		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	102		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31576

Client ID: 21A-AE112R7-091621-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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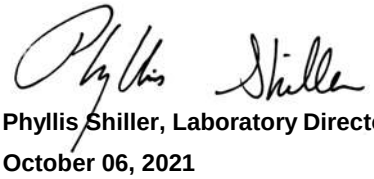


Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/21	10:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31577

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE105S-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.016	0.004	mg/L	1	09/22/21	TH	SW6010D
Arsenic (Dissolved)	0.011	0.004	mg/L	1	09/21/21	CPP	SW6010D
Dissolved Metals Preparation	Completed				09/20/21	AG	SW3005A
Total Metals Digestion	Completed				09/21/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31577

Client ID: 21A-AE105S-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	7.8	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.4	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/28/21	MH	70 - 130 %

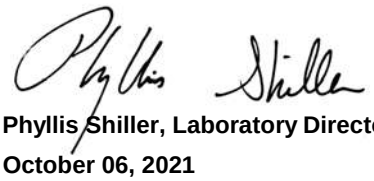
Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31577
Client ID: 21A-AE105S-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	101		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 06, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/21	10:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31578

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE105M-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Acetone	ND	25	ug/L	1	10/01/21	HM	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31578

Client ID: 21A-AE105M-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/01/21	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,2-Dichloroethene	5.2	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/01/21	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	10/01/21	HM	70 - 130 %
% Bromofluorobenzene	97		%	1	10/01/21	HM	70 - 130 %
% Dibromofluoromethane	104		%	1	10/01/21	HM	70 - 130 %
% Toluene-d8	103		%	1	10/01/21	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/01/21	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31578

Client ID: 21A-AE105M-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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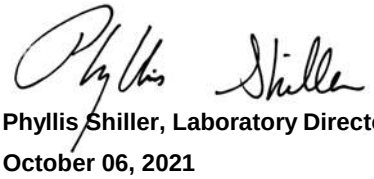

Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/21	11:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31579

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE105D-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31579

Client ID: 21A-AE105D-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	16	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.7	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	4.6	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	103		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31579
Client ID: 21A-AE105D-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.67	0.20	ug/l	1	09/24/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	88		%	1	09/24/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/23/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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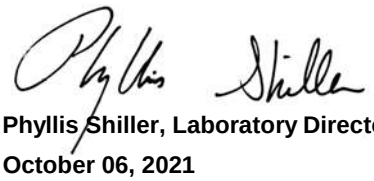

Phyllis Shiller, Laboratory Director
October 06, 2021
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/21	11:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31580

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-PS2S-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Acetone	ND	25	ug/L	1	10/01/21	HM	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31580

Client ID: 21A-PS2S-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/01/21	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Styrene	5.0	1.0	ug/L	1	10/01/21	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/01/21	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	10/01/21	HM	70 - 130 %
% Bromofluorobenzene	102		%	1	10/01/21	HM	70 - 130 %
% Dibromofluoromethane	102		%	1	10/01/21	HM	70 - 130 %
% Toluene-d8	96		%	1	10/01/21	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/01/21	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31580

Client ID: 21A-PS2S-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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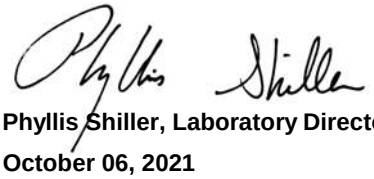

Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/21	11:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31581

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-PS2M-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Acetone	ND	25	ug/L	1	10/01/21	HM	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31581

Client ID: 21A-PS2M-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/01/21	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/01/21	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/01/21	HM	70 - 130 %
% Bromofluorobenzene	96		%	1	10/01/21	HM	70 - 130 %
% Dibromofluoromethane	106		%	1	10/01/21	HM	70 - 130 %
% Toluene-d8	100		%	1	10/01/21	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/01/21	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31581

Client ID: 21A-PS2M-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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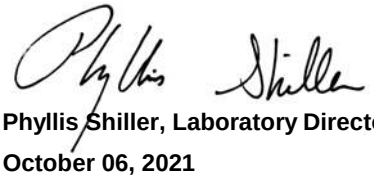


Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/21	11:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/17/21	16:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ31565
Phoenix ID: CJ31582

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-PS2D-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Acetone	ND	25	ug/L	1	10/01/21	HM	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31582

Client ID: 21A-PS2D-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/01/21	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/01/21	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/01/21	HM	70 - 130 %
% Bromofluorobenzene	97		%	1	10/01/21	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	10/01/21	HM	70 - 130 %
% Toluene-d8	98		%	1	10/01/21	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/01/21	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ31582

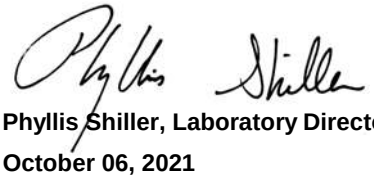
Client ID: 21A-PS2D-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 06, 2021

QA/QC Data

SDG I.D.: GCJ31565

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 592755 (mg/L), QC Sample No: CJ31413 (CJ31566, CJ31572, CJ31573)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	98.3	98.3	0.0	98.1			80 - 120	20
Iron	BRL	0.010	0.645	0.640	0.80	99.3	100	0.7	100			80 - 120	20
Manganese	BRL	0.001	0.051	0.050	2.00	101	102	1.0	101			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 592756 (mg/L), QC Sample No: CJ31574 (CJ31566, CJ31572, CJ31573, CJ31574, CJ31575, CJ31577)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.011	0.010	NC	86.9	87.8	1.0	86.2			80 - 120	20
Iron	BRL	0.011	0.013	0.015	NC	89.2	89.5	0.3	87.2			80 - 120	20
Manganese	BRL	0.001	0.163	0.163	0	90.7	90.8	0.1	87.1			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 592915 (mg/L), QC Sample No: CJ31577 (CJ31574, CJ31575, CJ31577)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.016	0.016	NC	98.5	97.2	1.3	98.7			80 - 120	20
Iron	BRL	0.010	40.7	40.5	0.50	98.2	97.4	0.8	NC			80 - 120	20
Manganese	BRL	0.001	1.59	1.58	0.60	98.2	97.0	1.2	94.8			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 06, 2021

QA/QC Data

SDG I.D.: GCJ31565

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 592776 (mg/L), QC Sample No: CJ29233 (CJ31572, CJ31573)													
Sulfide	BRL	0.05	0.21	0.21	NC	102			90.1			90 - 110	20
Comment:													
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.													
QA/QC Batch 593190 (mg/L), QC Sample No: CJ31574 (CJ31574, CJ31575)													
Sulfide	BRL	0.05	<0.05	0.05	NC	93.0			92.0			90 - 110	20
Comment:													
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.													
QA/QC Batch 593014 (mg/L), QC Sample No: CJ32216 (CJ31572, CJ31573, CJ31574, CJ31575)													
Total Organic Carbon	BRL	1.0	<1.0	<1.0	NC	96.0			96.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 592633 (mg/L), QC Sample No: CJ31896 (CJ31572, CJ31573, CJ31574, CJ31575)													
Chloride	BRL	5.0	16.3	16.0	NC	95.3			97.3			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.16	0.14	NC	93.9			101			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	94.0			99.9			90 - 110	20
Sulfate	BRL	5.0	<5.0	<5.0	NC	96.3			103			90 - 110	20

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QA/QC Report

October 06, 2021

QA/QC Data

SDG I.D.: GCJ31565

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 593240 (ug/l), QC Sample No: CJ31559 (CJ31573, CJ31574, CJ31575, CJ31579)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	82	70	15.8	NC			70 - 130	20
% 1,4-dioxane-d8	89	%	89	85	4.6	85			70 - 130	20
QA/QC Batch 593018 (ug/L), QC Sample No: CJ31474 (CJ31572, CJ31574, CJ31575)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	100	94	6.2				40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	130	122	6.3				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	112	107	4.6				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	117	110	6.2				40 - 140	25
C9 - Nonane	ND	10	63	59	6.6				40 - 140	25
C-10 Decane	ND	10	84	79	6.1				40 - 140	25
C12 - Dodecane	ND	10	88	84	4.7				40 - 140	25
C14 - Tetradecane	ND	10	105	96	9.0				40 - 140	25
C16 - Hexadecane	ND	10	118	110	7.0				40 - 140	25
C18 - Octadecane	ND	10	143	134	6.5				40 - 140	25
C19 - Nonadecane	ND	10	134	125	6.9				40 - 140	25
C20 - Eicosane	ND	10	133	124	7.0				40 - 140	25
C22 - Docosane	ND	10	136	127	6.8				40 - 140	25
C24 - Tetracosane	ND	10	139	130	6.7				40 - 140	25
C26 - Hexacosane	ND	10	136	127	6.8				40 - 140	25
C28 - Octacosane	ND	10	135	126	6.9				40 - 140	25
C30 - Tricotane	ND	10	125	116	7.5				40 - 140	25
C36 - Hexatriacontane	ND	10	103	97	6.0				40 - 140	25
% 1-chlorooctadecane (aliphatic)	59	%	83	78	6.2				40 - 140	25
% o-terphenyl (aromatic)	105	%	104	101	2.9				40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	109	%	103	114	10.1				40 - 140	25
% 2-Bromonaphthalene (Fractionati	113	%	105	118	11.7				40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 593413 (ug/L), QC Sample No: CJ39691 (CJ31573)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	47	47	0.0				40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	62	61	1.6				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	73	71	2.8				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	56	55	1.8				40 - 140	25

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
C9 - Nonane	ND	10	31	31	0.0				40 - 140	25	l
C-10 Decane	ND	10	41	41	0.0				40 - 140	25	
C12 - Dodecane	ND	10	42	42	0.0				40 - 140	25	
C14 - Tetradecane	ND	10	49	49	0.0				40 - 140	25	
C16 - Hexadecane	ND	10	54	54	0.0				40 - 140	25	
C18 - Octadecane	ND	10	67	66	1.5				40 - 140	25	
C19 - Nonadecane	ND	10	62	61	1.6				40 - 140	25	
C20 - Eicosane	ND	10	61	61	0.0				40 - 140	25	
C22 - Docosane	ND	10	63	62	1.6				40 - 140	25	
C24 - Tetracosane	ND	10	64	64	0.0				40 - 140	25	
C26 - Hexacosane	ND	10	62	62	0.0				40 - 140	25	
C28 - Octacosane	ND	10	62	62	0.0				40 - 140	25	
C30 - Tricotane	ND	10	58	58	0.0				40 - 140	25	
C36 - Hexatriacontane	ND	10	61	58	5.0				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	54	%	70	69	1.4				40 - 140	25	
% o-terphenyl (aromatic)	111	%	122	121	0.8				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	132	%	153	138	10.3				40 - 140	25	l
% 2-Bromonaphthalene (Fractionati	123	%	156	144	8.0				40 - 140	25	l
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 593120 (ug/L), QC Sample No: CJ31144 (CJ31572, CJ31573, CJ31574, CJ31575)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50	50	53	5.8				40 - 140	20	
Acenaphthene	ND	0.50	70	66	5.9				40 - 140	20	
Acenaphthylene	ND	0.10	65	17	117.1				40 - 140	20	l,r
Anthracene	ND	0.10	81	73	10.4				40 - 140	20	
Benz(a)anthracene	ND	0.02	85	64	28.2				40 - 140	20	r
Benzo(a)pyrene	ND	0.02	86	34	86.7				40 - 140	20	l,r
Benzo(b)fluoranthene	ND	0.02	95	76	22.2				40 - 140	20	r
Benzo(ghi)perylene	ND	0.02	88	47	60.7				40 - 140	20	r
Benzo(k)fluoranthene	ND	0.02	96	58	49.4				40 - 140	20	r
Chrysene	ND	0.02	88	76	14.6				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	96	79	19.4				40 - 140	20	
Fluoranthene	ND	0.50	96	85	12.2				40 - 140	20	
Fluorene	ND	0.10	72	73	1.4				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	96	48	66.7				40 - 140	20	r
Naphthalene	ND	0.50	51	50	2.0				40 - 140	20	
Phenanthrene	ND	0.06	95	93	2.1				40 - 140	20	
Pyrene	ND	0.07	100	51	64.9				40 - 140	20	r
% 2-Fluorobiphenyl	64	%	66	60	9.5				40 - 140	20	
% Nitrobenzene-d5	51	%	47	38	21.2				40 - 140	20	l,r
% Terphenyl-d14	74	%	78	73	6.6				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 593833 (ug/L), QC Sample No: CJ30888 (CJ31565, CJ31566, CJ31567)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	118	101	15.5				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	114	98	15.1				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	119	102	15.4				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ31565

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1,2-Trichloroethane	ND	1.0	111	95	15.5				70 - 130	20
1,1-Dichloroethane	ND	1.0	106	93	13.1				70 - 130	20
1,1-Dichloroethene	ND	1.0	111	96	14.5				70 - 130	20
1,1-Dichloropropene	ND	1.0	117	101	14.7				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	115	98	16.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	124	106	15.7				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	112	96	15.4				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	115	100	14.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	140	116	18.8				70 - 130	20
1,2-Dibromoethane	ND	1.0	118	99	17.5				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	109	93	15.8				70 - 130	20
1,2-Dichloroethane	ND	1.0	110	93	16.7				70 - 130	20
1,2-Dichloropropane	ND	1.0	107	91	16.2				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	115	101	13.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	109	94	14.8				70 - 130	20
1,3-Dichloropropane	ND	1.0	113	98	14.2				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	109	94	14.8				70 - 130	20
1,4-dioxane	ND	100	111	99	11.4				40 - 160	20
2,2-Dichloropropane	ND	1.0	120	101	17.2				70 - 130	20
2-Chlorotoluene	ND	1.0	116	100	14.8				70 - 130	20
2-Hexanone	ND	5.0	124	106	15.7				40 - 160	20
4-Chlorotoluene	ND	1.0	112	97	14.4				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	121	101	18.0				40 - 160	20
Acetone	ND	5.0	107	92	15.1				40 - 160	20
Benzene	ND	0.70	110	95	14.6				70 - 130	20
Bromobenzene	ND	1.0	113	97	15.2				70 - 130	20
Bromochloromethane	ND	1.0	106	92	14.1				70 - 130	20
Bromodichloromethane	ND	0.50	113	97	15.2				70 - 130	20
Bromoform	ND	1.0	127	108	16.2				70 - 130	20
Bromomethane	ND	1.0	105	87	18.8				40 - 160	20
Carbon Disulfide	ND	1.0	105	92	13.2				70 - 130	20
Carbon tetrachloride	ND	1.0	109	111	1.8				70 - 130	20
Chlorobenzene	ND	1.0	110	94	15.7				70 - 130	20
Chloroethane	ND	1.0	109	96	12.7				70 - 130	20
Chloroform	ND	1.0	106	92	14.1				70 - 130	20
Chloromethane	ND	1.0	104	89	15.5				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	108	93	14.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	115	98	16.0				70 - 130	20
Dibromochloromethane	ND	0.50	119	100	17.4				70 - 130	20
Dibromomethane	ND	1.0	110	96	13.6				70 - 130	20
Dichlorodifluoromethane	ND	1.0	125	110	12.8				40 - 160	20
Di-isopropyl ether	ND	1.0	106	91	15.2				70 - 130	20
Ethyl ether	ND	1.0	96	82	15.7				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	109	93	15.8				70 - 130	20
Ethylbenzene	ND	1.0	115	99	15.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	118	99	17.5				70 - 130	20
Isopropylbenzene	ND	1.0	116	100	14.8				70 - 130	20
m&p-Xylene	ND	1.0	115	98	16.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	118	104	12.6				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	110	96	13.6				70 - 130	20
Methylene chloride	ND	1.0	106	91	15.2				70 - 130	20
Naphthalene	ND	1.0	126	108	15.4				70 - 130	20
n-Butylbenzene	ND	1.0	119	104	13.5				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
n-Propylbenzene	ND	1.0	116	102	12.8				70 - 130	20
o-Xylene	ND	1.0	113	96	16.3				70 - 130	20
p-Isopropyltoluene	ND	1.0	119	104	13.5				70 - 130	20
sec-Butylbenzene	ND	1.0	120	105	13.3				70 - 130	20
Styrene	ND	1.0	119	99	18.3				70 - 130	20
tert-amyl methyl ether	ND	1.0	112	96	15.4				70 - 130	20
tert-Butylbenzene	ND	1.0	117	102	13.7				70 - 130	20
Tetrachloroethene	ND	1.0	113	99	13.2				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	113	96	16.3				70 - 130	20
Toluene	ND	1.0	110	95	14.6				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	105	91	14.3				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	120	101	17.2				70 - 130	20
Trichloroethene	ND	1.0	112	96	15.4				70 - 130	20
Trichlorofluoromethane	ND	1.0	116	103	11.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	106	93	13.1				70 - 130	20
Vinyl chloride	ND	1.0	119	104	13.5				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	98	%	101	99	2.0				70 - 130	20
% Dibromofluoromethane	99	%	97	98	1.0				70 - 130	20
% Toluene-d8	100	%	101	100	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593828 (ug/L), QC Sample No: CJ31570 (CJ31570, CJ31572, CJ31573, CJ31575)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	104	102	1.9				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	100	103	3.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	102	103	1.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	100	99	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	103	103	0.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	102	103	1.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	102	101	1.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	97	97	0.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	104	102	1.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	95	95	0.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	100	100	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	106	107	0.9				70 - 130	20
1,2-Dibromoethane	ND	1.0	104	102	1.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	94	96	2.1				70 - 130	20
1,2-Dichloroethane	ND	1.0	103	102	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	99	98	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	100	99	1.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	96	96	0.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	103	101	2.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	97	96	1.0				70 - 130	20
1,4-dioxane	ND	100	104	103	1.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	93	93	0.0				70 - 130	20
2-Chlorotoluene	ND	1.0	100	101	1.0				70 - 130	20
2-Hexanone	ND	5.0	109	107	1.9				40 - 160	20
4-Chlorotoluene	ND	1.0	100	99	1.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ31565

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
4-Methyl-2-pentanone	ND	5.0	107	106	0.9				40 - 160	20
Acetone	ND	5.0	114	111	2.7				40 - 160	20
Benzene	ND	0.70	101	101	0.0				70 - 130	20
Bromobenzene	ND	1.0	98	96	2.1				70 - 130	20
Bromochloromethane	ND	1.0	99	101	2.0				70 - 130	20
Bromodichloromethane	ND	0.50	101	101	0.0				70 - 130	20
Bromoform	ND	1.0	105	105	0.0				70 - 130	20
Bromomethane	ND	1.0	110	112	1.8				40 - 160	20
Carbon Disulfide	ND	1.0	101	102	1.0				70 - 130	20
Carbon tetrachloride	ND	1.0	95	101	6.1				70 - 130	20
Chlorobenzene	ND	1.0	99	98	1.0				70 - 130	20
Chloroethane	ND	1.0	119	119	0.0				70 - 130	20
Chloroform	ND	1.0	102	102	0.0				70 - 130	20
Chloromethane	ND	1.0	108	111	2.7				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	102	1.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	102	99	3.0				70 - 130	20
Dibromochloromethane	ND	0.50	103	102	1.0				70 - 130	20
Dibromomethane	ND	1.0	100	100	0.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	120	124	3.3				40 - 160	20
Di-isopropyl ether	ND	1.0	104	104	0.0				70 - 130	20
Ethyl ether	ND	1.0	101	97	4.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	100	101	1.0				70 - 130	20
Ethylbenzene	ND	1.0	100	101	1.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	89	91	2.2				70 - 130	20
Isopropylbenzene	ND	1.0	98	99	1.0				70 - 130	20
m&p-Xylene	ND	1.0	102	102	0.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	109	107	1.9				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	107	106	0.9				70 - 130	20
Methylene chloride	ND	1.0	104	104	0.0				70 - 130	20
Naphthalene	ND	1.0	103	104	1.0				70 - 130	20
n-Butylbenzene	ND	1.0	101	102	1.0				70 - 130	20
n-Propylbenzene	ND	1.0	98	99	1.0				70 - 130	20
o-Xylene	ND	1.0	100	99	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	101	101	0.0				70 - 130	20
sec-Butylbenzene	ND	1.0	101	100	1.0				70 - 130	20
Styrene	ND	1.0	102	102	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	96	95	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	99	99	0.0				70 - 130	20
Tetrachloroethene	ND	1.0	95	94	1.1				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	106	104	1.9				70 - 130	20
Toluene	ND	1.0	99	99	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	104	102	1.9				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	103	102	1.0				70 - 130	20
Trichloroethene	ND	1.0	98	98	0.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	116	117	0.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	92	93	1.1				70 - 130	20
Vinyl chloride	ND	1.0	114	116	1.7				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	99	%	101	100	1.0				70 - 130	20
% Dibromofluoromethane	96	%	97	99	2.0				70 - 130	20
% Toluene-d8	100	%	100	101	1.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 593886 (ug/L), QC Sample No: CJ32390 (CJ31568, CJ31569, CJ31571, CJ31574, CJ31576, CJ31577, CJ31579)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	105	104	1.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	111	109	1.8				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	101	105	3.9				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	98	102	4.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	106	104	1.9				70 - 130	20
1,1-Dichloroethene	ND	1.0	122	118	3.3				70 - 130	20
1,1-Dichloropropene	ND	1.0	116	109	6.2				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	100	99	1.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	110	104	5.6				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	98	97	1.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	107	103	3.8				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	102	105	2.9				70 - 130	20
1,2-Dibromoethane	ND	1.0	100	102	2.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	104	105	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	101	102	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	109	103	5.7				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	99	98	1.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	101	103	2.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	20
1,4-dioxane	ND	100	108	110	1.8				40 - 160	20
2,2-Dichloropropane	ND	1.0	115	108	6.3				70 - 130	20
2-Chlorotoluene	ND	1.0	106	103	2.9				70 - 130	20
2-Hexanone	ND	5.0	102	109	6.6				40 - 160	20
4-Chlorotoluene	ND	1.0	106	101	4.8				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	103	111	7.5				40 - 160	20
Acetone	ND	5.0	108	117	8.0				40 - 160	20
Benzene	ND	0.70	105	103	1.9				70 - 130	20
Bromobenzene	ND	1.0	100	98	2.0				70 - 130	20
Bromochloromethane	ND	1.0	99	99	0.0				70 - 130	20
Bromodichloromethane	ND	0.50	103	103	0.0				70 - 130	20
Bromoform	ND	1.0	104	107	2.8				70 - 130	20
Bromomethane	ND	1.0	124	117	5.8				40 - 160	20
Carbon Disulfide	ND	1.0	120	114	5.1				70 - 130	20
Carbon tetrachloride	ND	1.0	114	108	5.4				70 - 130	20
Chlorobenzene	ND	1.0	101	100	1.0				70 - 130	20
Chloroethane	ND	1.0	138	131	5.2				70 - 130	20
Chloroform	ND	1.0	103	104	1.0				70 - 130	20
Chloromethane	ND	1.0	118	115	2.6				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	101	0.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	103	104	1.0				70 - 130	20
Dibromochloromethane	ND	0.50	101	103	2.0				70 - 130	20
Dibromomethane	ND	1.0	100	101	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	146	138	5.6				40 - 160	20
Di-isopropyl ether	ND	1.0	104	106	1.9				70 - 130	20

QA/QC Data

SDG I.D.: GCJ31565

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Ethyl ether	ND	1.0	101	107	5.8				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	98	101	3.0				70 - 130	20	
Ethylbenzene	ND	1.0	108	104	3.8				70 - 130	20	
Hexachlorobutadiene	ND	0.40	108	100	7.7				70 - 130	20	
Isopropylbenzene	ND	1.0	110	102	7.5				70 - 130	20	
m&p-Xylene	ND	1.0	109	105	3.7				70 - 130	20	
Methyl ethyl ketone	ND	5.0	103	115	11.0				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	107	113	5.5				70 - 130	20	
Methylene chloride	ND	1.0	111	114	2.7				70 - 130	20	
Naphthalene	ND	1.0	102	105	2.9				70 - 130	20	
n-Butylbenzene	ND	1.0	120	112	6.9				70 - 130	20	
n-Propylbenzene	ND	1.0	111	105	5.6				70 - 130	20	
o-Xylene	ND	1.0	104	100	3.9				70 - 130	20	
p-Isopropyltoluene	ND	1.0	113	106	6.4				70 - 130	20	
sec-Butylbenzene	ND	1.0	118	110	7.0				70 - 130	20	
Styrene	ND	1.0	107	104	2.8				70 - 130	20	
tert-amyl methyl ether	ND	1.0	94	96	2.1				70 - 130	20	
tert-Butylbenzene	ND	1.0	111	103	7.5				70 - 130	20	
Tetrachloroethene	ND	1.0	106	104	1.9				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	101	112	10.3				70 - 130	20	
Toluene	ND	1.0	105	102	2.9				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	116	112	3.5				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	105	107	1.9				70 - 130	20	
Trichloroethene	ND	1.0	107	101	5.8				70 - 130	20	
Trichlorofluoromethane	ND	1.0	149	140	6.2				70 - 130	20	I
Trichlorotrifluoroethane	ND	1.0	118	113	4.3				70 - 130	20	
Vinyl chloride	ND	1.0	137	129	6.0				70 - 130	20	I
% 1,2-dichlorobenzene-d4	101	%	100	101	1.0				70 - 130	20	
% Bromofluorobenzene	97	%	101	101	0.0				70 - 130	20	
% Dibromofluoromethane	95	%	94	97	3.1				70 - 130	20	
% Toluene-d8	101	%	101	101	0.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 594621 (ug/L), QC Sample No: CJ44285 (CJ31578, CJ31580, CJ31581, CJ31582)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	107	104	2.8	114	105	8.2	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	104	104	0.0	109	108	0.9	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	95	94	1.1	104	102	1.9	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	103	104	1.0	108	102	5.7	70 - 130	20
1,1-Dichloroethane	ND	1.0	104	106	1.9	110	108	1.8	70 - 130	20
1,1-Dichloroethene	ND	1.0	98	98	0.0	105	101	3.9	70 - 130	20
1,1-Dichloropropene	ND	1.0	103	104	1.0	107	107	0.0	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	107	102	4.8	102	102	0.0	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	101	97	4.0	110	108	1.8	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	99	101	2.0	100	96	4.1	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	106	109	2.8	105	106	0.9	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	104	102	1.9	108	105	2.8	70 - 130	20
1,2-Dibromoethane	ND	1.0	97	100	3.0	97	96	1.0	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	98	97	1.0	102	96	6.1	70 - 130	20

QA/QC Data

SDG I.D.: GCJ31565

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2-Dichloroethane	ND	1.0	105	101	3.9	105	109	3.7	70 - 130	20
1,2-Dichloropropane	ND	1.0	92	94	2.2	97	93	4.2	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	108	107	0.9	104	106	1.9	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	100	103	3.0	103	103	0.0	70 - 130	20
1,3-Dichloropropane	ND	1.0	97	100	3.0	104	101	2.9	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	102	100	2.0	104	100	3.9	70 - 130	20
1,4-dioxane	ND	100	111	103	7.5	107	116	8.1	40 - 160	20
2,2-Dichloropropane	ND	1.0	109	104	4.7	90	89	1.1	70 - 130	20
2-Chlorotoluene	ND	1.0	98	100	2.0	98	95	3.1	70 - 130	20
2-Hexanone	ND	5.0	94	90	4.3	96	101	5.1	40 - 160	20
4-Chlorotoluene	ND	1.0	104	105	1.0	104	104	0.0	70 - 130	20
4-Methyl-2-pentanone	ND	5.0	101	90	11.5	108	104	3.8	40 - 160	20
Acetone	ND	5.0	83	87	4.7	125	125	0.0	40 - 160	20
Benzene	ND	0.70	98	99	1.0	100	99	1.0	70 - 130	20
Bromobenzene	ND	1.0	101	104	2.9	103	102	1.0	70 - 130	20
Bromochloromethane	ND	1.0	105	102	2.9	114	102	11.1	70 - 130	20
Bromodichloromethane	ND	0.50	106	103	2.9	103	106	2.9	70 - 130	20
Bromoform	ND	1.0	100	104	3.9	111	122	9.4	70 - 130	20
Bromomethane	ND	1.0	96	95	1.0	71	86	19.1	40 - 160	20
Carbon Disulfide	ND	1.0	88	89	1.1	87	93	6.7	70 - 130	20
Carbon tetrachloride	ND	1.0	101	102	1.0	107	105	1.9	70 - 130	20
Chlorobenzene	ND	1.0	101	100	1.0	105	104	1.0	70 - 130	20
Chloroethane	ND	1.0	81	83	2.4	84	85	1.2	70 - 130	20
Chloroform	ND	1.0	103	100	3.0	105	104	1.0	70 - 130	20
Chloromethane	ND	1.0	100	97	3.0	97	100	3.0	40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	99	96	3.1	100	104	3.9	70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	107	102	4.8	97	96	1.0	70 - 130	20
Dibromochloromethane	ND	0.50	97	101	4.0	103	102	1.0	70 - 130	20
Dibromomethane	ND	1.0	109	104	4.7	110	111	0.9	70 - 130	20
Dichlorodifluoromethane	ND	1.0	90	89	1.1	102	103	1.0	40 - 160	20
Di-isopropyl ether	ND	1.0	96	95	1.0	98	98	0.0	70 - 130	20
Ethyl ether	ND	1.0	85	83	2.4	86	84	2.4	70 - 130	20
Ethyl tert-butyl ether	ND	1.0	101	99	2.0	100	103	3.0	70 - 130	20
Ethylbenzene	ND	1.0	105	108	2.8	106	107	0.9	70 - 130	20
Hexachlorobutadiene	ND	0.40	96	97	1.0	102	101	1.0	70 - 130	20
Isopropylbenzene	ND	1.0	103	105	1.9	98	100	2.0	70 - 130	20
m&p-Xylene	ND	1.0	103	109	5.7	107	109	1.9	70 - 130	20
Methyl ethyl ketone	ND	5.0	106	89	17.4	110	106	3.7	40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	97	6.0	101	103	2.0	70 - 130	20
Methylene chloride	ND	1.0	90	91	1.1	110	108	1.8	70 - 130	20
Naphthalene	ND	1.0	101	99	2.0	102	100	2.0	70 - 130	20
n-Butylbenzene	ND	1.0	103	108	4.7	107	104	2.8	70 - 130	20
n-Propylbenzene	ND	1.0	104	106	1.9	101	101	0.0	70 - 130	20
o-Xylene	ND	1.0	100	103	3.0	103	103	0.0	70 - 130	20
p-Isopropyltoluene	ND	1.0	107	109	1.9	105	106	0.9	70 - 130	20
sec-Butylbenzene	ND	1.0	105	106	0.9	107	105	1.9	70 - 130	20
Styrene	ND	1.0	106	109	2.8	110	116	5.3	70 - 130	20
tert-amyl methyl ether	ND	1.0	97	97	0.0	95	98	3.1	70 - 130	20
tert-Butylbenzene	ND	1.0	103	104	1.0	105	104	1.0	70 - 130	20
Tetrachloroethene	ND	1.0	101	99	2.0	100	105	4.9	70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	97	95	2.1	95	101	6.1	70 - 130	20
Toluene	ND	1.0	107	101	5.8	102	99	3.0	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	94	95	1.1	103	97	6.0	70 - 130	20

QA/QC Data

SDG I.D.: GCJ31565

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
trans-1,3-Dichloropropene	ND	0.40	102	97	5.0	97	99	2.0	70 - 130	20
Trichloroethene	ND	1.0	104	105	1.0	106	108	1.9	70 - 130	20
Trichlorofluoromethane	ND	1.0	102	99	3.0	114	111	2.7	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	84	85	1.2	98	96	2.1	70 - 130	20
Vinyl chloride	ND	1.0	104	103	1.0	109	109	0.0	70 - 130	20
% 1,2-dichlorobenzene-d4	102	%	98	101	3.0	100	101	1.0	70 - 130	20
% Bromofluorobenzene	95	%	100	105	4.9	104	106	1.9	70 - 130	20
% Dibromofluoromethane	107	%	103	103	0.0	104	101	2.9	70 - 130	20
% Toluene-d8	101	%	103	100	3.0	101	97	4.0	70 - 130	20

Comment:

A blank MS/MSD was analyzed with this batch.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 592885 (ug/L), QC Sample No: CJ31473 (CJ31572, CJ31573, CJ31574, CJ31575)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	98	93	5.2				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	101	94	7.2				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	98	93	5.2				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	101	94	7.2				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	95	91	4.3				70 - 130	25
Benzene	ND	1.0	91	87	4.5				70 - 130	25
Ethyl Benzene	ND	1.0	90	88	2.2				70 - 130	25
MTBE	ND	1.0	100	95	5.1				70 - 130	25
Naphthalene	ND	5.0	89	86	3.4				70 - 130	25
Toluene	ND	1.0	92	89	3.3				70 - 130	25
m,p-Xylenes	ND	2.0	92	89	3.3				70 - 130	25
o-Xylene	ND	1.0	89	86	3.4				70 - 130	25
% 2,5-Dibromotoluene (PID)	98	%	94	97	3.1				70 - 130	25
% 2,5-Dibromotoluene (FID)	99	%	96	95	1.0				70 - 130	25

Comment:

This batch consists of a Blank, LCS and LCSD.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 06, 2021

Wednesday, October 06, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ31565 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ31565	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31565	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31565	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31565	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31565	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31565	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31565	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ31565	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ31566	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31566	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31566	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31566	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31566	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31566	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31566	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ31566	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ31567	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31567	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31567	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31567	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31567	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31567	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31567	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ31567	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ31568	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31568	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31568	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31568	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31568	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31568	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31568	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ31568	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ31569	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31569	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31569	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31569	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31569	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31569	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31569	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L

Wednesday, October 06, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ31565 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ31569	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ31570	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.6	1.0	5	5	ug/L
CJ31570	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31570	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31570	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31570	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.6	1.0	5	5	ug/L
CJ31570	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31570	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.6	1.0	5	5	ug/L
CJ31570	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31570	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5.6	1.0	5	5	ug/L
CJ31570	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5.6	1.0	5	5	ug/L
CJ31570	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31570	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ31570	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ31571	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31571	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31571	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31571	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.5	1.0	5	5	ug/L
CJ31571	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.5	1.0	5	5	ug/L
CJ31571	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31571	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.5	1.0	5	5	ug/L
CJ31571	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5.5	1.0	5	5	ug/L
CJ31571	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31571	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5.5	1.0	5	5	ug/L
CJ31571	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31571	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ31571	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ31572	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31572	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31572	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31572	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31572	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31572	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31572	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ31572	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ31572	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.24	0.001	0.43	0.43	mg/L
CJ31572	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.34	0.001	0.43	0.43	mg/L
CJ31573	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31573	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L

Wednesday, October 06, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ31565 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ31573	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31573	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31573	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31573	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.36	0.20	0.3	0.3	ug/l
CJ31573	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.36	0.20	0.3	0.3	ug/l
CJ31573	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.36	0.20	0.3	0.3	ug/l
CJ31573	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31573	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.011	0.004	0.01	0.01	mg/L
CJ31573	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.011	0.004	0.01	0.01	mg/L
CJ31573	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.011	0.004	0.01	0.01	mg/L
CJ31574	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31574	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31574	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31574	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31574	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31574	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.38	0.20	0.3	0.3	ug/l
CJ31574	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.38	0.20	0.3	0.3	ug/l
CJ31574	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.38	0.20	0.3	0.3	ug/l
CJ31574	$EPHRANGE-	C11-C22 Aromatic Hydrocarbons 1,2*	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	240	200	200	ug/L
CJ31574	$EPHRANGE-	C11-C22 Aromatic Hydrocarbons 1,2*	MA / GROUNDWATER STANDARDS / GW-1	ND	240	200	200	ug/L
CJ31574	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31574	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.011	0.004	0.01	0.01	mg/L
CJ31574	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.011	0.004	0.01	0.01	mg/L
CJ31574	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.011	0.004	0.01	0.01	mg/L
CJ31574	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.011	0.004	0.01	0.01	mg/L
CJ31574	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.011	0.004	0.01	0.01	mg/L
CJ31574	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.011	0.004	0.01	0.01	mg/L
CJ31575	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31575	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31575	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31575	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31575	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31575	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31576	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31576	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31576	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31576	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31576	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31576	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31576	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L

Wednesday, October 06, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ31565 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ31576	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ31577	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31577	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31577	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31577	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31577	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31577	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31577	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ31577	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ31577	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.016	0.004	0.01	0.01	mg/L
CJ31577	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.016	0.004	0.01	0.01	mg/L
CJ31577	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.016	0.004	0.01	0.01	mg/L
CJ31577	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.011	0.004	0.01	0.01	mg/L
CJ31577	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.011	0.004	0.01	0.01	mg/L
CJ31577	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.011	0.004	0.01	0.01	mg/L
CJ31578	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31578	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31578	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31578	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31578	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31578	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.3	0.3	ug/L
CJ31578	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CJ31578	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CJ31579	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4.6	1.0	2	2	ug/L
CJ31579	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31579	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31579	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31579	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	4.6	1.0	2	2	ug/L
CJ31579	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31579	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	4.6	1.0	2	2	ug/L
CJ31579	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	4.6	1.0	2	2	ug/L
CJ31579	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31579	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	4.6	1.0	2	2	ug/L
CJ31579	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.67	0.20	0.3	0.3	ug/l
CJ31579	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.67	0.20	0.3	0.3	ug/l
CJ31579	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.67	0.20	0.3	0.3	ug/l
CJ31579	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ31580	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31580	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L

Wednesday, October 06, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ31565 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ31580	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31580	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31580	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31580	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.3	0.3	ug/L
CJ31580	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CJ31580	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CJ31581	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31581	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31581	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31581	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31581	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31581	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.3	0.3	ug/L
CJ31581	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CJ31581	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CJ31582	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ31582	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ31582	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ31582	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ31582	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ31582	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.3	0.3	ug/L
CJ31582	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CJ31582	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ31565, CJ31566, CJ31567, CJ31568, CJ31569, CJ31570, CJ31571, CJ31572, CJ31573, CJ31574, CJ31575, CJ31576, CJ31577, CJ31578, CJ31579, CJ31580, CJ31581, CJ31582

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☐ Yes ☑ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Wednesday, October 06, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 06, 2021

SDG I.D.: GCJ31565

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.
1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/24/21-1 Adam Werner, Chemist 09/24/21

CJ31573 (1X), CJ31574 (1X), CJ31575 (1X), CJ31579 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0924_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 593240 (CJ31559)

CJ31573, CJ31574, CJ31575, CJ31579

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

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MCP Certification Report

October 06, 2021

SDG I.D.: GCJ31565

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 593018 (Samples: CJ31572, CJ31574, CJ31575): -----

The LCS recovery is above the upper range for one analyte that was not reported in the sample(s). No significant bias is suspected. (C18 - Octadecane)

QC Batch 593413 (Samples: CJ31573): -----

The LCS/LCSD is below the method criteria. A low bias is possible. (C9 - Nonane)

One or more surrogates is above the upper range. No significant bias is suspected. (% 2-Bromonaphthalene (Fractionation), % 2-Fluorobiphenyl (Fractionation))

Instrument:

AU-FID3 09/23/21-1 Adam Werner, Chemist 09/23/21

CJ31572 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID3 09/24/21-1 Adam Werner, Chemist 09/24/21

CJ31573 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/22/21-1 Adam Werner, Chemist 09/22/21

CJ31572 (1X), CJ31574 (1X), CJ31575 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/24/21-1 Adam Werner, Chemist 09/24/21

CJ31573 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 593018 (CJ31474)

CJ31572, CJ31574, CJ31575

All LCS recoveries were within 40 - 140 with the following exceptions: C18 - Octadecane(143%)
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

Batch 593413 (CJ39691)

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MCP Certification Report

October 06, 2021

SDG I.D.: GCJ31565

EPH Narration

CJ31573

All LCS recoveries were within 40 - 140 with the following exceptions: % 2-Bromonaphthalene (Fractionation)(156%), % 2-Fluorobiphenyl (Fractionation)(153%), C9 - Nonane(31%)
All LCSD recoveries were within 40 - 140 with the following exceptions: % 2-Bromonaphthalene (Fractionation)(144%), C9 - Nonane(31%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/20/21-1 Greg Danielewski, Chemist 09/20/21

CJ31572 , CJ31573

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

BECKMAN DU720 09/23/21-2 Greg Danielewski, Chemist 09/23/21

CJ31574 , CJ31575

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 592776 (CJ29233)

CJ31572, CJ31573

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 593014 (CJ32216)

CJ31572, CJ31573, CJ31574, CJ31575

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 593190 (CJ31574)

CJ31574, CJ31575

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 06, 2021

SDG I.D.: GCJ31565

Wet Chemistry Analysis

obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/17/21-1 Brian Sheriden, Eric Geyer, Chemist 09/17/21

CJ31572 , CJ31573 , CJ31574 , CJ31575

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 592633 (CJ31896)

CJ31572, CJ31573, CJ31574, CJ31575

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/21/21 08:04 Cindy Pearce, Tina Hall, Chemist 09/21/21

CJ31566, CJ31572, CJ31573, CJ31574, CJ31575, CJ31577

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS 09/22/21 09:49 Cindy Pearce, Tina Hall, Chemist 09/22/21

CJ31574, CJ31575, CJ31577

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/21/21 07:57 Cindy Pearce, Chemist 09/21/21

CJ31566, CJ31572, CJ31573

The initial calibration met criteria.

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SDG I.D.: GCJ31565

ICP Metals Narration

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 592755 (CJ31413)

CJ31566, CJ31572, CJ31573

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 592756 (CJ31574)

CJ31566, CJ31572, CJ31573, CJ31574, CJ31575, CJ31577

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 592915 (CJ31577)

CJ31574, CJ31575, CJ31577

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 593120 (Samples: CJ31572, CJ31573, CJ31574, CJ31575): -----

The LCSD recovery is below the method criteria. The LCS is acceptable. A low bias is possible. (Acenaphthylene, Benzo(a)pyrene, % Nitrobenzene-d5)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes and a surrogate. These analytes were not reported in the sample(s). No significant variability is suspected. (Acenaphthylene, Benz(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(ghi)perylene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Pyrene, % Nitrobenzene-d5)

Instrument:

CHEM33 09/23/21-1 Wes Bryon, Chemist 09/23/21

CJ31572 (1X), CJ31573 (1X), CJ31574 (1X), CJ31575 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0915):

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MCP Certification Report

October 06, 2021

SDG I.D.: GCJ31565

SVOASIM Narration

100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0923_03-33_PAHSIM_0915) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 593120 (CJ31144)

CJ31572, CJ31573, CJ31574, CJ31575

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: % Nitrobenzene-d5(38%), Acenaphthylene(17%), Benzo(a)pyrene(34%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: % Nitrobenzene-d5(21.2%), Acenaphthylene(117.1%), Benz(a)anthracene(28.2%), Benzo(a)pyrene(86.7%), Benzo(b)fluoranthene(22.2%), Benzo(ghi)perylene(60.7%), Benzo(k)fluoranthene(49.4%), Indeno(1,2,3-cd)pyrene(66.7%), Pyrene(64.9%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 593833 (Samples: CJ31565, CJ31566, CJ31567): -----

The LCS recovery is above the upper range for one analyte that was not reported in the sample(s). No significant bias is suspected. (1,2-Dibromo-3-chloropropane)

QC Batch 593886 (Samples: CJ31568, CJ31569, CJ31571, CJ31574, CJ31576, CJ31577, CJ31579): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Chloroethane, Trichlorofluoromethane)

The LCS recovery is above the upper range, therefore a slight high bias is possible. (Vinyl chloride)

Instrument:

CHEM15 10/01/21-1 Harry Mullin, Chemist 10/01/21

CJ31578 (1X), CJ31580 (1X), CJ31581 (1X), CJ31582 (1X)

Initial Calibration Evaluation (CHEM15/VOA15-092921):

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MCP Certification Report

October 06, 2021

SDG I.D.: GCJ31565

VOA Narration

94% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 28% (20%), Chloroethane 34% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM15/1001_02-VOA15-092921) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/27/21-1 Michael Hahn, Chemist 09/27/21

CJ31565 (1X), CJ31566 (1X), CJ31567 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0927_03-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 29%H (20%), Dichlorodifluoromethane 35%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.075 (0.1), Tetrachloroethene 0.172 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/27/21-2 Michael Hahn, Chemist 09/27/21

CJ31570 (1X), CJ31572 (1X), CJ31573 (1X), CJ31575 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0927_35-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Acetone 22%H (20%), Chloroethane 21%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/28/21-1 Michael Hahn, Chemist 09/28/21

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MCP Certification Report

October 06, 2021

SDG I.D.: GCJ31565

VOA Narration

CJ31568 (1X), CJ31569 (1X), CJ31571 (1X), CJ31574 (1X), CJ31576 (1X), CJ31577 (1X), CJ31579 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0928_02-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
92% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Acetone 24%H (20%), Carbon Disulfide 22%H (20%), Chloroethane 26%H (20%), Trichlorofluoromethane 36%H (20%), Trichlorotrifluoroethane 25%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.163 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 593828 (CJ31570) CHEM23 9/27/2021-2

CJ31570(1X), CJ31572(1X), CJ31573(1X), CJ31575(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593833 (CJ30888) CHEM23 9/27/2021-1

CJ31565(1X), CJ31566(1X), CJ31567(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2-Dibromo-3-chloropropane(140%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 593886 (CJ32390) CHEM23 9/28/2021-1

CJ31568(1X), CJ31569(1X), CJ31571(1X), CJ31574(1X), CJ31576(1X), CJ31577(1X), CJ31579(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Chloroethane(138%), Trichlorofluoromethane(149%), Vinyl chloride(137%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Chloroethane(131%), Trichlorofluoromethane(140%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

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MCP Certification Report

October 06, 2021

SDG I.D.: GCJ31565

VOA Narration

Batch 594621 (CJ44285) CHEM15 10/1/2021-1

CJ31578(1X), CJ31580(1X), CJ31581(1X), CJ31582(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/20/21-1 Raman Makol, Chemist 09/20/21

CJ31572 (1X), CJ31573 (1X), CJ31574 (1X), CJ31575 (1X)

Initial Calibration Evaluation (PIDFID/VPH_091621_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 592885 (CJ31473)

CJ31572(1X), CJ31573(1X), CJ31574(1X), CJ31575(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 2.0 C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature
Date: 9/17/21

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP VPH 04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP-EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
315165	ZIA-TB01-091621-1	GW	9/16/21	0800	2							X									
315166	ZIA-AE112R1-091621-1	GW	9/16/21	1250	3			2				X				X					
315167	ZIA-AE112R2-091621-1	GW	9/16/21	1255	3							X									
315168	ZIA-AE112R3-091621-1	GW	9/16/21	1300	3							X									
315169	ZIA-AE112R4-091621-1	GW	9/16/21	1305	3							X									
315170	ZIA-AE112R5-091621-1	GW	9/16/21	1307	3							X									
315171	ZIA-AE112R5-091621-2	GW	9/16/21	1310	3							X									
315172	ZIA-AE112R6-091621-1	GW	9/16/21	1315	5	4		4				X		X	X	X	X	X	X	X	
315173	ZIA-STM8R1-091621-1	GW	9/16/21	1350	5	5		4				X	X	X	X	X	X	X	X	X	
315174	ZIA-STM8R1-091621-2	GW	9/16/21	1355	5	5		4				X	X	X	X	X	X	X	X	X	
315175	ZIA-EB01-091621-1	GW	9/16/21	1415	5	5		4				X	X	X	X	X	X	X	X	X	
315176	ZIA-AE112R7-091621-1	GW	9/16/21	1320	3							X									

Relinquished by:	Accepted by:	Date:	Time:
		9-17-21	12:50
		9/17/21	16:13

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 2.0° C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
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Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/17/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
31577	21A-AE105S-091721-1	GW	9/17/21	1000	3			2				X				X					
31578	21A-AE105M-091721-1	GW	9/17/21	1050	3							X									
31579	21A-AE105D-091721-1	GW	9/17/21	1125	3	1						X	X								
31580	21A-PS25-091721-1	GW	9/17/21	1140	3							X									
31581	21A-PS2M-091721-1	GW	9/17/21	1120	3							X									
31582	21A-PS2D-091721-1	GW	9/17/21	1135	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-17-21	12:50
[signature]	[signature]	9/17/21	16:13

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

PHOENIX
Environmental Laboratories, Inc.

Monday, October 04, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEAD-WILMINGTON MA 60552044.25**
SDG ID: **GCJ32390**
Sample ID#s: CJ32390 - CJ32398

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 04, 2021

SDG I.D.: GCJ32390

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 04, 2021

SDG I.D.: GCJ32390

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-TB01-091721-1	CJ32390	GROUND WATER
21A-PS1S-091721-1	CJ32391	GROUND WATER
21A-PS1M-091721-1	CJ32392	GROUND WATER
21A-PS1D-091721-1	CJ32393	GROUND WATER
21A-MW4A-092021-1	CJ32394	GROUND WATER
21A-MW4-092021-1	CJ32395	GROUND WATER
21A-PS3-092021-1	CJ32396	GROUND WATER
21A-PS4-092021-1	CJ32397	GROUND WATER
21A-PS5S-092021-1	CJ32398	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 04, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/20/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ32390
Phoenix ID: CJ32390

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25
Client ID: 21A-TB01-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/21	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32390

Client ID: 21A-TB01-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	09/28/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/28/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/28/21	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/28/21	MH	70 - 130 %
% Toluene-d8	101		%	1	09/28/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32390

Client ID: 21A-TB01-091721-1

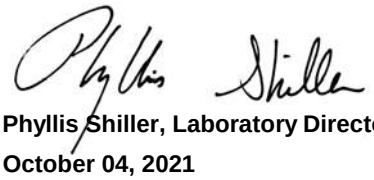
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 04, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 04, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/21	13:15
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/20/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ32390
Phoenix ID: CJ32391

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25
Client ID: 21A-PS1S-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Acetone	ND	25	ug/L	1	10/01/21	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32391

Client ID: 21A-PS1S-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/01/21	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,2-Dichloroethene	9.7	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Methyl t-butyl ether (MTBE)	22	1.0	ug/L	1	10/01/21	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/01/21	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Trichloroethene	1.0	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Vinyl chloride	1.3	1.0	ug/L	1	10/01/21	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/01/21	HM	70 - 130 %
% Bromofluorobenzene	98		%	1	10/01/21	HM	70 - 130 %
% Dibromofluoromethane	109		%	1	10/01/21	HM	70 - 130 %
% Toluene-d8	102		%	1	10/01/21	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/01/21	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

Ver 1

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32391

Client ID: 21A-PS1S-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	3.2	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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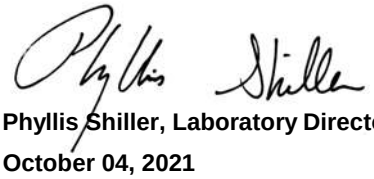


Phyllis Shiller, Laboratory Director

October 04, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 04, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/21	12:35
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/20/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ32390
Phoenix ID: CJ32392

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25
Client ID: 21A-PS1M-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/01/21	HM	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,1-Dichloroethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	2	10/01/21	HM	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/01/21	HM	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	10/01/21	HM	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/01/21	HM	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
2-Hexanone	ND	10	ug/L	2	10/01/21	HM	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/01/21	HM	SW8260C
Acetone	ND	50	ug/L	2	10/01/21	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32392

Client ID: 21A-PS1M-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	10/01/21	HM	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/01/21	HM	SW8260C
Bromoform	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/01/21	HM	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Chloroform	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
cis-1,2-Dichloroethene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	10/01/21	HM	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/01/21	HM	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	10/01/21	HM	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Methyl ethyl ketone	26	10	ug/L	2	10/01/21	HM	SW8260C
Methyl t-butyl ether (MTBE)	3.4	2.0	ug/L	2	10/01/21	HM	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Styrene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Tetrachloroethene	3.6	2.0	ug/L	2	10/01/21	HM	SW8260C
Tetrahydrofuran (THF)	34	5.0	ug/L	2	10/01/21	HM	SW8260C
Toluene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	10/01/21	HM	SW8260C
Trichloroethene	4.9	2.0	ug/L	2	10/01/21	HM	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	10/01/21	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	103		%	2	10/01/21	HM	70 - 130 %
% Bromofluorobenzene (2x)	93		%	2	10/01/21	HM	70 - 130 %
% Dibromofluoromethane (2x)	108		%	2	10/01/21	HM	70 - 130 %
% Toluene-d8 (2x)	99		%	2	10/01/21	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	2	10/01/21	HM	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/01/21	HM	SW8260C (OXY)

Ver 1

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32392

Client ID: 21A-PS1M-091721-1

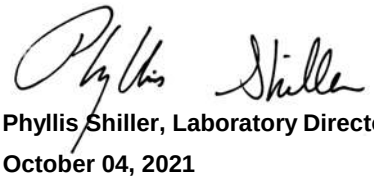
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	2.0	ug/L	2	10/01/21	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/01/21	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/01/21	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to sample dilution.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 04, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 04, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/21	13:25
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/20/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ32390
Phoenix ID: CJ32393

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25
Client ID: 21A-PS1D-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/01/21	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Acetone	ND	25	ug/L	1	10/01/21	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32393

Client ID: 21A-PS1D-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/01/21	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,2-Dichloroethene	8.3	1.0	ug/L	1	10/01/21	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/01/21	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/01/21	HM	SW8260C
Methyl t-butyl ether (MTBE)	3.0	1.0	ug/L	1	10/01/21	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/01/21	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/21	HM	SW8260C
Trichloroethene	6.3	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/01/21	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	10/01/21	HM	70 - 130 %
% Bromofluorobenzene	95		%	1	10/01/21	HM	70 - 130 %
% Dibromofluoromethane	102		%	1	10/01/21	HM	70 - 130 %
% Toluene-d8	98		%	1	10/01/21	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/01/21	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32393

Client ID: 21A-PS1D-091721-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/01/21	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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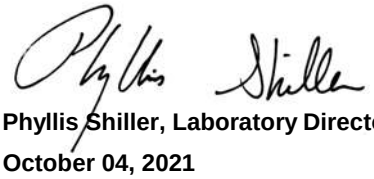

Phyllis Shiller, Laboratory Director

October 04, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 04, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/20/21	10:40
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/20/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ32390
Phoenix ID: CJ32394

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25
Client ID: 21A-MW4A-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.011	0.004	mg/L	1	09/23/21	CPP	SW6010D
Arsenic (Dissolved)	0.009	0.004	mg/L	1	09/22/21	CPP	SW6010D
Dissolved Metals Preparation	Completed				09/21/21	AG	SW3005A
Total Metals Digestion	Completed				09/22/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32394

Client ID: 21A-MW4A-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/03/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/03/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
cis-1,2-Dichloroethene	8.3	1.0	ug/L	1	10/03/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.8	1.0	ug/L	1	10/03/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Tetrachloroethene	1.1	1.0	ug/L	1	10/03/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/03/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Trichloroethene	1.7	1.0	ug/L	1	10/03/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/03/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	10/03/21	MH	70 - 130 %

Ver 1

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32394
Client ID: 21A-MW4A-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	103		%	1	10/03/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/03/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/03/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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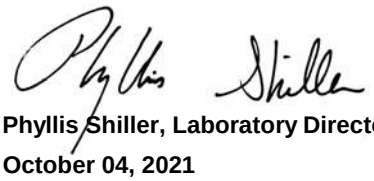

Phyllis Shiller, Laboratory Director
October 04, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 04, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/20/21	11:35
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/20/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ32390
Phoenix ID: CJ32395

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25
Client ID: 21A-MW4-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/23/21	CPP	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/22/21	CPP	SW6010D
Dissolved Metals Preparation	Completed				09/21/21	AG	SW3005A
Total Metals Digestion	Completed				09/22/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/02/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32395

Client ID: 21A-MW4-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/02/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/02/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/02/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/02/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/02/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
cis-1,2-Dichloroethene	20	1.0	ug/L	1	10/02/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/02/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/02/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/02/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	4.5	1.0	ug/L	1	10/02/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/02/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/02/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/02/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	10/02/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	98		%	1	10/02/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/02/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/02/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/02/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/02/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/02/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/02/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.80	0.20	ug/l	1	09/27/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	85		%	1	09/27/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/24/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 04, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 04, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/20/21	11:30
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/20/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ32390
Phoenix ID: CJ32396

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25
Client ID: 21A-PS3-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/02/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/02/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/02/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/02/21	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32396

Client ID: 21A-PS3-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/02/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/02/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/02/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/02/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/02/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/02/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/02/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/02/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/02/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/02/21	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	10/02/21	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	10/02/21	MH	70 - 130 %
% Toluene-d8	99		%	1	10/02/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/02/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/02/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32396

Client ID: 21A-PS3-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/02/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/02/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/02/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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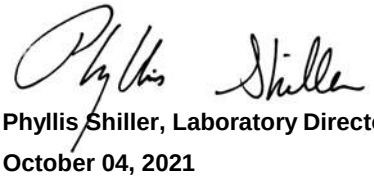

Phyllis Shiller, Laboratory Director

October 04, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 04, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/20/21	12:30
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/20/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ32390
Phoenix ID: CJ32397

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25
Client ID: 21A-PS4-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/03/21	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32397

Client ID: 21A-PS4-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/03/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
cis-1,2-Dichloroethene	7.7	1.0	ug/L	1	10/03/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.7	1.0	ug/L	1	10/03/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/03/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Vinyl chloride	1.8	1.0	ug/L	1	10/03/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/03/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/03/21	MH	70 - 130 %
% Dibromofluoromethane	104		%	1	10/03/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/03/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/03/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32397

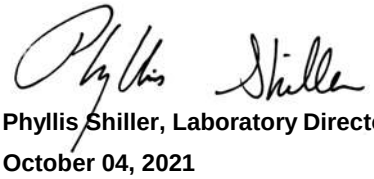
Client ID: 21A-PS4-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 04, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 04, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/20/21	12:05
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/20/21	15:44
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ32390
Phoenix ID: CJ32398

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25
Client ID: 21A-PS5S-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/03/21	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32398

Client ID: 21A-PS5S-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/03/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
cis-1,2-Dichloroethene	8.5	1.0	ug/L	1	10/03/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.8	1.0	ug/L	1	10/03/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/03/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Vinyl chloride	2.9	1.0	ug/L	1	10/03/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/03/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	10/03/21	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	10/03/21	MH	70 - 130 %
% Toluene-d8	101		%	1	10/03/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/03/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEAD-WILMINGTON MA 60552044.25 Phoenix I.D.: CJ32398

Client ID: 21A-PS5S-092021-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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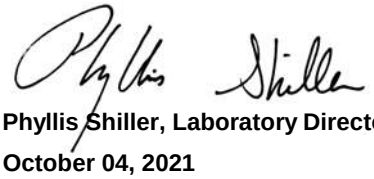

Phyllis Shiller, Laboratory Director

October 04, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 04, 2021

QA/QC Data

SDG I.D.: GCJ32390

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 592911 (mg/L), QC Sample No: CJ32351 (CJ32394, CJ32395)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	93.2	93.9	0.7	91.5			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 593108 (mg/L), QC Sample No: CJ33205 (CJ32394, CJ32395)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	99.1	99.2	0.1	101			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 04, 2021

QA/QC Data

SDG I.D.: GCJ32390

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 593466 (ug/l), QC Sample No: CJ31766 (CJ32395)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	74	86	15.0	76			70 - 130	20
% 1,4-dioxane-d8	86	%	102	105	2.9	97			70 - 130	20
QA/QC Batch 593886 (ug/L), QC Sample No: CJ32390 (CJ32390)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	105	104	1.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	111	109	1.8				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	101	105	3.9				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	98	102	4.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	106	104	1.9				70 - 130	20
1,1-Dichloroethene	ND	1.0	122	118	3.3				70 - 130	20
1,1-Dichloropropene	ND	1.0	116	109	6.2				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	100	99	1.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	110	104	5.6				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	98	97	1.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	107	103	3.8				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	102	105	2.9				70 - 130	20
1,2-Dibromoethane	ND	1.0	100	102	2.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	104	105	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	101	102	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	109	103	5.7				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	99	98	1.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	101	103	2.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	20
1,4-dioxane	ND	100	108	110	1.8				40 - 160	20
2,2-Dichloropropane	ND	1.0	115	108	6.3				70 - 130	20
2-Chlorotoluene	ND	1.0	106	103	2.9				70 - 130	20
2-Hexanone	ND	5.0	102	109	6.6				40 - 160	20
4-Chlorotoluene	ND	1.0	106	101	4.8				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	103	111	7.5				40 - 160	20
Acetone	ND	5.0	108	117	8.0				40 - 160	20
Benzene	ND	0.70	105	103	1.9				70 - 130	20
Bromobenzene	ND	1.0	100	98	2.0				70 - 130	20
Bromochloromethane	ND	1.0	99	99	0.0				70 - 130	20
Bromodichloromethane	ND	0.50	103	103	0.0				70 - 130	20
Bromoform	ND	1.0	104	107	2.8				70 - 130	20
Bromomethane	ND	1.0	124	117	5.8				40 - 160	20
Carbon Disulfide	ND	1.0	120	114	5.1				70 - 130	20
Carbon tetrachloride	ND	1.0	114	108	5.4				70 - 130	20
Chlorobenzene	ND	1.0	101	100	1.0				70 - 130	20
Chloroethane	ND	1.0	138	131	5.2				70 - 130	20

QA/QC Data

SDG I.D.: GCJ32390

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloroform	ND	1.0	103	104	1.0				70 - 130	20
Chloromethane	ND	1.0	118	115	2.6				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	101	101	0.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	103	104	1.0				70 - 130	20
Dibromochloromethane	ND	0.50	101	103	2.0				70 - 130	20
Dibromomethane	ND	1.0	100	101	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	146	138	5.6				40 - 160	20
Di-isopropyl ether	ND	1.0	104	106	1.9				70 - 130	20
Ethyl ether	ND	1.0	101	107	5.8				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	98	101	3.0				70 - 130	20
Ethylbenzene	ND	1.0	108	104	3.8				70 - 130	20
Hexachlorobutadiene	ND	0.40	108	100	7.7				70 - 130	20
Isopropylbenzene	ND	1.0	110	102	7.5				70 - 130	20
m&p-Xylene	ND	1.0	109	105	3.7				70 - 130	20
Methyl ethyl ketone	ND	5.0	103	115	11.0				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	107	113	5.5				70 - 130	20
Methylene chloride	ND	1.0	111	114	2.7				70 - 130	20
Naphthalene	ND	1.0	102	105	2.9				70 - 130	20
n-Butylbenzene	ND	1.0	120	112	6.9				70 - 130	20
n-Propylbenzene	ND	1.0	111	105	5.6				70 - 130	20
o-Xylene	ND	1.0	104	100	3.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	113	106	6.4				70 - 130	20
sec-Butylbenzene	ND	1.0	118	110	7.0				70 - 130	20
Styrene	ND	1.0	107	104	2.8				70 - 130	20
tert-amyl methyl ether	ND	1.0	94	96	2.1				70 - 130	20
tert-Butylbenzene	ND	1.0	111	103	7.5				70 - 130	20
Tetrachloroethene	ND	1.0	106	104	1.9				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	101	112	10.3				70 - 130	20
Toluene	ND	1.0	105	102	2.9				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	116	112	3.5				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	105	107	1.9				70 - 130	20
Trichloroethene	ND	1.0	107	101	5.8				70 - 130	20
Trichlorofluoromethane	ND	1.0	149	140	6.2				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	118	113	4.3				70 - 130	20
Vinyl chloride	ND	1.0	137	129	6.0				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	100	101	1.0				70 - 130	20
% Bromofluorobenzene	97	%	101	101	0.0				70 - 130	20
% Dibromofluoromethane	95	%	94	97	3.1				70 - 130	20
% Toluene-d8	101	%	101	101	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 594641 (ug/L), QC Sample No: CJ32395 (CJ32395, CJ32396)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	107	103	3.8				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	103	98	5.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	104	101	2.9				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	102	100	2.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	102	97	5.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	99	99	0.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ32390

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1-Dichloropropene	ND	1.0	102	97	5.0				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	106	103	2.9				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	105	101	3.9				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	106	102	3.8				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	108	102	5.7				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	107	105	1.9				70 - 130	20	
1,2-Dibromoethane	ND	1.0	109	104	4.7				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	103	98	5.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	101	97	4.0				70 - 130	20	
1,2-Dichloropropane	ND	1.0	103	98	5.0				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	106	102	3.8				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	103	99	4.0				70 - 130	20	
1,3-Dichloropropane	ND	1.0	107	102	4.8				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	103	98	5.0				70 - 130	20	
1,4-dioxane	ND	100	93	111	17.6				40 - 160	20	
2,2-Dichloropropane	ND	1.0	102	96	6.1				70 - 130	20	
2-Chlorotoluene	ND	1.0	105	100	4.9				70 - 130	20	
2-Hexanone	ND	5.0	103	101	2.0				40 - 160	20	
4-Chlorotoluene	ND	1.0	103	98	5.0				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	103	100	3.0				40 - 160	20	
Acetone	ND	5.0	96	97	1.0				40 - 160	20	
Benzene	ND	0.70	104	100	3.9				70 - 130	20	
Bromobenzene	ND	1.0	104	99	4.9				70 - 130	20	
Bromochloromethane	ND	1.0	102	98	4.0				70 - 130	20	
Bromodichloromethane	ND	0.50	104	101	2.9				70 - 130	20	
Bromoform	ND	1.0	108	106	1.9				70 - 130	20	
Bromomethane	ND	1.0	102	103	1.0				40 - 160	20	
Carbon Disulfide	ND	1.0	97	100	3.0				70 - 130	20	
Carbon tetrachloride	ND	1.0	110	104	5.6				70 - 130	20	
Chlorobenzene	ND	1.0	104	99	4.9				70 - 130	20	
Chloroethane	ND	1.0	96	103	7.0				70 - 130	20	
Chloroform	ND	1.0	103	96	7.0				70 - 130	20	
Chloromethane	ND	1.0	101	97	4.0				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	105	98	6.9				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	105	101	3.9				70 - 130	20	
Dibromochloromethane	ND	0.50	110	105	4.7				70 - 130	20	
Dibromomethane	ND	1.0	105	101	3.9				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	100	97	3.0				40 - 160	20	
Di-isopropyl ether	ND	1.0	101	75	29.5				70 - 130	20	r
Ethyl ether	ND	1.0	91	98	7.4				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	105	99	5.9				70 - 130	20	
Ethylbenzene	ND	1.0	108	101	6.7				70 - 130	20	
Hexachlorobutadiene	ND	0.40	103	95	8.1				70 - 130	20	
Isopropylbenzene	ND	1.0	104	99	4.9				70 - 130	20	
m&p-Xylene	ND	1.0	107	101	5.8				70 - 130	20	
Methyl ethyl ketone	ND	5.0	98	98	0.0				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	103	101	2.0				70 - 130	20	
Methylene chloride	ND	1.0	100	102	2.0				70 - 130	20	
Naphthalene	ND	1.0	109	107	1.9				70 - 130	20	
n-Butylbenzene	ND	1.0	106	100	5.8				70 - 130	20	
n-Propylbenzene	ND	1.0	103	96	7.0				70 - 130	20	
o-Xylene	ND	1.0	107	100	6.8				70 - 130	20	
p-Isopropyltoluene	ND	1.0	106	101	4.8				70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
sec-Butylbenzene	ND	1.0	105	100	4.9				70 - 130	20
Styrene	ND	1.0	110	104	5.6				70 - 130	20
tert-amyl methyl ether	ND	1.0	102	100	2.0				70 - 130	20
tert-Butylbenzene	ND	1.0	104	99	4.9				70 - 130	20
Tetrachloroethene	ND	1.0	102	95	7.1				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	97	95	2.1				70 - 130	20
Toluene	ND	1.0	104	100	3.9				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	100	99	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	107	104	2.8				70 - 130	20
Trichloroethene	ND	1.0	102	96	6.1				70 - 130	20
Trichlorofluoromethane	ND	1.0	96	96	0.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	85	87	2.3				70 - 130	20
Vinyl chloride	ND	1.0	103	99	4.0				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	98	%	100	100	0.0				70 - 130	20
% Dibromofluoromethane	98	%	101	98	3.0				70 - 130	20
% Toluene-d8	99	%	100	100	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 594650 (ug/L), QC Sample No: CJ33721 (CJ32394, CJ32397, CJ32398)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	115	113	1.8				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	110	108	1.8				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	104	105	1.0				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	103	103	0.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	107	106	0.9				70 - 130	20
1,1-Dichloroethene	ND	1.0	101	98	3.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	109	106	2.8				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	111	108	2.7				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	107	107	0.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	110	109	0.9				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	112	109	2.7				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	116	111	4.4				70 - 130	20
1,2-Dibromoethane	ND	1.0	111	109	1.8				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	107	105	1.9				70 - 130	20
1,2-Dichloroethane	ND	1.0	106	103	2.9				70 - 130	20
1,2-Dichloropropane	ND	1.0	106	105	0.9				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	109	2.7				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	107	104	2.8				70 - 130	20
1,3-Dichloropropane	ND	1.0	110	108	1.8				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	106	104	1.9				70 - 130	20
1,4-dioxane	ND	100	109	114	4.5				40 - 160	20
2,2-Dichloropropane	ND	1.0	113	111	1.8				70 - 130	20
2-Chlorotoluene	ND	1.0	108	107	0.9				70 - 130	20
2-Hexanone	ND	5.0	110	105	4.7				40 - 160	20
4-Chlorotoluene	ND	1.0	110	107	2.8				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	108	106	1.9				40 - 160	20
Acetone	ND	5.0	101	97	4.0				40 - 160	20
Benzene	ND	0.70	108	105	2.8				70 - 130	20

QA/QC Data

SDG I.D.: GCJ32390

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromobenzene	ND	1.0	107	106	0.9				70 - 130	20
Bromochloromethane	ND	1.0	108	107	0.9				70 - 130	20
Bromodichloromethane	ND	0.50	109	106	2.8				70 - 130	20
Bromoform	ND	1.0	116	115	0.9				70 - 130	20
Bromomethane	ND	1.0	100	101	1.0				40 - 160	20
Carbon Disulfide	ND	1.0	98	96	2.1				70 - 130	20
Carbon tetrachloride	ND	1.0	104	102	1.9				70 - 130	20
Chlorobenzene	ND	1.0	109	105	3.7				70 - 130	20
Chloroethane	ND	1.0	100	95	5.1				70 - 130	20
Chloroform	ND	1.0	106	105	0.9				70 - 130	20
Chloromethane	ND	1.0	104	102	1.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	109	108	0.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	113	110	2.7				70 - 130	20
Dibromochloromethane	ND	0.50	117	114	2.6				70 - 130	20
Dibromomethane	ND	1.0	107	105	1.9				70 - 130	20
Dichlorodifluoromethane	ND	1.0	98	97	1.0				40 - 160	20
Di-isopropyl ether	ND	1.0	106	105	0.9				70 - 130	20
Ethyl ether	ND	1.0	91	89	2.2				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	110	110	0.0				70 - 130	20
Ethylbenzene	ND	1.0	113	109	3.6				70 - 130	20
Hexachlorobutadiene	ND	0.40	110	108	1.8				70 - 130	20
Isopropylbenzene	ND	1.0	112	107	4.6				70 - 130	20
m&p-Xylene	ND	1.0	114	109	4.5				70 - 130	20
Methyl ethyl ketone	ND	5.0	107	108	0.9				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	105	103	1.9				70 - 130	20
Methylene chloride	ND	1.0	101	97	4.0				70 - 130	20
Naphthalene	ND	1.0	114	112	1.8				70 - 130	20
n-Butylbenzene	ND	1.0	116	112	3.5				70 - 130	20
n-Propylbenzene	ND	1.0	111	107	3.7				70 - 130	20
o-Xylene	ND	1.0	111	107	3.7				70 - 130	20
p-Isopropyltoluene	ND	1.0	115	111	3.5				70 - 130	20
sec-Butylbenzene	ND	1.0	114	110	3.6				70 - 130	20
Styrene	ND	1.0	114	114	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	108	106	1.9				70 - 130	20
tert-Butylbenzene	ND	1.0	112	108	3.6				70 - 130	20
Tetrachloroethene	ND	1.0	108	105	2.8				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	103	101	2.0				70 - 130	20
Toluene	ND	1.0	109	105	3.7				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	101	96	5.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	116	113	2.6				70 - 130	20
Trichloroethene	ND	1.0	108	105	2.8				70 - 130	20
Trichlorofluoromethane	ND	1.0	101	99	2.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	87	86	1.2				70 - 130	20
Vinyl chloride	ND	1.0	108	107	0.9				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	98	%	103	101	2.0				70 - 130	20
% Dibromofluoromethane	102	%	102	103	1.0				70 - 130	20
% Toluene-d8	100	%	100	99	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCJ32390

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 594621 (ug/L), QC Sample No: CJ44285 (CJ32391, CJ32392 (2X) , CJ32393)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	107	104	2.8	114	105	8.2	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	104	104	0.0	109	108	0.9	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	95	94	1.1	104	102	1.9	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	103	104	1.0	108	102	5.7	70 - 130	20
1,1-Dichloroethane	ND	1.0	104	106	1.9	110	108	1.8	70 - 130	20
1,1-Dichloroethene	ND	1.0	98	98	0.0	105	101	3.9	70 - 130	20
1,1-Dichloropropene	ND	1.0	103	104	1.0	107	107	0.0	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	107	102	4.8	102	102	0.0	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	101	97	4.0	110	108	1.8	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	99	101	2.0	100	96	4.1	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	106	109	2.8	105	106	0.9	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	104	102	1.9	108	105	2.8	70 - 130	20
1,2-Dibromoethane	ND	1.0	97	100	3.0	97	96	1.0	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	98	97	1.0	102	96	6.1	70 - 130	20
1,2-Dichloroethane	ND	1.0	105	101	3.9	105	109	3.7	70 - 130	20
1,2-Dichloropropane	ND	1.0	92	94	2.2	97	93	4.2	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	108	107	0.9	104	106	1.9	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	100	103	3.0	103	103	0.0	70 - 130	20
1,3-Dichloropropane	ND	1.0	97	100	3.0	104	101	2.9	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	102	100	2.0	104	100	3.9	70 - 130	20
1,4-dioxane	ND	100	111	103	7.5	107	116	8.1	40 - 160	20
2,2-Dichloropropane	ND	1.0	109	104	4.7	90	89	1.1	70 - 130	20
2-Chlorotoluene	ND	1.0	98	100	2.0	98	95	3.1	70 - 130	20
2-Hexanone	ND	5.0	94	90	4.3	96	101	5.1	40 - 160	20
4-Chlorotoluene	ND	1.0	104	105	1.0	104	104	0.0	70 - 130	20
4-Methyl-2-pentanone	ND	5.0	101	90	11.5	108	104	3.8	40 - 160	20
Acetone	ND	5.0	83	87	4.7	125	125	0.0	40 - 160	20
Benzene	ND	0.70	98	99	1.0	100	99	1.0	70 - 130	20
Bromobenzene	ND	1.0	101	104	2.9	103	102	1.0	70 - 130	20
Bromochloromethane	ND	1.0	105	102	2.9	114	102	11.1	70 - 130	20
Bromodichloromethane	ND	0.50	106	103	2.9	103	106	2.9	70 - 130	20
Bromoform	ND	1.0	100	104	3.9	111	122	9.4	70 - 130	20
Bromomethane	ND	1.0	96	95	1.0	71	86	19.1	40 - 160	20
Carbon Disulfide	ND	1.0	88	89	1.1	87	93	6.7	70 - 130	20
Carbon tetrachloride	ND	1.0	101	102	1.0	107	105	1.9	70 - 130	20
Chlorobenzene	ND	1.0	101	100	1.0	105	104	1.0	70 - 130	20
Chloroethane	ND	1.0	81	83	2.4	84	85	1.2	70 - 130	20
Chloroform	ND	1.0	103	100	3.0	105	104	1.0	70 - 130	20
Chloromethane	ND	1.0	100	97	3.0	97	100	3.0	40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	99	96	3.1	100	104	3.9	70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	107	102	4.8	97	96	1.0	70 - 130	20
Dibromochloromethane	ND	0.50	97	101	4.0	103	102	1.0	70 - 130	20
Dibromomethane	ND	1.0	109	104	4.7	110	111	0.9	70 - 130	20
Dichlorodifluoromethane	ND	1.0	90	89	1.1	102	103	1.0	40 - 160	20
Di-isopropyl ether	ND	1.0	96	95	1.0	98	98	0.0	70 - 130	20
Ethyl ether	ND	1.0	85	83	2.4	86	84	2.4	70 - 130	20
Ethyl tert-butyl ether	ND	1.0	101	99	2.0	100	103	3.0	70 - 130	20
Ethylbenzene	ND	1.0	105	108	2.8	106	107	0.9	70 - 130	20
Hexachlorobutadiene	ND	0.40	96	97	1.0	102	101	1.0	70 - 130	20
Isopropylbenzene	ND	1.0	103	105	1.9	98	100	2.0	70 - 130	20

QA/QC Data

SDG I.D.: GCJ32390

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
m&p-Xylene	ND	1.0	103	109	5.7	107	109	1.9	70 - 130	20
Methyl ethyl ketone	ND	5.0	106	89	17.4	110	106	3.7	40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	97	6.0	101	103	2.0	70 - 130	20
Methylene chloride	ND	1.0	90	91	1.1	110	108	1.8	70 - 130	20
Naphthalene	ND	1.0	101	99	2.0	102	100	2.0	70 - 130	20
n-Butylbenzene	ND	1.0	103	108	4.7	107	104	2.8	70 - 130	20
n-Propylbenzene	ND	1.0	104	106	1.9	101	101	0.0	70 - 130	20
o-Xylene	ND	1.0	100	103	3.0	103	103	0.0	70 - 130	20
p-Isopropyltoluene	ND	1.0	107	109	1.9	105	106	0.9	70 - 130	20
sec-Butylbenzene	ND	1.0	105	106	0.9	107	105	1.9	70 - 130	20
Styrene	ND	1.0	106	109	2.8	110	116	5.3	70 - 130	20
tert-amyl methyl ether	ND	1.0	97	97	0.0	95	98	3.1	70 - 130	20
tert-Butylbenzene	ND	1.0	103	104	1.0	105	104	1.0	70 - 130	20
Tetrachloroethene	ND	1.0	101	99	2.0	100	105	4.9	70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	97	95	2.1	95	101	6.1	70 - 130	20
Toluene	ND	1.0	107	101	5.8	102	99	3.0	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	94	95	1.1	103	97	6.0	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	97	5.0	97	99	2.0	70 - 130	20
Trichloroethene	ND	1.0	104	105	1.0	106	108	1.9	70 - 130	20
Trichlorofluoromethane	ND	1.0	102	99	3.0	114	111	2.7	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	84	85	1.2	98	96	2.1	70 - 130	20
Vinyl chloride	ND	1.0	104	103	1.0	109	109	0.0	70 - 130	20
% 1,2-dichlorobenzene-d4	102	%	98	101	3.0	100	101	1.0	70 - 130	20
% Bromofluorobenzene	95	%	100	105	4.9	104	106	1.9	70 - 130	20
% Dibromofluoromethane	107	%	103	103	0.0	104	101	2.9	70 - 130	20
% Toluene-d8	101	%	103	100	3.0	101	97	4.0	70 - 130	20

Comment:

A blank MS/MSD was analyzed with this batch.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 04, 2021

Monday, October 04, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ32390 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ32390	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ32390	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ32390	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ32390	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ32390	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ32390	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	100	0.3	0.3	ug/L
CJ32390	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ32390	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ32391	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ32391	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ32391	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ32391	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ32391	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ32391	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	50	0.3	0.3	ug/L
CJ32391	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CJ32391	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CJ32392	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	1.0	0.6	0.6	ug/L
CJ32392	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	1.0	0.00075	0.00075	ug/L
CJ32392	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	1.0	0.00033	0.00033	ug/L
CJ32392	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	1.0	0.0075	0.0075	ug/L
CJ32392	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ32392	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	1.0	0.47	0.47	ug/L
CJ32392	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ32392	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CJ32392	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ32392	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CJ32392	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CJ32392	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CJ32392	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	100	0.3	0.3	ug/L
CJ32392	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ32392	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ32393	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ32393	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ32393	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ32393	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	6.3	1.0	5	5	ug/L
CJ32393	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.3	1.0	5	5	ug/L
CJ32393	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ32393	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6.3	1.0	5	5	ug/L
CJ32393	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6.3	1.0	5	5	ug/L
CJ32393	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L

Monday, October 04, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ32390 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ32393	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6.3	1.0	5	5	ug/L
CJ32393	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	50	0.3	0.3	ug/L
CJ32393	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CJ32393	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CJ32394	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ32394	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ32394	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ32394	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ32394	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ32394	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	100	0.3	0.3	ug/L
CJ32394	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ32394	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ32394	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	0.011	0.004	0.01	0.01	mg/L
CJ32394	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.011	0.004	0.01	0.01	mg/L
CJ32394	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.011	0.004	0.01	0.01	mg/L
CJ32395	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ32395	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ32395	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ32395	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ32395	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ32395	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	0.80	0.20	0.3	0.3	ug/l
CJ32395	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.80	0.20	0.3	0.3	ug/l
CJ32395	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.80	0.20	0.3	0.3	ug/l
CJ32395	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	100	0.3	0.3	ug/L
CJ32396	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ32396	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ32396	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ32396	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ32396	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ32396	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	100	0.3	0.3	ug/L
CJ32396	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ32396	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ32397	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ32397	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ32397	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ32397	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ32397	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ32397	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	100	0.3	0.3	ug/L
CJ32397	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L

Monday, October 04, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ32390 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ32397	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ32398	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ32398	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	2.9	1.0	2	2	ug/L
CJ32398	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ32398	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ32398	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ32398	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.9	1.0	2	2	ug/L
CJ32398	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.9	1.0	2	2	ug/L
CJ32398	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ32398	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.9	1.0	2	2	ug/L
CJ32398	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.9	1.0	2	2	ug/L
CJ32398	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGT	ND	100	0.3	0.3	ug/L
CJ32398	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ32398	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEAD-WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ32390, CJ32391, CJ32392, CJ32393, CJ32394, CJ32395, CJ32396, CJ32397, CJ32398

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☐ Yes ☑ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Monday, October 04, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 04, 2021

SDG I.D.: GCJ32390

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/27/21-1 Adam Werner, Chemist 09/27/21

CJ32395 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0927_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 593466 (CJ31766)

CJ32395

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/23/21 08:28 Cindy Pearce, Chemist 09/23/21

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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Certification Report

October 04, 2021

SDG I.D.: GCJ32390

ICP Metals Narration

CJ32394, CJ32395

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/22/21 08:35 Cindy Pearce, Chemist 09/22/21

CJ32394, CJ32395

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 592911 (CJ32351)

CJ32394, CJ32395

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 593108 (CJ33205)

CJ32394, CJ32395

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 593886 (Samples: CJ32390): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Chloroethane, Trichlorofluoromethane, Vinyl chloride)

QC Batch 594641 (Samples: CJ32395, CJ32396): -----

The LCS/LCSD RPD exceeds the method criteria for one analyte. This analyte was not reported in the sample(s). No significant variability is suspected. (Di-isopropyl ether)

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SDG I.D.: GCJ32390

VOA Narration

Instrument:

CHEM15 10/01/21-1 Harry Mullin, Chemist 10/01/21

CJ32391 (1X), CJ32392 (2X), CJ32393 (1X)

Initial Calibration Evaluation (CHEM15/VOA15-092921):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 28% (20%), Chloroethane 34% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM15/1001_02-VOA15-092921) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/28/21-1 Michael Hahn, Chemist 09/28/21

CJ32390 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092421P):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Chloroethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.082 (0.1), Tetrachloroethene 0.158 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0928_02-VOA23_092421P) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
92% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Acetone 24%H (20%), Carbon Disulfide 22%H (20%), Chloroethane 26%H (20%), Trichlorofluoromethane 36%H (20%), Trichlorotrifluoroethane 25%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.163 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/01/21-1 Michael Hahn, Chemist 10/01/21

CJ32395 (1X), CJ32396 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1001_14-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.

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NY # 11301

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October 04, 2021

SDG I.D.: GCJ32390

VOA Narration

The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/03/21-1 Michael Hahn, Chemist 10/03/21

CJ32394 (1X), CJ32397 (1X), CJ32398 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1003_05-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 593886 (CJ32390) CHEM23 9/28/2021-1

CJ32390(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Chloroethane(138%), Trichlorofluoromethane(149%), Vinyl chloride(137%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Chloroethane(131%), Trichlorofluoromethane(140%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 594621 (CJ44285) CHEM15 10/1/2021-1

CJ32391(1X), CJ32392(2X), CJ32393(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 594641 (CJ32395) CHEM23 10/1/2021-1

CJ32395(1X), CJ32396(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Di-isopropyl ether(29.5%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

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MCP Certification Report

October 04, 2021

SDG I.D.: GCJ32390

VOA Narration

The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 594650 (CJ33721) CHEM23 10/3/2021-1

CJ32394(1X), CJ32397(1X), CJ32398(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 2.8 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/20/21

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
32390	21A-TB01-091721-1	GW	9/17/21	0800	2							X									
32391	21A-PS1S-091721-1	GW	9/17/21	1315	3							X									
32392	21A-PS1M-091721-1	GW	9/17/21	1235	3							X									
32393	21A-PS1D-091721-1	GW	9/17/21	1325	3							X									
32394	21A-MW4A-092021-1	GW	9/20/21	1040	3			2				X				X					
32395	21A-MW4-092021-1	GW	9/20/21	1135	3	1		2				X	X			X					
32396	21A-PS3-092021-1	GW	9/20/21	1130	3							X									
32397	21A-PS4-092021-1	GW	9/20/21	1230	3							X									
32398	21A-PS5S-092021-1	GW	9/20/21	1205	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9.20.21	13:35
[signature]	[signature]	9/20/21	1544

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Tuesday, October 05, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA**
SDG ID: **GCJ33721**
Sample ID#s: CJ33721 - CJ33733

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 05, 2021

SDG I.D.: GCJ33721

Project ID: LOCKHEED-WILMINGTON MA

Client Id	Lab Id	Matrix
21A-TB01-092121-1	CJ33721	GROUND WATER
21A-PS5D-092121-1	CJ33722	GROUND WATER
21A-MW5-092121-1	CJ33723	GROUND WATER
21A-GZA14A-092121-1	CJ33724	GROUND WATER
21A-GZA14A-092121-2	CJ33725	GROUND WATER
21A-PS8S-092121-1	CJ33726	GROUND WATER
21A-PS8M-092121-1	CJ33727	GROUND WATER
21A-PS8D-092121-1	CJ33728	GROUND WATER
21A-PZ2S-092121-1	CJ33729	GROUND WATER
21A-GZA14-092121-1	CJ33730	GROUND WATER
21A-IP1R2-092121-1	CJ33731	GROUND WATER
21A-IP1R2-092121-2	CJ33732	GROUND WATER
21A-MW7-092121-1	CJ33733	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33721

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-TB01-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/03/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-TB01-092121-1

Phoenix I.D.: CJ33721

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/03/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/03/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/03/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/03/21	MH	70 - 130 %
% Dibromofluoromethane	106		%	1	10/03/21	MH	70 - 130 %
% Toluene-d8	101		%	1	10/03/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/03/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-TB01-092121-1

Phoenix I.D.: CJ33721

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	9:15
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33722

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS5D-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/03/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/03/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS5D-092121-1

Phoenix I.D.: CJ33722

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/03/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
cis-1,2-Dichloroethene	14	1.0	ug/L	1	10/03/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/03/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/03/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.0	1.0	ug/L	1	10/03/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/03/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/03/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/03/21	MH	SW8260C
Vinyl chloride	2.5	1.0	ug/L	1	10/03/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/03/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/03/21	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	10/03/21	MH	70 - 130 %
% Toluene-d8	102		%	1	10/03/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/03/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS5D-092121-1

Phoenix I.D.: CJ33722

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/03/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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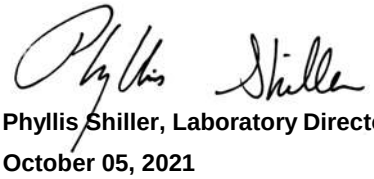

Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	10:50
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33723

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-MW5-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-MW5-092121-1

Phoenix I.D.: CJ33723

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	12	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/04/21	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	101		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-MW5-092121-1

Phoenix I.D.: CJ33723

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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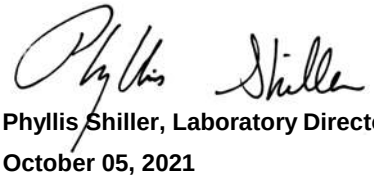


Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	10:40
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33724

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-GZA14A-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.008	0.004	mg/L	1	09/24/21	CPP	SW6010D
Arsenic (Dissolved)	0.007	0.004	mg/L	1	09/27/21	EK	SW6010D
Dissolved Metals Preparation	Completed				09/23/21	AG	SW3005A
Total Metals Digestion	Completed				09/23/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/04/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-GZA14A-092121-1

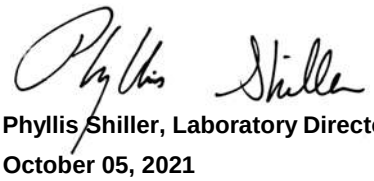
Phoenix I.D.: CJ33724

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	98		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	10:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33725

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-GZA14A-092121-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	09/24/21	CPP	SW6010D
Arsenic (Dissolved)	0.007	0.004	mg/L	1	09/27/21	EK	SW6010D
Dissolved Metals Preparation	Completed				09/23/21	AG	SW3005A
Total Metals Digestion	Completed				09/23/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/04/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-GZA14A-092121-2

Phoenix I.D.: CJ33725

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	98		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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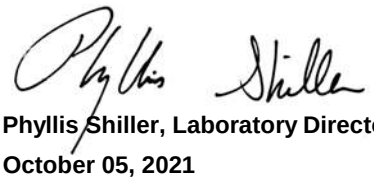

Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	10:05
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33726

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS8S-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/04/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	101		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS8S-092121-1

Phoenix I.D.: CJ33726

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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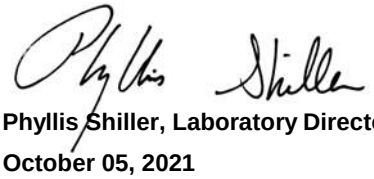

Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	10:40
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33727

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS8M-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS8M-092121-1

Phoenix I.D.: CJ33727

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/04/21	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS8M-092121-1

Phoenix I.D.: CJ33727

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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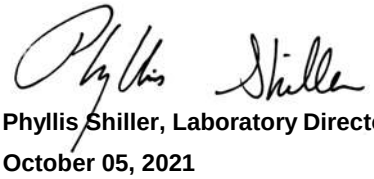

Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	11:15
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33728

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS8D-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/24/21	CPP	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/27/21	EK	SW6010D
Dissolved Metals Preparation	Completed				09/23/21	AG	SW3005A
Total Metals Digestion	Completed				09/23/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS8D-092121-1

Phoenix I.D.: CJ33728

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/04/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PS8D-092121-1

Phoenix I.D.: CJ33728

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	97		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	101		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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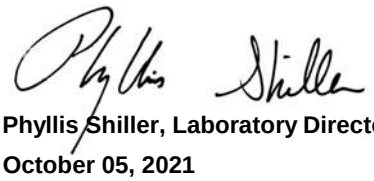


Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	11:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33729

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PZ2S-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/22/21	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/21/21		MADEP EPH-19
Semi-Volatile Extraction	Completed				09/23/21	P/D	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/27/21	RM	MADEP VPH2.1, 2018
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	1.1	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PZ2S-092121-1

Phoenix I.D.: CJ33729

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	1.2	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	1.3	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	3.3	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	1.2	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	101		%	1	10/04/21	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	99		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	0.51	0.47	ug/L	1	09/24/21	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/24/21	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/24/21	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/24/21	WB	SW8270D (SIM)
Benz(a)anthracene	0.14	0.09	ug/L	1	09/24/21	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/24/21	WB	SW8270D (SIM)
Benzo(b)fluoranthene	0.19	0.09	ug/L	1	09/24/21	WB	SW8270D (SIM)
Benzo(ghi)perylene	0.17	0.02	ug/L	1	09/24/21	WB	SW8270D (SIM)
Benzo(k)fluoranthene	0.18	0.09	ug/L	1	09/24/21	WB	SW8270D (SIM)
Chrysene	0.19	0.05	ug/L	1	09/24/21	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	0.03	0.02	ug/L	1	09/24/21	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/24/21	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/24/21	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	0.20	0.09	ug/L	1	09/24/21	WB	SW8270D (SIM)
Naphthalene	1.9	0.47	ug/L	1	09/24/21	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/24/21	WB	SW8270D (SIM)
Pyrene	0.36	0.07	ug/L	1	09/24/21	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	46		%	1	09/24/21	WB	40 - 140 %
% Nitrobenzene-d5	115		%	1	09/24/21	WB	40 - 140 %
% Terphenyl-d14	45		%	1	09/24/21	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	3000	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
Total TPH 1,2*	3000	200	ug/L	1	09/23/21	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	49		%	1	09/23/21	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	96		%	1	09/23/21	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	93		%	1	09/23/21	AW	40 - 140 %
% o-terphenyl (aromatic)	79		%	1	09/23/21	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	450	100	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/27/21	RM	MA VPH2.1, 2018

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-PZ2S-092121-1

Phoenix I.D.: CJ33729

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
C9-C12 Aliphatic Hydrocarbons *1,3	330	100	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	120	100	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
Benzene	ND	1.0	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
Ethyl Benzene	ND	1.0	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
MTBE	ND	1.0	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
Naphthalene	ND	5.0	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
Toluene	ND	1.0	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
m,p-Xylenes	ND	2.0	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
o-Xylene	2.3	1.0	ug/L	1	09/27/21	RM	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	105		%	1	09/27/21	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	104		%	1	09/27/21	RM	70 - 130 %

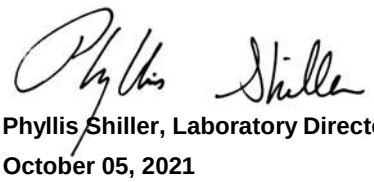
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	11:50
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33730

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-GZA14-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-GZA14-092121-1

Phoenix I.D.: CJ33730

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	1.3	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.9	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	1.5	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/04/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-GZA14-092121-1

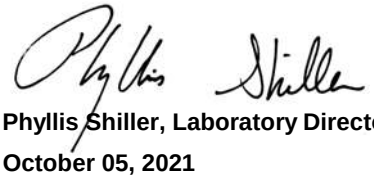
Phoenix I.D.: CJ33730

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	13:55
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33731

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-IP1R2-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,1-Dichloroethane	81	20	ug/L	20	10/04/21	MH	SW8260C
1,1-Dichloroethene	23	20	ug/L	20	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/04/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/04/21	MH	SW8260C
Acetone	ND	500	ug/L	20	10/04/21	MH	SW8260C

Ver 1

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-IP1R2-092121-1

Phoenix I.D.: CJ33731

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	10/04/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	10/04/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	10/04/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/04/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	85	20	ug/L	20	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	10/04/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	10/04/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/04/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	10/04/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/04/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Styrene	ND	20	ug/L	20	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Tetrachloroethene	2200	100	ug/L	100	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/04/21	MH	SW8260C
Toluene	ND	20	ug/L	20	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	10/04/21	MH	SW8260C
Trichloroethene	5100	100	ug/L	100	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	10/04/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	10/04/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	96		%	20	10/04/21	MH	70 - 130 %
% Toluene-d8 (20x)	96		%	20	10/04/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	99		%	100	10/04/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	98		%	100	10/04/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	10/04/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-IP1R2-092121-1

Phoenix I.D.: CJ33731

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	97		%	100	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/04/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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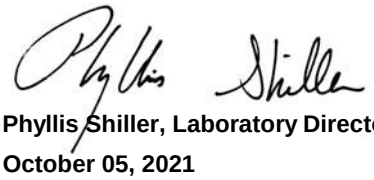


Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	14:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33732

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-IP1R2-092121-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,1-Dichloroethane	81	20	ug/L	20	10/04/21	MH	SW8260C
1,1-Dichloroethene	25	20	ug/L	20	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/04/21	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/04/21	MH	SW8260C
Acetone	ND	500	ug/L	20	10/04/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-IP1R2-092121-2

Phoenix I.D.: CJ33732

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	20	10/04/21	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
Bromoform	ND	10	ug/L	20	10/04/21	MH	SW8260C
Bromomethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	10/04/21	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/04/21	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	89	20	ug/L	20	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	10/04/21	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	10/04/21	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/04/21	MH	SW8260C
Methylene chloride	ND	100	ug/L	20	10/04/21	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/04/21	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Styrene	ND	20	ug/L	20	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/04/21	MH	SW8260C
Tetrachloroethene	2600	100	ug/L	100	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/04/21	MH	SW8260C
Toluene	ND	20	ug/L	20	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	10/04/21	MH	SW8260C
Trichloroethene	5800	100	ug/L	100	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/04/21	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	10/04/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	96		%	20	10/04/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	10/04/21	MH	70 - 130 %
% Toluene-d8 (20x)	97		%	20	10/04/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	101		%	100	10/04/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	96		%	100	10/04/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	100		%	100	10/04/21	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-IP1R2-092121-2

Phoenix I.D.: CJ33732

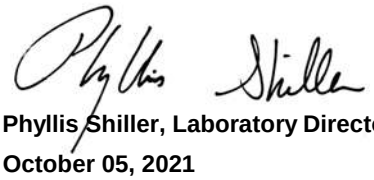
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	98		%	100	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/04/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/21	14:55
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/21/21	17:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ33721
Phoenix ID: CJ33733

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-MW7-092121-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				10/04/21		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-MW7-092121-1

Phoenix I.D.: CJ33733

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	27	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	10	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	49	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	2.5	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	10/04/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	98		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA
Client ID: 21A-MW7-092121-1

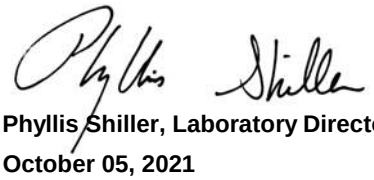
Phoenix I.D.: CJ33733

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 05, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 05, 2021

QA/QC Data

SDG I.D.: GCJ33721

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 593319 (mg/L), QC Sample No: CJ33139 (CJ33724, CJ33725, CJ33728)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.004	<0.004	NC	92.8	93.6	0.9	94.2			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 593314 (mg/L), QC Sample No: CJ33245 (CJ33724, CJ33725, CJ33728)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	97.5	98.4	0.9	97.1			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 05, 2021

QA/QC Data

SDG I.D.: GCJ33721

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 593018 (ug/L), QC Sample No: CJ31474 (CJ33729)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	100	94	6.2				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	130	122	6.3				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	112	107	4.6				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	117	110	6.2				40 - 140	25	
C9 - Nonane	ND	10	63	59	6.6				40 - 140	25	
C-10 Decane	ND	10	84	79	6.1				40 - 140	25	
C12 - Dodecane	ND	10	88	84	4.7				40 - 140	25	
C14 - Tetradecane	ND	10	105	96	9.0				40 - 140	25	
C16 - Hexadecane	ND	10	118	110	7.0				40 - 140	25	
C18 - Octadecane	ND	10	143	134	6.5				40 - 140	25	I
C19 - Nonadecane	ND	10	134	125	6.9				40 - 140	25	
C20 - Eicosane	ND	10	133	124	7.0				40 - 140	25	
C22 - Docosane	ND	10	136	127	6.8				40 - 140	25	
C24 - Tetracosane	ND	10	139	130	6.7				40 - 140	25	
C26 - Hexacosane	ND	10	136	127	6.8				40 - 140	25	
C28 - Octacosane	ND	10	135	126	6.9				40 - 140	25	
C30 - Tricotane	ND	10	125	116	7.5				40 - 140	25	
C36 - Hexatriacontane	ND	10	103	97	6.0				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	59	%	83	78	6.2				40 - 140	25	
% o-terphenyl (aromatic)	105	%	104	101	2.9				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	109	%	103	114	10.1				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	113	%	105	118	11.7				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 593332 (ug/L), QC Sample No: CJ33048 (CJ33729)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	79	80	1.3				40 - 140	20	
Acenaphthene	ND	0.50	81	83	2.4				40 - 140	20	
Acenaphthylene	ND	0.10	72	66	8.7				40 - 140	20	
Anthracene	ND	0.10	84	85	1.2				40 - 140	20	
Benz(a)anthracene	ND	0.02	89	87	2.3				40 - 140	20	
Benzo(a)pyrene	ND	0.02	83	94	12.4				40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	86	108	22.7				40 - 140	20	r
Benzo(ghi)perylene	ND	0.02	83	97	15.6				40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	92	111	18.7				40 - 140	20	
Chrysene	ND	0.02	85	85	0.0				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Dibenz(a,h)anthracene	ND	0.02	90	112	21.8				40 - 140	20	r
Fluoranthene	ND	0.50	90	91	1.1				40 - 140	20	
Fluorene	ND	0.10	86	88	2.3				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	88	104	16.7				40 - 140	20	
Naphthalene	ND	0.50	75	75	0.0				40 - 140	20	
Phenanthrene	ND	0.06	74	74	0.0				40 - 140	20	
Pyrene	ND	0.07	91	91	0.0				40 - 140	20	
% 2-Fluorobiphenyl	68	%	70	73	4.2				40 - 140	20	
% Nitrobenzene-d5	61	%	76	72	5.4				40 - 140	20	
% Terphenyl-d14	84	%	84	86	2.4				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 594650 (ug/L), QC Sample No: CJ33721 (CJ33721, CJ33722, CJ33723)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	115	113	1.8				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	110	108	1.8				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	104	105	1.0				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	103	103	0.0				70 - 130	20	
1,1-Dichloroethane	ND	1.0	107	106	0.9				70 - 130	20	
1,1-Dichloroethene	ND	1.0	101	98	3.0				70 - 130	20	
1,1-Dichloropropene	ND	1.0	109	106	2.8				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	111	108	2.7				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	107	107	0.0				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	110	109	0.9				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	112	109	2.7				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	116	111	4.4				70 - 130	20	
1,2-Dibromoethane	ND	1.0	111	109	1.8				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	107	105	1.9				70 - 130	20	
1,2-Dichloroethane	ND	1.0	106	103	2.9				70 - 130	20	
1,2-Dichloropropane	ND	1.0	106	105	0.9				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	112	109	2.7				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	107	104	2.8				70 - 130	20	
1,3-Dichloropropane	ND	1.0	110	108	1.8				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	106	104	1.9				70 - 130	20	
1,4-dioxane	ND	100	109	114	4.5				40 - 160	20	
2,2-Dichloropropane	ND	1.0	113	111	1.8				70 - 130	20	
2-Chlorotoluene	ND	1.0	108	107	0.9				70 - 130	20	
2-Hexanone	ND	5.0	110	105	4.7				40 - 160	20	
4-Chlorotoluene	ND	1.0	110	107	2.8				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	108	106	1.9				40 - 160	20	
Acetone	ND	5.0	101	97	4.0				40 - 160	20	
Benzene	ND	0.70	108	105	2.8				70 - 130	20	
Bromobenzene	ND	1.0	107	106	0.9				70 - 130	20	
Bromochloromethane	ND	1.0	108	107	0.9				70 - 130	20	
Bromodichloromethane	ND	0.50	109	106	2.8				70 - 130	20	
Bromoform	ND	1.0	116	115	0.9				70 - 130	20	
Bromomethane	ND	1.0	100	101	1.0				40 - 160	20	
Carbon Disulfide	ND	1.0	98	96	2.1				70 - 130	20	
Carbon tetrachloride	ND	1.0	104	102	1.9				70 - 130	20	
Chlorobenzene	ND	1.0	109	105	3.7				70 - 130	20	
Chloroethane	ND	1.0	100	95	5.1				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ33721

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloroform	ND	1.0	106	105	0.9				70 - 130	20
Chloromethane	ND	1.0	104	102	1.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	109	108	0.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	113	110	2.7				70 - 130	20
Dibromochloromethane	ND	0.50	117	114	2.6				70 - 130	20
Dibromomethane	ND	1.0	107	105	1.9				70 - 130	20
Dichlorodifluoromethane	ND	1.0	98	97	1.0				40 - 160	20
Di-isopropyl ether	ND	1.0	106	105	0.9				70 - 130	20
Ethyl ether	ND	1.0	91	89	2.2				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	110	110	0.0				70 - 130	20
Ethylbenzene	ND	1.0	113	109	3.6				70 - 130	20
Hexachlorobutadiene	ND	0.40	110	108	1.8				70 - 130	20
Isopropylbenzene	ND	1.0	112	107	4.6				70 - 130	20
m&p-Xylene	ND	1.0	114	109	4.5				70 - 130	20
Methyl ethyl ketone	ND	5.0	107	108	0.9				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	105	103	1.9				70 - 130	20
Methylene chloride	ND	1.0	101	97	4.0				70 - 130	20
Naphthalene	ND	1.0	114	112	1.8				70 - 130	20
n-Butylbenzene	ND	1.0	116	112	3.5				70 - 130	20
n-Propylbenzene	ND	1.0	111	107	3.7				70 - 130	20
o-Xylene	ND	1.0	111	107	3.7				70 - 130	20
p-Isopropyltoluene	ND	1.0	115	111	3.5				70 - 130	20
sec-Butylbenzene	ND	1.0	114	110	3.6				70 - 130	20
Styrene	ND	1.0	114	114	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	108	106	1.9				70 - 130	20
tert-Butylbenzene	ND	1.0	112	108	3.6				70 - 130	20
Tetrachloroethene	ND	1.0	108	105	2.8				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	103	101	2.0				70 - 130	20
Toluene	ND	1.0	109	105	3.7				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	101	96	5.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	116	113	2.6				70 - 130	20
Trichloroethene	ND	1.0	108	105	2.8				70 - 130	20
Trichlorofluoromethane	ND	1.0	101	99	2.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	87	86	1.2				70 - 130	20
Vinyl chloride	ND	1.0	108	107	0.9				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	98	%	103	101	2.0				70 - 130	20
% Dibromofluoromethane	102	%	102	103	1.0				70 - 130	20
% Toluene-d8	100	%	100	99	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 594857 (ug/L), QC Sample No: CJ33733 (CJ33731 (20X) , CJ33732 (20X) , CJ33733)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	108	109	0.9	115	108	6.3	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	106	107	0.9	123	111	10.3	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	101	100	1.0	104	95	9.0	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	100	100	0.0	105	100	4.9	70 - 130	20
1,1-Dichloroethane	ND	1.0	104	104	0.0	117	106	9.9	70 - 130	20
1,1-Dichloroethene	ND	1.0	100	100	0.0	127	115	9.9	70 - 130	20

QA/QC Data

SDG I.D.: GCJ33721

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1-Dichloropropene	ND	1.0	104	105	1.0	120	107	11.5	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	103	103	0.0	104	99	4.9	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	107	105	1.9	101	92	9.3	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	104	105	1.0	106	100	5.8	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	106	106	0.0	116	105	10.0	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	104	104	0.0	100	96	4.1	70 - 130	20	
1,2-Dibromoethane	ND	1.0	105	104	1.0	107	102	4.8	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	100	101	1.0	107	100	6.8	70 - 130	20	
1,2-Dichloroethane	ND	1.0	100	101	1.0	106	100	5.8	70 - 130	20	
1,2-Dichloropropane	ND	1.0	99	102	3.0	110	103	6.6	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	106	106	0.0	116	105	10.0	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	101	100	1.0	108	101	6.7	70 - 130	20	
1,3-Dichloropropane	ND	1.0	106	105	0.9	109	103	5.7	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	101	101	0.0	108	99	8.7	70 - 130	20	
1,4-dioxane	ND	100	100	105	4.9	94	114	19.2	40 - 160	20	
2,2-Dichloropropane	ND	1.0	108	107	0.9	110	99	10.5	70 - 130	20	
2-Chlorotoluene	ND	1.0	102	103	1.0	111	101	9.4	70 - 130	20	
2-Hexanone	ND	5.0	103	101	2.0	93	88	5.5	40 - 160	20	
4-Chlorotoluene	ND	1.0	102	103	1.0	111	102	8.5	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	101	101	0.0	100	95	5.1	40 - 160	20	
Acetone	ND	5.0	104	107	2.8	111	104	6.5	40 - 160	20	
Benzene	ND	0.70	102	103	1.0	113	104	8.3	70 - 130	20	
Bromobenzene	ND	1.0	103	101	2.0	109	101	7.6	70 - 130	20	
Bromochloromethane	ND	1.0	100	102	2.0	111	102	8.5	70 - 130	20	
Bromodichloromethane	ND	0.50	103	104	1.0	109	104	4.7	70 - 130	20	
Bromoform	ND	1.0	110	110	0.0	108	105	2.8	70 - 130	20	
Bromomethane	ND	1.0	106	105	0.9	126	113	10.9	40 - 160	20	
Carbon Disulfide	ND	1.0	96	96	0.0	123	109	12.1	70 - 130	20	
Carbon tetrachloride	ND	1.0	116	123	5.9	141	126	11.2	70 - 130	20	m
Chlorobenzene	ND	1.0	101	104	2.9	112	104	7.4	70 - 130	20	
Chloroethane	ND	1.0	99	104	4.9	137	124	10.0	70 - 130	20	m
Chloroform	ND	1.0	103	103	0.0	115	106	8.1	70 - 130	20	
Chloromethane	ND	1.0	105	106	0.9	126	114	10.0	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	103	103	0.0	115	101	13.0	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	106	106	0.0	105	101	3.9	70 - 130	20	
Dibromochloromethane	ND	0.50	109	111	1.8	112	106	5.5	70 - 130	20	
Dibromomethane	ND	1.0	102	103	1.0	106	103	2.9	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	111	114	2.7	130	114	13.1	40 - 160	20	
Di-isopropyl ether	ND	1.0	103	104	1.0	110	104	5.6	70 - 130	20	
Ethyl ether	ND	1.0	92	91	1.1	109	103	5.7	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	105	106	0.9	108	102	5.7	70 - 130	20	
Ethylbenzene	ND	1.0	106	107	0.9	117	107	8.9	70 - 130	20	
Hexachlorobutadiene	ND	0.40	105	105	0.0	109	99	9.6	70 - 130	20	
Isopropylbenzene	ND	1.0	107	106	0.9	115	104	10.0	70 - 130	20	
m&p-Xylene	ND	1.0	106	108	1.9	117	107	8.9	70 - 130	20	
Methyl ethyl ketone	ND	5.0	103	103	0.0	100	95	5.1	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	104	103	1.0	115	108	6.3	70 - 130	20	
Methylene chloride	ND	1.0	99	100	1.0	121	112	7.7	70 - 130	20	
Naphthalene	ND	1.0	106	105	0.9	104	97	7.0	70 - 130	20	
n-Butylbenzene	ND	1.0	111	109	1.8	122	109	11.3	70 - 130	20	
n-Propylbenzene	ND	1.0	102	104	1.9	116	102	12.8	70 - 130	20	
o-Xylene	ND	1.0	103	105	1.9	114	104	9.2	70 - 130	20	
p-Isopropyltoluene	ND	1.0	108	108	0.0	120	107	11.5	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
sec-Butylbenzene	ND	1.0	109	108	0.9	120	108	10.5	70 - 130	20	
Styrene	ND	1.0	107	109	1.9	117	109	7.1	70 - 130	20	
tert-amyl methyl ether	ND	1.0	101	101	0.0	102	97	5.0	70 - 130	20	
tert-Butylbenzene	ND	1.0	105	105	0.0	117	104	11.8	70 - 130	20	
Tetrachloroethene	ND	1.0	101	103	2.0	117	104	11.8	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	98	98	0.0	96	90	6.5	70 - 130	20	
Toluene	ND	1.0	103	103	0.0	115	104	10.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	101	100	1.0	126	114	10.0	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	107	109	1.9	109	105	3.7	70 - 130	20	
Trichloroethene	ND	1.0	102	102	0.0	NC	NC	NC	70 - 130	20	
Trichlorofluoromethane	ND	1.0	110	111	0.9	146	128	13.1	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	93	94	1.1	120	105	13.3	70 - 130	20	
Vinyl chloride	ND	1.0	108	110	1.8	134	122	9.4	70 - 130	20	m
% 1,2-dichlorobenzene-d4	98	%	99	101	2.0	99	100	1.0	70 - 130	20	
% Bromofluorobenzene	99	%	101	102	1.0	101	101	0.0	70 - 130	20	
% Dibromofluoromethane	98	%	101	100	1.0	99	101	2.0	70 - 130	20	
% Toluene-d8	99	%	101	100	1.0	100	101	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 594862 (ug/L), QC Sample No: CJ40166 (CJ33724, CJ33725, CJ33726, CJ33727, CJ33728, CJ33729, CJ33730, CJ33731 (100X) , CJ33732 (100X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	105	105	0.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	102	98	4.0				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	92	94	2.2				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	97	98	1.0				70 - 130	20	
1,1-Dichloroethane	ND	1.0	100	98	2.0				70 - 130	20	
1,1-Dichloroethene	ND	1.0	101	99	2.0				70 - 130	20	
1,1-Dichloropropene	ND	1.0	99	96	3.1				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	89	94	5.5				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	102	103	1.0				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	89	91	2.2				70 - 130	20	
1,2-Dibromoethane	ND	1.0	96	100	4.1				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20	
1,2-Dichloroethane	ND	1.0	99	96	3.1				70 - 130	20	
1,2-Dichloropropane	ND	1.0	99	99	0.0				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	101	100	1.0				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	97	97	0.0				70 - 130	20	
1,3-Dichloropropane	ND	1.0	99	100	1.0				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	96	97	1.0				70 - 130	20	
1,4-dioxane	ND	100	104	109	4.7				40 - 160	20	
2,2-Dichloropropane	ND	1.0	101	98	3.0				70 - 130	20	
2-Chlorotoluene	ND	1.0	99	98	1.0				70 - 130	20	
2-Hexanone	ND	5.0	88	88	0.0				40 - 160	20	
4-Chlorotoluene	ND	1.0	98	99	1.0				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	89	91	2.2				40 - 160	20	
Acetone	ND	5.0	99	99	0.0				40 - 160	20	
Benzene	ND	0.70	100	99	1.0				70 - 130	20	
Bromobenzene	ND	1.0	98	97	1.0				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ33721

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromochloromethane	ND	1.0	97	100	3.0				70 - 130	20
Bromodichloromethane	ND	0.50	101	101	0.0				70 - 130	20
Bromoform	ND	1.0	100	103	3.0				70 - 130	20
Bromomethane	ND	1.0	112	112	0.0				40 - 160	20
Carbon Disulfide	ND	1.0	100	98	2.0				70 - 130	20
Carbon tetrachloride	ND	1.0	115	111	3.5				70 - 130	20
Chlorobenzene	ND	1.0	100	100	0.0				70 - 130	20
Chloroethane	ND	1.0	113	113	0.0				70 - 130	20
Chloroform	ND	1.0	103	100	3.0				70 - 130	20
Chloromethane	ND	1.0	105	102	2.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	102	97	5.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	102	103	1.0				70 - 130	20
Dibromochloromethane	ND	0.50	104	104	0.0				70 - 130	20
Dibromomethane	ND	1.0	98	99	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	94	92	2.2				40 - 160	20
Di-isopropyl ether	ND	1.0	99	98	1.0				70 - 130	20
Ethyl ether	ND	1.0	96	97	1.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	100	100	0.0				70 - 130	20
Ethylbenzene	ND	1.0	103	103	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	90	91	1.1				70 - 130	20
Isopropylbenzene	ND	1.0	99	99	0.0				70 - 130	20
m&p-Xylene	ND	1.0	104	102	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	90	92	2.2				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	104	1.0				70 - 130	20
Methylene chloride	ND	1.0	108	107	0.9				70 - 130	20
Naphthalene	ND	1.0	94	97	3.1				70 - 130	20
n-Butylbenzene	ND	1.0	103	102	1.0				70 - 130	20
n-Propylbenzene	ND	1.0	97	98	1.0				70 - 130	20
o-Xylene	ND	1.0	100	101	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	101	100	1.0				70 - 130	20
sec-Butylbenzene	ND	1.0	100	100	0.0				70 - 130	20
Styrene	ND	1.0	105	105	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	95	96	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	99	98	1.0				70 - 130	20
Tetrachloroethene	ND	1.0	96	95	1.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	87	90	3.4				70 - 130	20
Toluene	ND	1.0	101	101	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	103	102	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	104	1.9				70 - 130	20
Trichloroethene	ND	1.0	99	98	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	105	102	2.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	88	85	3.5				70 - 130	20
Vinyl chloride	ND	1.0	107	104	2.8				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	99	101	2.0				70 - 130	20
% Bromofluorobenzene	96	%	100	101	1.0				70 - 130	20
% Dibromofluoromethane	100	%	100	101	1.0				70 - 130	20
% Toluene-d8	101	%	100	101	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCJ33721

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 593882 (ug/L), QC Sample No: CJ40605 (CJ33729)										
Volatile Petroleum Hydrocarbons - Ground Water										
Unadjusted C5-C8 Aliphatics (*1)	ND	100	104	102	1.9				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	106	110	3.7				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	104	102	1.9				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	106	110	3.7				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	104	100	3.9				70 - 130	25
Benzene	ND	1.0	98	94	4.2				70 - 130	25
Ethyl Benzene	ND	1.0	99	95	4.1				70 - 130	25
MTBE	ND	1.0	108	104	3.8				70 - 130	25
Naphthalene	ND	5.0	93	91	2.2				70 - 130	25
Toluene	ND	1.0	100	96	4.1				70 - 130	25
m,p-Xylenes	ND	2.0	100	96	4.1				70 - 130	25
o-Xylene	ND	1.0	98	93	5.2				70 - 130	25
% 2,5-Dibromotoluene (PID)	102	%	97	94	3.1				70 - 130	25
% 2,5-Dibromotoluene (FID)	107	%	94	95	1.1				70 - 130	25

Comment:

This batch consists of a Blank, LCS and LCSD.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 05, 2021

Tuesday, October 05, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ33721 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ33721	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ33721	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33721	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33721	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33721	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33721	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33721	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ33721	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ33722	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2.5	1.0	2	2	ug/L
CJ33722	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33722	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33722	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ33722	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33722	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.5	1.0	2	2	ug/L
CJ33722	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.5	1.0	2	2	ug/L
CJ33722	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33722	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.5	1.0	2	2	ug/L
CJ33722	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.5	1.0	2	2	ug/L
CJ33722	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33722	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ33722	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ33723	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33723	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ33723	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33723	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33723	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33723	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33723	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ33723	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ33724	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33724	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ33724	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33724	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33724	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33724	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33724	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ33724	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ33725	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33725	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L

Tuesday, October 05, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ33721 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ33725	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33725	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33725	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33725	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33725	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ33725	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ33726	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33726	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ33726	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33726	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33726	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33726	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33726	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ33726	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ33727	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33727	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ33727	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33727	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33727	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33727	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33727	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ33727	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ33728	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33728	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ33728	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33728	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33728	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33728	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33728	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ33728	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ33729	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33729	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ33729	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33729	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33729	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33729	$EPHRANGE-	C9-C18 Aliphatic Hydrocarbons 1*	MA / CMR 310.40.1600 / GW-1 (mg/l)	3000	200	700	700	ug/L
CJ33729	$EPHRANGE-	C9-C18 Aliphatic Hydrocarbons 1*	MA / GROUNDWATER STANDARDS / GW-1	3000	200	700	700	ug/L
CJ33729	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33729	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L

Tuesday, October 05, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ33721 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ33729	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ33730	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33730	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ33730	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33730	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33730	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33730	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33730	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ33730	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ33731	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ33731	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ33731	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ33731	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ33731	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L
CJ33731	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ33731	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	85	20	20	20	ug/L
CJ33731	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ33731	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ33731	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ33731	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ33731	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2200	100	5	5	ug/L
CJ33731	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ33731	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ33731	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5100	100	5	5	ug/L
CJ33731	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ33731	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ33731	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	81	20	70	70	ug/L
CJ33731	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ33731	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ33731	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L

Tuesday, October 05, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ33721 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ33731	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	85	20	20	20	ug/L
CJ33731	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2200	100	5	5	ug/L
CJ33731	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ33731	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ33731	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	81	20	70	70	ug/L
CJ33731	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ33731	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	23	20	7	7	ug/L
CJ33731	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ33731	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ33731	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ33731	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ33731	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ33731	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5100	100	5	5	ug/L
CJ33731	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CJ33731	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	85	20	20	20	ug/L
CJ33731	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ33731	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ33731	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2200	100	50	50	ug/L
CJ33731	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ33731	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5100	100	5	5	ug/L
CJ33731	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	23	20	7	7	ug/L
CJ33731	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ33731	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ33731	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	85	20	70	70	ug/L
CJ33731	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L

Tuesday, October 05, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ33721 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ33731	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ33731	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5100	100	5	5	ug/L
CJ33731	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	81	20	70	70	ug/L
CJ33731	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2200	100	5	5	ug/L
CJ33731	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ33731	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ33731	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ33731	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ33731	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ33731	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ33731	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	85	20	20	20	ug/L
CJ33731	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5100	100	5	5	ug/L
CJ33731	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2200	100	50	50	ug/L
CJ33731	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ33731	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ33731	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	5100	100	5000	5000	ug/L
CJ33731	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ33731	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ33731	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CJ33732	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ33732	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	5800	100	5	5	ug/L
CJ33732	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ33732	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2600	100	5	5	ug/L
CJ33732	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ33732	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ33732	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CJ33732	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CJ33732	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CJ33732	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CJ33732	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L

Tuesday, October 05, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ33721 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ33732	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CJ33732	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	89	20	20	20	ug/L
CJ33732	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CJ33732	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	81	20	70	70	ug/L
CJ33732	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CJ33732	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CJ33732	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CJ33732	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CJ33732	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CJ33732	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ33732	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CJ33732	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	25	20	7	7	ug/L
CJ33732	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CJ33732	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ33732	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	89	20	20	20	ug/L
CJ33732	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	81	20	70	70	ug/L
CJ33732	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5800	100	5	5	ug/L
CJ33732	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CJ33732	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CJ33732	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CJ33732	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2600	100	5	5	ug/L
CJ33732	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CJ33732	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	89	20	20	20	ug/L
CJ33732	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5800	100	5	5	ug/L
CJ33732	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L

Tuesday, October 05, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ33721 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ33732	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2600	100	50	50	ug/L
CJ33732	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CJ33732	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CJ33732	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CJ33732	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CJ33732	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5800	100	5	5	ug/L
CJ33732	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CJ33732	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CJ33732	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2600	100	5	5	ug/L
CJ33732	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	25	20	7	7	ug/L
CJ33732	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	81	20	70	70	ug/L
CJ33732	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	89	20	70	70	ug/L
CJ33732	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CJ33732	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CJ33732	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5800	100	5	5	ug/L
CJ33732	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	89	20	20	20	ug/L
CJ33732	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CJ33732	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CJ33732	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CJ33732	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2600	100	50	50	ug/L
CJ33732	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CJ33732	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CJ33732	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CJ33732	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	5800	100	5000	5000	ug/L
CJ33732	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CJ33732	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CJ33732	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L

Tuesday, October 05, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ33721 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ33733	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	10	1.0	5	5	ug/L
CJ33733	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CJ33733	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CJ33733	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CJ33733	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2.5	1.0	2	2	ug/L
CJ33733	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	27	1.0	20	20	ug/L
CJ33733	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	49	1.0	5	5	ug/L
CJ33733	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.5	1.0	2	2	ug/L
CJ33733	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	49	1.0	5	5	ug/L
CJ33733	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	1.0	5	5	ug/L
CJ33733	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	1.0	20	20	ug/L
CJ33733	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ33733	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	1.0	20	20	ug/L
CJ33733	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	49	1.0	5	5	ug/L
CJ33733	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.5	1.0	2	2	ug/L
CJ33733	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	49	1.0	5	5	ug/L
CJ33733	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ33733	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.5	1.0	2	2	ug/L
CJ33733	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	1.0	5	5	ug/L
CJ33733	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	27	1.0	20	20	ug/L
CJ33733	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	49	1.0	5	5	ug/L
CJ33733	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.5	1.0	2	2	ug/L
CJ33733	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CJ33733	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ33733	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ33721, CJ33722, CJ33723, CJ33724, CJ33725, CJ33726, CJ33727, CJ33728, CJ33729, CJ33730, CJ33731, CJ33732, CJ33733

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Tuesday, October 05, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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NY # 11301

MCP Certification Report

October 05, 2021

SDG I.D.: GCJ33721

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 593018 (Samples: CJ33729): -----

The LCS recovery is above the upper range for one analyte that was not reported in the sample(s). No significant bias is suspected. (C18 - Octadecane)

Instrument:

AU-FID3 09/23/21-1 Adam Werner, Chemist 09/23/21

CJ33729 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/22/21-1 Adam Werner, Chemist 09/22/21

CJ33729 (1X)

The initial calibration (AL0810BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 593018 (CJ31474)

CJ33729

All LCS recoveries were within 40 - 140 with the following exceptions: C18 - Octadecane(143%)
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

October 05, 2021

SDG I.D.: GCJ33721

ICP Metals Narration

Instrument:

ARCOS 09/27/21 09:58 Emily Kolominskaya, Chemist 09/27/21

CJ33724, CJ33725, CJ33728

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/24/21 08:14 Cindy Pearce, Chemist 09/24/21

CJ33724, CJ33725, CJ33728

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 593314 (CJ33245)

CJ33724, CJ33725, CJ33728

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 593319 (CJ33139)

CJ33724, CJ33725, CJ33728

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 593332 (Samples: CJ33729): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (Benzo(b)fluoranthene, Dibenz(a,h)anthracene)

Instrument:

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MCP Certification Report

October 05, 2021

SDG I.D.: GCJ33721

SVOASIM Narration

CHEM27 09/24/21-1 Wes Bryon, Chemist 09/24/21

CJ33729 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0706):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/0924_03-27_BNSIM18_0706) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 593332 (CJ33048)

CJ33729

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Benzo(b)fluoranthene(22.7%), Dibenz(a,h)anthracene(21.8%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 594857 (Samples: CJ33731, CJ33732, CJ33733): -----

The MS recovery is above the upper range for one or more analytes that were not reported in the sample(s). No significant bias is suspected. (Carbon tetrachloride, Chloroethane, Trichlorofluoromethane)

The MS recovery is above the upper range, therefore a slight high bias is possible. (Vinyl chloride)

Instrument:

CHEM23 10/03/21-1 Michael Hahn, Chemist 10/03/21

CJ33721 (1X), CJ33722 (1X), CJ33723 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.

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MCP Certification Report

October 05, 2021

SDG I.D.: GCJ33721

VOA Narration

The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1003_05-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/04/21-1 Michael Hahn, Chemist 10/04/21

CJ33731 (20X), CJ33732 (20X), CJ33733 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1004_03-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.186 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/04/21-2 Michael Hahn, Chemist 10/04/21

CJ33724 (1X), CJ33725 (1X), CJ33726 (1X), CJ33727 (1X), CJ33728 (1X), CJ33729 (1X), CJ33730 (1X), CJ33731 (100X), CJ33732 (100X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1004_34-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 23%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 594650_(CJ33721) CHEM23 10/3/2021-1

CJ33721(1X), CJ33722(1X), CJ33723(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.

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MCP Certification Report

October 05, 2021

SDG I.D.: GCJ33721

VOA Narration

All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 594862_(CJ40166) CHEM23 10/4/2021-2

CJ33724(1X), CJ33725(1X), CJ33726(1X), CJ33727(1X), CJ33728(1X), CJ33729(1X), CJ33730(1X), CJ33731(100X), CJ33732(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 594857_(CJ33733) CHEM23 10/4/2021-1

CJ33731(20X), CJ33732(20X), CJ33733(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: Carbon tetrachloride(141%), Chloroethane(137%), Trichlorofluoromethane(146%), Vinyl chloride(134%)
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/27/21-1 Raman Makol, Chemist 09/27/21

CJ33729 (1X)

Initial Calibration Evaluation (PIDFID/VPH_091621_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Environmental Laboratories, Inc.
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MCP Certification Report

October 05, 2021

SDG I.D.: GCJ33721

VPH Narration

Batch 593882 (CJ40605)

CJ33729(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 1.9 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/21/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
33721	21A-TB01-092121-1	GW	9/21/21	0800	2							X									
33722	21A-PS5D-092121-1	GW	9/21/21	0115	3							X									
33723	21A-MW5-092121-1	GW	9/21/21	1050	3							X									
33724	21A-GZA14A-092121-1	GW	9/21/21	1040	3			2				X				X					
33725	21A-GZA14A-092121-2	GW	9/21/21	1045	3			2				X				X					
33726	21A-PS8S-092121-1	GW	9/21/21	1005	3							X									
33727	21A-PS8M-092121-1	GW	9/21/21	1047	3							X									
33728	21A-PS8D-092121-1	GW	9/21/21	1115	3			2				X				X					
33729	21A-PZ2S-092121-1	GW	9/21/21	1145	5	3						X		X	X						
33730	21A-GZA14-092121-1	GW	9/21/21	1150	3							X									
33731	21A-IPIR2-092121-1	GW	9/21/21	1355	3							X									
33732	21A-IPIR2-092121-2	GW	9/21/21	1400	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-21-21	15:10
[signature]	[signature]	9/21/21	17:24

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 1.8 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature
Client Sample - Information - Identification
Date: 9/21/21

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water **L**=Liquid
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe **OIL**=Oil **B**=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
33733	21A-MW7-092121-1	GW	9/21/21	1455	9							X									MS/MSD

Relinquished by:	Accepted by:	Date:	Time:
		9-21-21	15:10
		9/22/21	17:24

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

Wednesday, October 06, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.25**
SDG ID: **GCJ34744**
Sample ID#s: CJ34744 - CJ34747

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 06, 2021

SDG I.D.: GCJ34744

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
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Sample Id Cross Reference

October 06, 2021

SDG I.D.: GCJ34744

Project ID: LOCKHEED WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-TB01-092221-1	CJ34744	GROUND WATER
21A-AE104S-092221-1	CJ34745	GROUND WATER
21A-AE104M-092221-1	CJ34746	GROUND WATER
21A-AE104D-092221-1	CJ34747	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/22/21	16:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ34744
Phoenix ID: CJ34744

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-TB01-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34744

Client ID: 21A-TB01-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/04/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	98		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34744

Client ID: 21A-TB01-092221-1

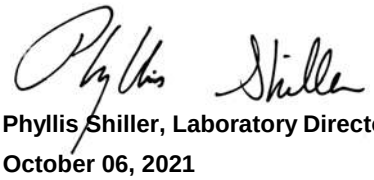
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	9:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/22/21	16:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ34744
Phoenix ID: CJ34745

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE104S-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34745

Client ID: 21A-AE104S-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/04/21	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34745

Client ID: 21A-AE104S-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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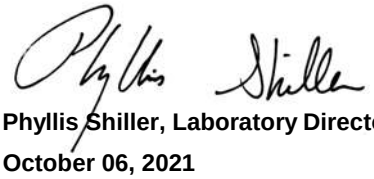


Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	10:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/22/21	16:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ34744
Phoenix ID: CJ34746

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE104M-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/05/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34746

Client ID: 21A-AE104M-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/05/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/05/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/05/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/05/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	10/05/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/05/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/05/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

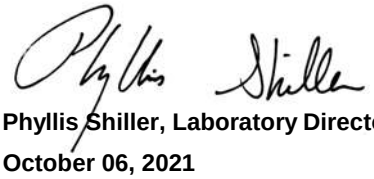
Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 06, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	10:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/22/21	16:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ34744
Phoenix ID: CJ34747

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-AE104D-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34747

Client ID: 21A-AE104D-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	1.7	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	1.8	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/04/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.34	0.20	ug/l	1	09/27/21	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	76		%	1	09/27/21	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/24/21	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 06, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 06, 2021

QA/QC Data

SDG I.D.: GCJ34744

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 593466 (ug/l), QC Sample No: CJ31766 (CJ34747)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	74	86	15.0	76			70 - 130	20	
% 1,4-dioxane-d8	86	%	102	105	2.9	97			70 - 130	20	
QA/QC Batch 594857 (ug/L), QC Sample No: CJ33733 (CJ34744, CJ34745, CJ34747)											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	108	109	0.9	115	108	6.3	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	106	107	0.9	123	111	10.3	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	101	100	1.0	104	95	9.0	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	100	100	0.0	105	100	4.9	70 - 130	20	
1,1-Dichloroethane	ND	1.0	104	104	0.0	117	106	9.9	70 - 130	20	
1,1-Dichloroethene	ND	1.0	100	100	0.0	127	115	9.9	70 - 130	20	
1,1-Dichloropropene	ND	1.0	104	105	1.0	120	107	11.5	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	103	103	0.0	104	99	4.9	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	107	105	1.9	101	92	9.3	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	104	105	1.0	106	100	5.8	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	106	106	0.0	116	105	10.0	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	104	104	0.0	100	96	4.1	70 - 130	20	
1,2-Dibromoethane	ND	1.0	105	104	1.0	107	102	4.8	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	100	101	1.0	107	100	6.8	70 - 130	20	
1,2-Dichloroethane	ND	1.0	100	101	1.0	106	100	5.8	70 - 130	20	
1,2-Dichloropropane	ND	1.0	99	102	3.0	110	103	6.6	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	106	106	0.0	116	105	10.0	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	101	100	1.0	108	101	6.7	70 - 130	20	
1,3-Dichloropropane	ND	1.0	106	105	0.9	109	103	5.7	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	101	101	0.0	108	99	8.7	70 - 130	20	
1,4-dioxane	ND	100	100	105	4.9	94	114	19.2	40 - 160	20	
2,2-Dichloropropane	ND	1.0	108	107	0.9	110	99	10.5	70 - 130	20	
2-Chlorotoluene	ND	1.0	102	103	1.0	111	101	9.4	70 - 130	20	
2-Hexanone	ND	5.0	103	101	2.0	93	88	5.5	40 - 160	20	
4-Chlorotoluene	ND	1.0	102	103	1.0	111	102	8.5	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	101	101	0.0	100	95	5.1	40 - 160	20	
Acetone	ND	5.0	104	107	2.8	111	104	6.5	40 - 160	20	
Benzene	ND	0.70	102	103	1.0	113	104	8.3	70 - 130	20	
Bromobenzene	ND	1.0	103	101	2.0	109	101	7.6	70 - 130	20	
Bromochloromethane	ND	1.0	100	102	2.0	111	102	8.5	70 - 130	20	
Bromodichloromethane	ND	0.50	103	104	1.0	109	104	4.7	70 - 130	20	
Bromoform	ND	1.0	110	110	0.0	108	105	2.8	70 - 130	20	
Bromomethane	ND	1.0	106	105	0.9	126	113	10.9	40 - 160	20	
Carbon Disulfide	ND	1.0	96	96	0.0	123	109	12.1	70 - 130	20	
Carbon tetrachloride	ND	1.0	116	123	5.9	141	126	11.2	70 - 130	20	m
Chlorobenzene	ND	1.0	101	104	2.9	112	104	7.4	70 - 130	20	
Chloroethane	ND	1.0	99	104	4.9	137	124	10.0	70 - 130	20	m

QA/QC Data

SDG I.D.: GCJ34744

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Chloroform	ND	1.0	103	103	0.0	115	106	8.1	70 - 130	20	
Chloromethane	ND	1.0	105	106	0.9	126	114	10.0	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	103	103	0.0	115	101	13.0	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	106	106	0.0	105	101	3.9	70 - 130	20	
Dibromochloromethane	ND	0.50	109	111	1.8	112	106	5.5	70 - 130	20	
Dibromomethane	ND	1.0	102	103	1.0	106	103	2.9	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	111	114	2.7	130	114	13.1	40 - 160	20	
Di-isopropyl ether	ND	1.0	103	104	1.0	110	104	5.6	70 - 130	20	
Ethyl ether	ND	1.0	92	91	1.1	109	103	5.7	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	105	106	0.9	108	102	5.7	70 - 130	20	
Ethylbenzene	ND	1.0	106	107	0.9	117	107	8.9	70 - 130	20	
Hexachlorobutadiene	ND	0.40	105	105	0.0	109	99	9.6	70 - 130	20	
Isopropylbenzene	ND	1.0	107	106	0.9	115	104	10.0	70 - 130	20	
m&p-Xylene	ND	1.0	106	108	1.9	117	107	8.9	70 - 130	20	
Methyl ethyl ketone	ND	5.0	103	103	0.0	100	95	5.1	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	104	103	1.0	115	108	6.3	70 - 130	20	
Methylene chloride	ND	1.0	99	100	1.0	121	112	7.7	70 - 130	20	
Naphthalene	ND	1.0	106	105	0.9	104	97	7.0	70 - 130	20	
n-Butylbenzene	ND	1.0	111	109	1.8	122	109	11.3	70 - 130	20	
n-Propylbenzene	ND	1.0	102	104	1.9	116	102	12.8	70 - 130	20	
o-Xylene	ND	1.0	103	105	1.9	114	104	9.2	70 - 130	20	
p-Isopropyltoluene	ND	1.0	108	108	0.0	120	107	11.5	70 - 130	20	
sec-Butylbenzene	ND	1.0	109	108	0.9	120	108	10.5	70 - 130	20	
Styrene	ND	1.0	107	109	1.9	117	109	7.1	70 - 130	20	
tert-amyl methyl ether	ND	1.0	101	101	0.0	102	97	5.0	70 - 130	20	
tert-Butylbenzene	ND	1.0	105	105	0.0	117	104	11.8	70 - 130	20	
Tetrachloroethene	ND	1.0	101	103	2.0	117	104	11.8	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	98	98	0.0	96	90	6.5	70 - 130	20	
Toluene	ND	1.0	103	103	0.0	115	104	10.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	101	100	1.0	126	114	10.0	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	107	109	1.9	109	105	3.7	70 - 130	20	
Trichloroethene	ND	1.0	102	102	0.0	NC	NC	NC	70 - 130	20	
Trichlorofluoromethane	ND	1.0	110	111	0.9	146	128	13.1	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	93	94	1.1	120	105	13.3	70 - 130	20	
Vinyl chloride	ND	1.0	108	110	1.8	134	122	9.4	70 - 130	20	m
% 1,2-dichlorobenzene-d4	98	%	99	101	2.0	99	100	1.0	70 - 130	20	
% Bromofluorobenzene	99	%	101	102	1.0	101	101	0.0	70 - 130	20	
% Dibromofluoromethane	98	%	101	100	1.0	99	101	2.0	70 - 130	20	
% Toluene-d8	99	%	101	100	1.0	100	101	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 595031 (ug/L), QC Sample No: CJ47060 (CJ34746)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	117	102	13.7				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	115	101	13.0				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	107	92	15.1				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	109	94	14.8				70 - 130	20	
1,1-Dichloroethane	ND	1.0	114	99	14.1				70 - 130	20	
1,1-Dichloroethene	ND	1.0	120	104	14.3				70 - 130	20	
1,1-Dichloropropene	ND	1.0	113	99	13.2				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ34744

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2,3-Trichlorobenzene	ND	1.0	111	97	13.5				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	113	92	20.5				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	110	98	11.5				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	114	99	14.1				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	110	91	18.9				70 - 130	20	
1,2-Dibromoethane	ND	1.0	110	97	12.6				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	96	12.7				70 - 130	20	
1,2-Dichloroethane	ND	1.0	108	96	11.8				70 - 130	20	
1,2-Dichloropropane	ND	1.0	112	97	14.4				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	113	99	13.2				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	110	97	12.6				70 - 130	20	
1,3-Dichloropropane	ND	1.0	112	97	14.4				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	108	95	12.8				70 - 130	20	
1,4-dioxane	ND	100	108	97	10.7				40 - 160	20	
2,2-Dichloropropane	ND	1.0	121	103	16.1				70 - 130	20	
2-Chlorotoluene	ND	1.0	111	97	13.5				70 - 130	20	
2-Hexanone	ND	5.0	103	86	18.0				40 - 160	20	
4-Chlorotoluene	ND	1.0	110	98	11.5				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	106	90	16.3				40 - 160	20	
Acetone	ND	5.0	116	102	12.8				40 - 160	20	
Benzene	ND	0.70	112	99	12.3				70 - 130	20	
Bromobenzene	ND	1.0	109	96	12.7				70 - 130	20	
Bromochloromethane	ND	1.0	110	97	12.6				70 - 130	20	
Bromodichloromethane	ND	0.50	113	99	13.2				70 - 130	20	
Bromoform	ND	1.0	117	99	16.7				70 - 130	20	
Bromomethane	ND	1.0	123	109	12.1				40 - 160	20	
Carbon Disulfide	ND	1.0	118	103	13.6				70 - 130	20	
Carbon tetrachloride	ND	1.0	133	97	31.3				70 - 130	20	l,r
Chlorobenzene	ND	1.0	112	98	13.3				70 - 130	20	
Chloroethane	ND	1.0	125	113	10.1				70 - 130	20	
Chloroform	ND	1.0	114	101	12.1				70 - 130	20	
Chloromethane	ND	1.0	118	103	13.6				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	113	95	17.3				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	115	99	15.0				70 - 130	20	
Dibromochloromethane	ND	0.50	117	102	13.7				70 - 130	20	
Dibromomethane	ND	1.0	110	96	13.6				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	115	100	14.0				40 - 160	20	
Di-isopropyl ether	ND	1.0	112	98	13.3				70 - 130	20	
Ethyl ether	ND	1.0	111	97	13.5				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	112	98	13.3				70 - 130	20	
Ethylbenzene	ND	1.0	116	101	13.8				70 - 130	20	
Hexachlorobutadiene	ND	0.40	111	96	14.5				70 - 130	20	
Isopropylbenzene	ND	1.0	113	98	14.2				70 - 130	20	
m&p-Xylene	ND	1.0	115	101	13.0				70 - 130	20	
Methyl ethyl ketone	ND	5.0	104	89	15.5				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	116	102	12.8				70 - 130	20	
Methylene chloride	ND	1.0	120	106	12.4				70 - 130	20	
Naphthalene	ND	1.0	110	94	15.7				70 - 130	20	
n-Butylbenzene	ND	1.0	119	103	14.4				70 - 130	20	
n-Propylbenzene	ND	1.0	112	98	13.3				70 - 130	20	
o-Xylene	ND	1.0	114	98	15.1				70 - 130	20	
p-Isopropyltoluene	ND	1.0	116	100	14.8				70 - 130	20	
sec-Butylbenzene	ND	1.0	116	100	14.8				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ34744

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Styrene	ND	1.0	117	103	12.7				70 - 130	20
tert-amyl methyl ether	ND	1.0	108	94	13.9				70 - 130	20
tert-Butylbenzene	ND	1.0	112	98	13.3				70 - 130	20
Tetrachloroethene	ND	1.0	108	96	11.8				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	100	86	15.1				70 - 130	20
Toluene	ND	1.0	113	98	14.2				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	118	102	14.5				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	116	102	12.8				70 - 130	20
Trichloroethene	ND	1.0	113	98	14.2				70 - 130	20
Trichlorofluoromethane	ND	1.0	129	113	13.2				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	106	94	12.0				70 - 130	20
Vinyl chloride	ND	1.0	125	108	14.6				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	97	%	101	102	1.0				70 - 130	20
% Dibromofluoromethane	98	%	100	99	1.0				70 - 130	20
% Toluene-d8	100	%	100	100	0.0				70 - 130	20

Comment:

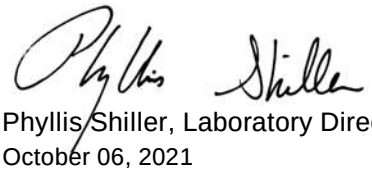
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
October 06, 2021

Wednesday, October 06, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ34744 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ34744	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ34744	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ34744	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ34744	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ34744	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ34744	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ34744	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ34744	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ34745	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ34745	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ34745	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ34745	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ34745	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ34745	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ34745	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ34745	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ34746	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ34746	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ34746	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ34746	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ34746	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ34746	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ34746	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ34746	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ34747	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ34747	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ34747	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ34747	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ34747	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ34747	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.34	0.20	0.3	0.3	ug/l
CJ34747	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.34	0.20	0.3	0.3	ug/l
CJ34747	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.34	0.20	0.3	0.3	ug/l
CJ34747	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ34744, CJ34745, CJ34746, CJ34747

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes ☐ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Wednesday, October 06, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 06, 2021

SDG I.D.: GCJ34744

SDG Comments

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/27/21-1 Adam Werner, Chemist 09/27/21

CJ34747 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0507):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0927_04-DIOX_0507) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 593466 (CJ31766)

CJ34747

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 06, 2021

SDG I.D.: GCJ34744

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 595031 (Samples: CJ34746): -----

The LCS recovery is above the upper range for one analyte that was not reported in the sample(s). No significant bias is suspected. (Carbon tetrachloride)

The LCS/LCSD RPD exceeds the method criteria for one analyte. This analyte was not reported in the sample(s) so no variability is suspected. (Carbon tetrachloride)

Instrument:

CHEM23 10/04/21-1 Michael Hahn, Chemist 10/04/21

CJ34744 (1X), CJ34745 (1X), CJ34747 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1004_03-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.186 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/05/21-1 Michael Hahn, Chemist 10/05/21

CJ34746 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1005_03-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 594857 (CJ33733) CHEM23 10/4/2021-1

CJ34744(1X), CJ34745(1X), CJ34747(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

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MCP Certification Report

October 06, 2021

SDG I.D.: GCJ34744

VOA Narration

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 595031 (CJ47060) CHEM23 10/5/2021-1

CJ34746(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Carbon tetrachloride(133%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Carbon tetrachloride(31.3%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 1.6 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
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Data Delivery/Contact EMails:
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scott.olson@aecom.com
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Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5236
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/22/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
34744	21A-TB01-092221-1	GW	9/22/21	0800	2							X									
34745	21A-AE104S-092221-1	GW	9/22/21	0930	3							X									
34746	21A-AE104M-092221-1	GW	9/22/21	1005	3							X									
X 34747	21A-AE104D-092221-1	GW	9/22/21	1040	3							X									
~~—~~	~~21A-ST43S-092221-1~~	~~GW~~	~~9/22/21~~		~~3~~							~~X~~	(2) 9/22/21								
~~—~~	~~21A-ST43D-092221-1~~	~~GW~~	~~9/22/21~~		~~3~~							~~X~~	(2) 9/22/21								
~~—~~	~~21A-ST43D-092221-2~~	~~GW~~	~~9/22/21~~		~~3~~							~~X~~	(2) 9/22/21								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-22-21	14:40
[signature]	Krystal Hall	9/22/21	16:50

Comments, Special Requirements or Regulations:
X Recieved 8oz w/ NAHSO4 Amber

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Rebecca Merz

From: Olson, Scott (Chelmsford) <scott.olson@aecom.com>
Sent: Thursday, September 23, 2021 10:28 AM
To: Client Services; Rebecca Merz
Cc: Potter, Dylan (Chelmsford); Herberich, Lori
Subject: RE: Phoenix Labs - GCJ34744, LOCKHEED WILMINGTON MA 60552044.25 - COC Acknowledgement

Hello,

Although not listed on the COC submitted to the Lab, Dylan has confirmed that bottle(s) were submitted with this sample group yesterday for 1,4-dioxane for one sample AE104D. Please login this analysis.

Scott

From: clientservices@phoenixlabs.com <clientservices@phoenixlabs.com>
Sent: Wednesday, September 22, 2021 6:56 PM
To: Olson, Scott (Chelmsford) <scott.olson@aecom.com>
Subject: [EXTERNAL] Phoenix Labs - GCJ34744, LOCKHEED WILMINGTON MA 60552044.25 - COC Acknowledgement

This is an automated sample acknowledgement.

Price Quote#: WILMINGTON

Purchase Order#:137485

GCJ34744 Criteria:
GROUND WATER(4): MA CAM, MA GW1 (GW-1), MA GW2 (GW-2), MA GW3 (GW-3)

Please email client services only if you require criteria different than what is listed.

Delivery group GCJ34744 (LOCKHEED WILMINGTON MA 60552044.25) has been logged in for the following samples:

Phoenix Id	Client Id
CJ34744	21A-TB01-092221-1
CJ34745	21A-AE104S-092221-1
CJ34746	21A-AE104M-092221-1
CJ34747	21A-AE104D-092221-1

If there are any questions regarding this submittal, please call Phoenix Client Services at extension 200.

Thank you for your business,

Phoenix Environmental Laboratories, Inc.
587 East Middle Turnpike
P.O. Box 370
Manchester, CT 06374
Tel. (860) 645-1102
Fax. (860) 645-0823
www.phoenixlabs.com

Please do not reply to this email.
cc'd:rebeccam@phoenixlabs.com;Nicole.Callahan@aecom.com;Lori.Herberich@aecom.com;Scott.Olson@aecom.com

PHOENIX
Environmental Laboratories, Inc.

Wednesday, October 06, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: LOCKHEED WILMINGTON MA 60552044.25
SDG ID: GCJ40162
Sample ID#s: CJ40162 - CJ40166

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,



Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 06, 2021

SDG I.D.: GCJ40162

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 06, 2021

SDG I.D.: GCJ40162

Project ID: LOCKHEED WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-STM3S-092221-1	CJ40162	GROUND WATER
21A-STM3D-092221-1	CJ40163	GROUND WATER
21A-STM3D-092221-2	CJ40164	GROUND WATER
21A-STM3R-092221-1	CJ40165	GROUND WATER
21A-TB02-092221-1	CJ40166	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	11:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/23/21	16:51
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ40162
Phoenix ID: CJ40162

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-STM3S-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/05/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ40162

Client ID: 21A-STM3S-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/05/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/05/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	10/05/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/05/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	10/05/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/05/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/05/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ40162

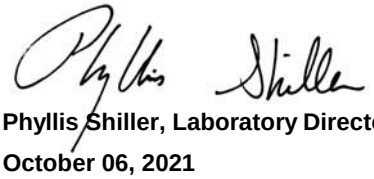
Client ID: 21A-STM3S-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	12:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/23/21	16:51
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ40162
Phoenix ID: CJ40163

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-STM3D-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/05/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ40163

Client ID: 21A-STM3D-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/05/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/05/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/05/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/05/21	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	10/05/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/05/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/05/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ40163

Client ID: 21A-STM3D-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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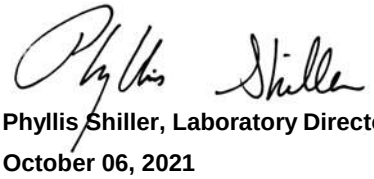

Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	12:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/23/21	16:51
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ40162
Phoenix ID: CJ40164

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-STM3D-092221-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/05/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ40164

Client ID: 21A-STM3D-092221-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/05/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/05/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/05/21	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/05/21	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/05/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/05/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/05/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ40164

Client ID: 21A-STM3D-092221-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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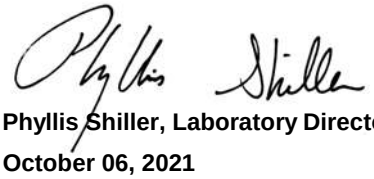

Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	14:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/23/21	16:51
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ40162
Phoenix ID: CJ40165

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-STM3R-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/05/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ40165

Client ID: 21A-STM3R-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/05/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/05/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/05/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/05/21	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/05/21	MH	70 - 130 %
% Toluene-d8	101		%	1	10/05/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/05/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ40165

Client ID: 21A-STM3R-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

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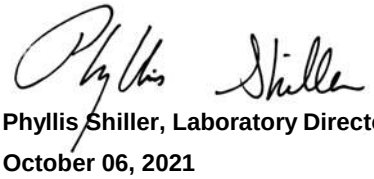


Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	8:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/23/21	16:51
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ40162
Phoenix ID: CJ40166

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-TB02-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/04/21	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/04/21	MH	SW8260C

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ40166

Client ID: 21A-TB02-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/04/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/04/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/04/21	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/04/21	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/04/21	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/04/21	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	10/04/21	MH	70 - 130 %
% Toluene-d8	100		%	1	10/04/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ40166

Client ID: 21A-TB02-092221-1

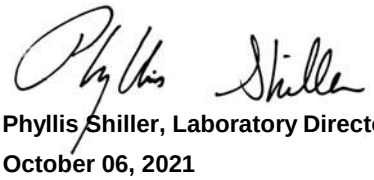
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2021

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 06, 2021

QA/QC Data

SDG I.D.: GCJ40162

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 594862 (ug/L), QC Sample No: CJ40166 (CJ40166)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	105	105	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	102	98	4.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	92	94	2.2				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	97	98	1.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	100	98	2.0				70 - 130	20
1,1-Dichloroethene	ND	1.0	101	99	2.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	99	96	3.1				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	89	94	5.5				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	102	103	1.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	89	91	2.2				70 - 130	20
1,2-Dibromoethane	ND	1.0	96	100	4.1				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20
1,2-Dichloroethane	ND	1.0	99	96	3.1				70 - 130	20
1,2-Dichloropropane	ND	1.0	99	99	0.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	101	100	1.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	97	97	0.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	99	100	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	96	97	1.0				70 - 130	20
1,4-dioxane	ND	100	104	109	4.7				40 - 160	20
2,2-Dichloropropane	ND	1.0	101	98	3.0				70 - 130	20
2-Chlorotoluene	ND	1.0	99	98	1.0				70 - 130	20
2-Hexanone	ND	5.0	88	88	0.0				40 - 160	20
4-Chlorotoluene	ND	1.0	98	99	1.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	89	91	2.2				40 - 160	20
Acetone	ND	5.0	99	99	0.0				40 - 160	20
Benzene	ND	0.70	100	99	1.0				70 - 130	20
Bromobenzene	ND	1.0	98	97	1.0				70 - 130	20
Bromochloromethane	ND	1.0	97	100	3.0				70 - 130	20
Bromodichloromethane	ND	0.50	101	101	0.0				70 - 130	20
Bromoform	ND	1.0	100	103	3.0				70 - 130	20
Bromomethane	ND	1.0	112	112	0.0				40 - 160	20
Carbon Disulfide	ND	1.0	100	98	2.0				70 - 130	20
Carbon tetrachloride	ND	1.0	115	111	3.5				70 - 130	20
Chlorobenzene	ND	1.0	100	100	0.0				70 - 130	20
Chloroethane	ND	1.0	113	113	0.0				70 - 130	20
Chloroform	ND	1.0	103	100	3.0				70 - 130	20
Chloromethane	ND	1.0	105	102	2.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	102	97	5.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	102	103	1.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ40162

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dibromochloromethane	ND	0.50	104	104	0.0				70 - 130	20
Dibromomethane	ND	1.0	98	99	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	94	92	2.2				40 - 160	20
Di-isopropyl ether	ND	1.0	99	98	1.0				70 - 130	20
Ethyl ether	ND	1.0	96	97	1.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	100	100	0.0				70 - 130	20
Ethylbenzene	ND	1.0	103	103	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	90	91	1.1				70 - 130	20
Isopropylbenzene	ND	1.0	99	99	0.0				70 - 130	20
m&p-Xylene	ND	1.0	104	102	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	90	92	2.2				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	104	1.0				70 - 130	20
Methylene chloride	ND	1.0	108	107	0.9				70 - 130	20
Naphthalene	ND	1.0	94	97	3.1				70 - 130	20
n-Butylbenzene	ND	1.0	103	102	1.0				70 - 130	20
n-Propylbenzene	ND	1.0	97	98	1.0				70 - 130	20
o-Xylene	ND	1.0	100	101	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	101	100	1.0				70 - 130	20
sec-Butylbenzene	ND	1.0	100	100	0.0				70 - 130	20
Styrene	ND	1.0	105	105	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	95	96	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	99	98	1.0				70 - 130	20
Tetrachloroethene	ND	1.0	96	95	1.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	87	90	3.4				70 - 130	20
Toluene	ND	1.0	101	101	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	103	102	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	104	1.9				70 - 130	20
Trichloroethene	ND	1.0	99	98	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	105	102	2.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	88	85	3.5				70 - 130	20
Vinyl chloride	ND	1.0	107	104	2.8				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	99	101	2.0				70 - 130	20
% Bromofluorobenzene	96	%	100	101	1.0				70 - 130	20
% Dibromofluoromethane	100	%	100	101	1.0				70 - 130	20
% Toluene-d8	101	%	100	101	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 595031 (ug/L), QC Sample No: CJ47060 (CJ40162, CJ40163, CJ40164, CJ40165)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	117	102	13.7				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	115	101	13.0				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	107	92	15.1				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	109	94	14.8				70 - 130	20
1,1-Dichloroethane	ND	1.0	114	99	14.1				70 - 130	20
1,1-Dichloroethene	ND	1.0	120	104	14.3				70 - 130	20
1,1-Dichloropropene	ND	1.0	113	99	13.2				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	111	97	13.5				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	113	92	20.5				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	110	98	11.5				70 - 130	20

QA/QC Data

SDG I.D.: GCJ40162

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2,4-Trimethylbenzene	ND	1.0	114	99	14.1				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	110	91	18.9				70 - 130	20	
1,2-Dibromoethane	ND	1.0	110	97	12.6				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	96	12.7				70 - 130	20	
1,2-Dichloroethane	ND	1.0	108	96	11.8				70 - 130	20	
1,2-Dichloropropane	ND	1.0	112	97	14.4				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	113	99	13.2				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	110	97	12.6				70 - 130	20	
1,3-Dichloropropane	ND	1.0	112	97	14.4				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	108	95	12.8				70 - 130	20	
1,4-dioxane	ND	100	108	97	10.7				40 - 160	20	
2,2-Dichloropropane	ND	1.0	121	103	16.1				70 - 130	20	
2-Chlorotoluene	ND	1.0	111	97	13.5				70 - 130	20	
2-Hexanone	ND	5.0	103	86	18.0				40 - 160	20	
4-Chlorotoluene	ND	1.0	110	98	11.5				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	106	90	16.3				40 - 160	20	
Acetone	ND	5.0	116	102	12.8				40 - 160	20	
Benzene	ND	0.70	112	99	12.3				70 - 130	20	
Bromobenzene	ND	1.0	109	96	12.7				70 - 130	20	
Bromochloromethane	ND	1.0	110	97	12.6				70 - 130	20	
Bromodichloromethane	ND	0.50	113	99	13.2				70 - 130	20	
Bromoform	ND	1.0	117	99	16.7				70 - 130	20	
Bromomethane	ND	1.0	123	109	12.1				40 - 160	20	
Carbon Disulfide	ND	1.0	118	103	13.6				70 - 130	20	
Carbon tetrachloride	ND	1.0	133	97	31.3				70 - 130	20	l,r
Chlorobenzene	ND	1.0	112	98	13.3				70 - 130	20	
Chloroethane	ND	1.0	125	113	10.1				70 - 130	20	
Chloroform	ND	1.0	114	101	12.1				70 - 130	20	
Chloromethane	ND	1.0	118	103	13.6				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	113	95	17.3				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	115	99	15.0				70 - 130	20	
Dibromochloromethane	ND	0.50	117	102	13.7				70 - 130	20	
Dibromomethane	ND	1.0	110	96	13.6				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	115	100	14.0				40 - 160	20	
Di-isopropyl ether	ND	1.0	112	98	13.3				70 - 130	20	
Ethyl ether	ND	1.0	111	97	13.5				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	112	98	13.3				70 - 130	20	
Ethylbenzene	ND	1.0	116	101	13.8				70 - 130	20	
Hexachlorobutadiene	ND	0.40	111	96	14.5				70 - 130	20	
Isopropylbenzene	ND	1.0	113	98	14.2				70 - 130	20	
m&p-Xylene	ND	1.0	115	101	13.0				70 - 130	20	
Methyl ethyl ketone	ND	5.0	104	89	15.5				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	116	102	12.8				70 - 130	20	
Methylene chloride	ND	1.0	120	106	12.4				70 - 130	20	
Naphthalene	ND	1.0	110	94	15.7				70 - 130	20	
n-Butylbenzene	ND	1.0	119	103	14.4				70 - 130	20	
n-Propylbenzene	ND	1.0	112	98	13.3				70 - 130	20	
o-Xylene	ND	1.0	114	98	15.1				70 - 130	20	
p-Isopropyltoluene	ND	1.0	116	100	14.8				70 - 130	20	
sec-Butylbenzene	ND	1.0	116	100	14.8				70 - 130	20	
Styrene	ND	1.0	117	103	12.7				70 - 130	20	
tert-amyl methyl ether	ND	1.0	108	94	13.9				70 - 130	20	
tert-Butylbenzene	ND	1.0	112	98	13.3				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ40162

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Tetrachloroethene	ND	1.0	108	96	11.8				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	100	86	15.1				70 - 130	20
Toluene	ND	1.0	113	98	14.2				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	118	102	14.5				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	116	102	12.8				70 - 130	20
Trichloroethene	ND	1.0	113	98	14.2				70 - 130	20
Trichlorofluoromethane	ND	1.0	129	113	13.2				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	106	94	12.0				70 - 130	20
Vinyl chloride	ND	1.0	125	108	14.6				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	97	%	101	102	1.0				70 - 130	20
% Dibromofluoromethane	98	%	100	99	1.0				70 - 130	20
% Toluene-d8	100	%	100	100	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 06, 2021

Wednesday, October 06, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ40162 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ40162	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ40162	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ40162	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ40162	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ40162	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ40162	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ40162	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ40162	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ40163	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ40163	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ40163	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ40163	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ40163	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ40163	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ40163	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ40163	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ40164	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ40164	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ40164	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ40164	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ40164	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ40164	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ40164	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ40164	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ40165	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ40165	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ40165	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ40165	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ40165	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ40165	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ40165	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ40165	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CJ40166	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ40166	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ40166	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ40166	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ40166	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ40166	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ40166	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L

Wednesday, October 06, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ40162 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ40166	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ40162, CJ40163, CJ40164, CJ40165, CJ40166

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes ☐ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Wednesday, October 06, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 06, 2021

SDG I.D.: GCJ40162

SDG Comments

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 595031 (Samples: CJ40162, CJ40163, CJ40164, CJ40165): -----

The LCS recovery is above the upper range for one analyte that was not reported in the sample(s). No significant bias is suspected. (Carbon tetrachloride)

The LCS/LCSD RPD exceeds the method criteria for one analyte, but this analytes was not reported in the sample(s). No significant variability is suspected. (Carbon tetrachloride)

Instrument:

CHEM23 10/04/21-2 Michael Hahn, Chemist 10/04/21

CJ40166 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1004_34-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 23%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/05/21-1 Michael Hahn, Chemist 10/05/21

CJ40162 (1X), CJ40163 (1X), CJ40164 (1X), CJ40165 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1005_03-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 06, 2021

SDG I.D.: GCJ40162

VOA Narration

The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 594862 (CJ40166) CHEM23 10/4/2021-2

CJ40166(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 595031 (CJ47060) CHEM23 10/5/2021-1

CJ40162(1X), CJ40163(1X), CJ40164(1X), CJ40165(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Carbon tetrachloride(133%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Carbon tetrachloride(31.3%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 4.9 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/23/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP VPH 04 1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
40162	21A-STM3S-092221-1	GW	9/22/21	1140	3							X									
40163	21A-STM3D-092221-1	GW	9/22/21	1250	3							X									
40164	21A-STM3D-092221-2	GW	9/22/21	1255	3							X									
40165	21A-STM3R-092221-1	GW	9/22/21	1450	3							X									
40166	21A-TB02-092221-1	GW	9/22/21	0805	2							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-23-21	13:10
	[signature]	9/23/21	16:51

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Thursday, October 07, 2021

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.25**
SDG ID: **GCJ34748**
Sample ID#s: CJ34748 - CJ34752

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,



Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 07, 2021

SDG I.D.: GCJ34748

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 07, 2021

SDG I.D.: GCJ34748

Project ID: LOCKHEED WILMINGTON MA 60552044.25

Client Id	Lab Id	Matrix
21A-IDW1-092221-1	CJ34748	GROUND WATER
21A-IDW2-092221-1	CJ34749	GROUND WATER
21A-IDW3-092221-1	CJ34750	GROUND WATER
21A-IDW4-092221-1	CJ34751	GROUND WATER
21A-IDW5-092221-1	CJ34752	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	13:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/22/21	16:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ34748
Phoenix ID: CJ34748

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-IDW1-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Arsenic	< 0.004	0.004	mg/L	1	09/25/21	CPP	SW6010D
Barium	0.162	0.002	mg/L	1	09/25/21	CPP	SW6010D
Cadmium	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Chromium	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Mercury	< 0.0002	0.0002	mg/L	1	09/23/21	AP	SW7470A
Lead	< 0.002	0.002	mg/L	1	09/25/21	CPP	SW6010D
Selenium	< 0.010	0.010	mg/L	1	09/25/21	CPP	SW6010D
Mercury Digestion	Completed				09/23/21	AB/AB	SW7470A
Total Metals Digestion	Completed				09/24/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,1-Dichloroethane	24	5.0	ug/L	5	10/04/21	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/04/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34748

Client ID: 21A-IDW1-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichloropropane	ND	3.0	ug/L	5	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/04/21	MH	SW8260C
Acetone	ND	130	ug/L	5	10/04/21	MH	SW8260C
Benzene	ND	3.5	ug/L	5	10/04/21	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/04/21	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	340	5.0	ug/L	5	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Tetrachloroethene	360	5.0	ug/L	5	10/04/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/04/21	MH	SW8260C
Toluene	130	5.0	ug/L	5	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	17	5.0	ug/L	5	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Trichloroethene	760	20	ug/L	20	10/06/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorofluoromethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Vinyl chloride	26	5.0	ug/L	5	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/06/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	94		%	20	10/06/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	97		%	20	10/06/21	MH	70 - 130 %
% Toluene-d8 (20x)	98		%	20	10/06/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/04/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/22/21	16:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ34748
Phoenix ID: CJ34749

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-IDW2-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Arsenic	< 0.004	0.004	mg/L	1	09/25/21	CPP	SW6010D
Barium	0.157	0.002	mg/L	1	09/25/21	CPP	SW6010D
Cadmium	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Chromium	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Mercury	< 0.0002	0.0002	mg/L	1	09/23/21	AP	SW7470A
Lead	< 0.002	0.002	mg/L	1	09/25/21	CPP	SW6010D
Selenium	< 0.010	0.010	mg/L	1	09/25/21	CPP	SW6010D
Mercury Digestion	Completed				09/23/21	AB/AB	SW7470A
Total Metals Digestion	Completed				09/24/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,1-Dichloroethane	42	5.0	ug/L	5	10/04/21	MH	SW8260C
1,1-Dichloroethene	9.0	5.0	ug/L	5	10/04/21	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/04/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34749

Client ID: 21A-IDW2-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichloropropane	ND	3.0	ug/L	5	10/04/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/04/21	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/04/21	MH	SW8260C
Acetone	ND	130	ug/L	5	10/04/21	MH	SW8260C
Benzene	ND	3.5	ug/L	5	10/04/21	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/04/21	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/04/21	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
cis-1,2-Dichloroethene	100	5.0	ug/L	5	10/04/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/04/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Tetrachloroethene	610	100	ug/L	100	10/05/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/04/21	MH	SW8260C
Toluene	180	5.0	ug/L	5	10/04/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	10/04/21	MH	SW8260C
Trichloroethene	3500	100	ug/L	100	10/05/21	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorofluoromethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/04/21	MH	SW8260C
Vinyl chloride	2.9	2.5	ug/L	5	10/04/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	99		%	5	10/04/21	MH	70 - 130 %
% Bromofluorobenzene (5x)	97		%	5	10/04/21	MH	70 - 130 %
% Dibromofluoromethane (5x)	99		%	5	10/04/21	MH	70 - 130 %
% Toluene-d8 (5x)	100		%	5	10/04/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	99		%	100	10/05/21	MH	70 - 130 %
% Bromofluorobenzene (100x)	95		%	100	10/05/21	MH	70 - 130 %
% Dibromofluoromethane (100x)	103		%	100	10/05/21	MH	70 - 130 %
% Toluene-d8 (100x)	98		%	100	10/05/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	10/04/21	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/04/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/04/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/04/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/04/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	14:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/22/21	16:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ34748
Phoenix ID: CJ34750

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-IDW3-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Arsenic	< 0.004	0.004	mg/L	1	09/25/21	CPP	SW6010D
Barium	0.061	0.002	mg/L	1	09/25/21	CPP	SW6010D
Cadmium	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Chromium	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Mercury	< 0.0002	0.0002	mg/L	1	09/23/21	AP	SW7470A
Lead	< 0.002	0.002	mg/L	1	09/25/21	CPP	SW6010D
Selenium	< 0.010	0.010	mg/L	1	09/25/21	CPP	SW6010D
Mercury Digestion	Completed				09/23/21	AB/AB	SW7470A
Total Metals Digestion	Completed				09/24/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	10/05/21	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,1-Dichloroethane	24	5.0	ug/L	5	10/05/21	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	10/05/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/05/21	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	10/05/21	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/05/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34750

Client ID: 21A-IDW3-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichloropropane	ND	3.0	ug/L	5	10/05/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/05/21	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/05/21	MH	SW8260C
Acetone	ND	130	ug/L	5	10/05/21	MH	SW8260C
Benzene	ND	3.5	ug/L	5	10/05/21	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/05/21	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/05/21	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/05/21	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	10/05/21	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
cis-1,2-Dichloroethene	210	5.0	ug/L	5	10/05/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	10/05/21	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	10/05/21	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	10/05/21	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/05/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Tetrachloroethene	350	5.0	ug/L	5	10/05/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/05/21	MH	SW8260C
Toluene	7.2	5.0	ug/L	5	10/05/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	10/05/21	MH	SW8260C
Trichloroethene	870	10	ug/L	10	10/05/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34750
Client ID: 21A-IDW3-092221-1

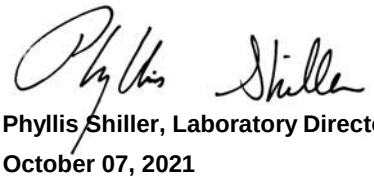
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorofluoromethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/05/21	MH	SW8260C
Vinyl chloride	14	5.0	ug/L	5	10/05/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	101		%	5	10/05/21	MH	70 - 130 %
% Bromofluorobenzene (5x)	96		%	5	10/05/21	MH	70 - 130 %
% Dibromofluoromethane (5x)	100		%	5	10/05/21	MH	70 - 130 %
% Toluene-d8 (5x)	99		%	5	10/05/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	100		%	10	10/05/21	MH	70 - 130 %
% Bromofluorobenzene (10x)	94		%	10	10/05/21	MH	70 - 130 %
% Dibromofluoromethane (10x)	103		%	10	10/05/21	MH	70 - 130 %
% Toluene-d8 (10x)	97		%	10	10/05/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	10/05/21	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/05/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/05/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/05/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/05/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	14:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/22/21	16:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ34748
Phoenix ID: CJ34751

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-IDW4-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Arsenic	< 0.004	0.004	mg/L	1	09/25/21	CPP	SW6010D
Barium	0.088	0.002	mg/L	1	09/25/21	CPP	SW6010D
Cadmium	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Chromium	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Mercury	< 0.0002	0.0002	mg/L	1	09/23/21	AP	SW7470A
Lead	< 0.002	0.002	mg/L	1	09/25/21	CPP	SW6010D
Selenium	< 0.010	0.010	mg/L	1	09/25/21	CPP	SW6010D
Mercury Digestion	Completed				09/23/21	AB/AB	SW7470A
Total Metals Digestion	Completed				09/24/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/05/21	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,1-Dichloroethane	11	2.0	ug/L	2	10/05/21	MH	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	2	10/05/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/05/21	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	10/05/21	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/05/21	MH	SW8260C

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34751

Client ID: 21A-IDW4-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichloropropane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	10/05/21	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/05/21	MH	SW8260C
Acetone	ND	50	ug/L	2	10/05/21	MH	SW8260C
Benzene	ND	1.4	ug/L	2	10/05/21	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/05/21	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/05/21	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
cis-1,2-Dichloroethene	69	2.0	ug/L	2	10/05/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	10/05/21	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/05/21	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	10/05/21	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/05/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Styrene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Tetrachloroethene	180	2.0	ug/L	2	10/05/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/05/21	MH	SW8260C
Toluene	6.2	2.0	ug/L	2	10/05/21	MH	SW8260C
trans-1,2-Dichloroethene	3.2	2.0	ug/L	2	10/05/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	10/05/21	MH	SW8260C
Trichloroethene	350	20	ug/L	20	10/05/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34751
Client ID: 21A-IDW4-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorofluoromethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/05/21	MH	SW8260C
Vinyl chloride	2.2	2.0	ug/L	2	10/05/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	100		%	2	10/05/21	MH	70 - 130 %
% Bromofluorobenzene (2x)	97		%	2	10/05/21	MH	70 - 130 %
% Dibromofluoromethane (2x)	97		%	2	10/05/21	MH	70 - 130 %
% Toluene-d8 (2x)	97		%	2	10/05/21	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/05/21	MH	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	10/05/21	MH	70 - 130 %
% Dibromofluoromethane (20x)	97		%	20	10/05/21	MH	70 - 130 %
% Toluene-d8 (20x)	99		%	20	10/05/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	2	10/05/21	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/05/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/05/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/05/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/05/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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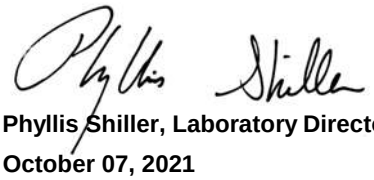


Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 07, 2021

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/21	14:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/22/21	16:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	137485				

Laboratory Data

SDG ID: GCJ34748
Phoenix ID: CJ34752

Project ID: LOCKHEED WILMINGTON MA 60552044.25
Client ID: 21A-IDW5-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Arsenic	< 0.004	0.004	mg/L	1	09/25/21	CPP	SW6010D
Barium	0.078	0.002	mg/L	1	09/25/21	CPP	SW6010D
Cadmium	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Chromium	< 0.001	0.001	mg/L	1	09/25/21	CPP	SW6010D
Mercury	< 0.0002	0.0002	mg/L	1	09/23/21	AP	SW7470A
Lead	0.002	0.002	mg/L	1	09/25/21	CPP	SW6010D
Selenium	< 0.010	0.010	mg/L	1	09/25/21	CPP	SW6010D
Mercury Digestion	Completed				09/23/21	AB/AB	SW7470A
Total Metals Digestion	Completed				09/24/21	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethane	3.1	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/05/21	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34752

Client ID: 21A-IDW5-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Acetone	ND	25	ug/L	1	10/05/21	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/05/21	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,2-Dichloroethene	11	1.0	ug/L	1	10/05/21	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/05/21	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/05/21	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrachloroethene	25	1.0	ug/L	1	10/05/21	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/05/21	MH	SW8260C
Toluene	27	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/21	MH	SW8260C
Trichloroethene	72	1.0	ug/L	1	10/05/21	MH	SW8260C

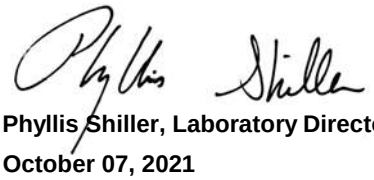
Project ID: LOCKHEED WILMINGTON MA 60552044.25 Phoenix I.D.: CJ34752
Client ID: 21A-IDW5-092221-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorofluoromethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/05/21	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/05/21	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/05/21	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	10/05/21	MH	70 - 130 %
% Toluene-d8	98		%	1	10/05/21	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/05/21	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/05/21	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 07, 2021
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 07, 2021

QA/QC Data

SDG I.D.: GCJ34748

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 593201 (mg/L), QC Sample No: CJ34748 (CJ34748, CJ34749, CJ34750, CJ34751, CJ34752)													
Mercury - Water	BRL	0.0002	<0.0002	<0.0002	NC	93.0			98.4			75 - 125	30
Comment:													
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%													
QA/QC Batch 593498 (mg/L), QC Sample No: CJ39571 (CJ34748, CJ34749, CJ34750, CJ34751, CJ34752)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	106	103	2.9	106			80 - 120	20
Barium	BRL	0.002	0.297	0.291	2.00	106	104	1.9	104			80 - 120	20
Cadmium	BRL	0.001	<0.001	<0.001	NC	110	108	1.8	102			80 - 120	20
Chromium	BRL	0.001	<0.001	<0.001	NC	108	106	1.9	103			80 - 120	20
Lead	BRL	0.002	<0.002	<0.002	NC	104	102	1.9	102			80 - 120	20
Selenium	BRL	0.010	<0.010	<0.010	NC	104	99.5	4.4	99.2			80 - 120	20
Silver	BRL	0.001	0.001	<0.001	NC	98.7	95.4	3.4	103			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 07, 2021

QA/QC Data

SDG I.D.: GCJ34748

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 594857 (ug/L), QC Sample No: CJ33733 (CJ34748 (5X))											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	108	109	0.9	115	108	6.3	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	106	107	0.9	123	111	10.3	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	101	100	1.0	104	95	9.0	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	100	100	0.0	105	100	4.9	70 - 130	20	
1,1-Dichloroethane	ND	1.0	104	104	0.0	117	106	9.9	70 - 130	20	
1,1-Dichloroethene	ND	1.0	100	100	0.0	127	115	9.9	70 - 130	20	
1,1-Dichloropropene	ND	1.0	104	105	1.0	120	107	11.5	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	103	103	0.0	104	99	4.9	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	107	105	1.9	101	92	9.3	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	104	105	1.0	106	100	5.8	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	106	106	0.0	116	105	10.0	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	104	104	0.0	100	96	4.1	70 - 130	20	
1,2-Dibromoethane	ND	1.0	105	104	1.0	107	102	4.8	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	100	101	1.0	107	100	6.8	70 - 130	20	
1,2-Dichloroethane	ND	1.0	100	101	1.0	106	100	5.8	70 - 130	20	
1,2-Dichloropropane	ND	1.0	99	102	3.0	110	103	6.6	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	106	106	0.0	116	105	10.0	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	101	100	1.0	108	101	6.7	70 - 130	20	
1,3-Dichloropropane	ND	1.0	106	105	0.9	109	103	5.7	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	101	101	0.0	108	99	8.7	70 - 130	20	
1,4-dioxane	ND	100	100	105	4.9	94	114	19.2	40 - 160	20	
2,2-Dichloropropane	ND	1.0	108	107	0.9	110	99	10.5	70 - 130	20	
2-Chlorotoluene	ND	1.0	102	103	1.0	111	101	9.4	70 - 130	20	
2-Hexanone	ND	5.0	103	101	2.0	93	88	5.5	40 - 160	20	
4-Chlorotoluene	ND	1.0	102	103	1.0	111	102	8.5	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	101	101	0.0	100	95	5.1	40 - 160	20	
Acetone	ND	5.0	104	107	2.8	111	104	6.5	40 - 160	20	
Benzene	ND	0.70	102	103	1.0	113	104	8.3	70 - 130	20	
Bromobenzene	ND	1.0	103	101	2.0	109	101	7.6	70 - 130	20	
Bromochloromethane	ND	1.0	100	102	2.0	111	102	8.5	70 - 130	20	
Bromodichloromethane	ND	0.50	103	104	1.0	109	104	4.7	70 - 130	20	
Bromoform	ND	1.0	110	110	0.0	108	105	2.8	70 - 130	20	
Bromomethane	ND	1.0	106	105	0.9	126	113	10.9	40 - 160	20	
Carbon Disulfide	ND	1.0	96	96	0.0	123	109	12.1	70 - 130	20	
Carbon tetrachloride	ND	1.0	116	123	5.9	141	126	11.2	70 - 130	20	m
Chlorobenzene	ND	1.0	101	104	2.9	112	104	7.4	70 - 130	20	
Chloroethane	ND	1.0	99	104	4.9	137	124	10.0	70 - 130	20	m
Chloroform	ND	1.0	103	103	0.0	115	106	8.1	70 - 130	20	
Chloromethane	ND	1.0	105	106	0.9	126	114	10.0	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	103	103	0.0	115	101	13.0	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	106	106	0.0	105	101	3.9	70 - 130	20	

QA/QC Data

SDG I.D.: GCJ34748

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Dibromochloromethane	ND	0.50	109	111	1.8	112	106	5.5	70 - 130	20	
Dibromomethane	ND	1.0	102	103	1.0	106	103	2.9	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	111	114	2.7	130	114	13.1	40 - 160	20	
Di-isopropyl ether	ND	1.0	103	104	1.0	110	104	5.6	70 - 130	20	
Ethyl ether	ND	1.0	92	91	1.1	109	103	5.7	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	105	106	0.9	108	102	5.7	70 - 130	20	
Ethylbenzene	ND	1.0	106	107	0.9	117	107	8.9	70 - 130	20	
Hexachlorobutadiene	ND	0.40	105	105	0.0	109	99	9.6	70 - 130	20	
Isopropylbenzene	ND	1.0	107	106	0.9	115	104	10.0	70 - 130	20	
m&p-Xylene	ND	1.0	106	108	1.9	117	107	8.9	70 - 130	20	
Methyl ethyl ketone	ND	5.0	103	103	0.0	100	95	5.1	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	104	103	1.0	115	108	6.3	70 - 130	20	
Methylene chloride	ND	1.0	99	100	1.0	121	112	7.7	70 - 130	20	
Naphthalene	ND	1.0	106	105	0.9	104	97	7.0	70 - 130	20	
n-Butylbenzene	ND	1.0	111	109	1.8	122	109	11.3	70 - 130	20	
n-Propylbenzene	ND	1.0	102	104	1.9	116	102	12.8	70 - 130	20	
o-Xylene	ND	1.0	103	105	1.9	114	104	9.2	70 - 130	20	
p-Isopropyltoluene	ND	1.0	108	108	0.0	120	107	11.5	70 - 130	20	
sec-Butylbenzene	ND	1.0	109	108	0.9	120	108	10.5	70 - 130	20	
Styrene	ND	1.0	107	109	1.9	117	109	7.1	70 - 130	20	
tert-amyl methyl ether	ND	1.0	101	101	0.0	102	97	5.0	70 - 130	20	
tert-Butylbenzene	ND	1.0	105	105	0.0	117	104	11.8	70 - 130	20	
Tetrachloroethene	ND	1.0	101	103	2.0	117	104	11.8	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	98	98	0.0	96	90	6.5	70 - 130	20	
Toluene	ND	1.0	103	103	0.0	115	104	10.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	101	100	1.0	126	114	10.0	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	107	109	1.9	109	105	3.7	70 - 130	20	
Trichlorofluoromethane	ND	1.0	110	111	0.9	146	128	13.1	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	93	94	1.1	120	105	13.3	70 - 130	20	
Vinyl chloride	ND	1.0	108	110	1.8	134	122	9.4	70 - 130	20	m

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 594862 (ug/L), QC Sample No: CJ40166 (CJ34749 (5X) , CJ34750 (10X) , CJ34751 (20X) , CJ34752)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	105	105	0.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	102	98	4.0				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	92	94	2.2				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	97	98	1.0				70 - 130	20	
1,1-Dichloroethane	ND	1.0	100	98	2.0				70 - 130	20	
1,1-Dichloroethene	ND	1.0	101	99	2.0				70 - 130	20	
1,1-Dichloropropene	ND	1.0	99	96	3.1				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	89	94	5.5				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	102	103	1.0				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	89	91	2.2				70 - 130	20	
1,2-Dibromoethane	ND	1.0	96	100	4.1				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20	
1,2-Dichloroethane	ND	1.0	99	96	3.1				70 - 130	20	
1,2-Dichloropropane	ND	1.0	99	99	0.0				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ34748

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,3,5-Trimethylbenzene	ND	1.0	101	100	1.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	97	97	0.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	99	100	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	96	97	1.0				70 - 130	20
1,4-dioxane	ND	100	104	109	4.7				40 - 160	20
2,2-Dichloropropane	ND	1.0	101	98	3.0				70 - 130	20
2-Chlorotoluene	ND	1.0	99	98	1.0				70 - 130	20
2-Hexanone	ND	5.0	88	88	0.0				40 - 160	20
4-Chlorotoluene	ND	1.0	98	99	1.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	89	91	2.2				40 - 160	20
Acetone	ND	5.0	99	99	0.0				40 - 160	20
Benzene	ND	0.70	100	99	1.0				70 - 130	20
Bromobenzene	ND	1.0	98	97	1.0				70 - 130	20
Bromochloromethane	ND	1.0	97	100	3.0				70 - 130	20
Bromodichloromethane	ND	0.50	101	101	0.0				70 - 130	20
Bromoform	ND	1.0	100	103	3.0				70 - 130	20
Bromomethane	ND	1.0	112	112	0.0				40 - 160	20
Carbon Disulfide	ND	1.0	100	98	2.0				70 - 130	20
Carbon tetrachloride	ND	1.0	115	111	3.5				70 - 130	20
Chlorobenzene	ND	1.0	100	100	0.0				70 - 130	20
Chloroethane	ND	1.0	113	113	0.0				70 - 130	20
Chloroform	ND	1.0	103	100	3.0				70 - 130	20
Chloromethane	ND	1.0	105	102	2.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	102	97	5.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	102	103	1.0				70 - 130	20
Dibromochloromethane	ND	0.50	104	104	0.0				70 - 130	20
Dibromomethane	ND	1.0	98	99	1.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	94	92	2.2				40 - 160	20
Di-isopropyl ether	ND	1.0	99	98	1.0				70 - 130	20
Ethyl ether	ND	1.0	96	97	1.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	100	100	0.0				70 - 130	20
Ethylbenzene	ND	1.0	103	103	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	90	91	1.1				70 - 130	20
Isopropylbenzene	ND	1.0	99	99	0.0				70 - 130	20
m&p-Xylene	ND	1.0	104	102	1.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	90	92	2.2				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	104	1.0				70 - 130	20
Methylene chloride	ND	1.0	108	107	0.9				70 - 130	20
Naphthalene	ND	1.0	94	97	3.1				70 - 130	20
n-Butylbenzene	ND	1.0	103	102	1.0				70 - 130	20
n-Propylbenzene	ND	1.0	97	98	1.0				70 - 130	20
o-Xylene	ND	1.0	100	101	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	101	100	1.0				70 - 130	20
sec-Butylbenzene	ND	1.0	100	100	0.0				70 - 130	20
Styrene	ND	1.0	105	105	0.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	95	96	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	99	98	1.0				70 - 130	20
Tetrachloroethene	ND	1.0	96	95	1.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	87	90	3.4				70 - 130	20
Toluene	ND	1.0	101	101	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	103	102	1.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	104	1.9				70 - 130	20
Trichloroethene	ND	1.0	99	98	1.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Trichlorofluoromethane	ND	1.0	105	102	2.9				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	88	85	3.5				70 - 130	20	
Vinyl chloride	ND	1.0	107	104	2.8				70 - 130	20	
% 1,2-dichlorobenzene-d4	101	%	99	101	2.0				70 - 130	20	
% Bromofluorobenzene	96	%	100	101	1.0				70 - 130	20	
% Dibromofluoromethane	100	%	100	101	1.0				70 - 130	20	
% Toluene-d8	101	%	100	101	1.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 595031 (ug/L), QC Sample No: CJ47060 (CJ34749 (100X) , CJ34750 (5X) , CJ34751 (2X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	117	102	13.7				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	115	101	13.0				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	107	92	15.1				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	109	94	14.8				70 - 130	20	
1,1-Dichloroethane	ND	1.0	114	99	14.1				70 - 130	20	
1,1-Dichloroethene	ND	1.0	120	104	14.3				70 - 130	20	
1,1-Dichloropropene	ND	1.0	113	99	13.2				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	111	97	13.5				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	113	92	20.5				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	110	98	11.5				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	114	99	14.1				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	110	91	18.9				70 - 130	20	
1,2-Dibromoethane	ND	1.0	110	97	12.6				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	96	12.7				70 - 130	20	
1,2-Dichloroethane	ND	1.0	108	96	11.8				70 - 130	20	
1,2-Dichloropropane	ND	1.0	112	97	14.4				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	113	99	13.2				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	110	97	12.6				70 - 130	20	
1,3-Dichloropropane	ND	1.0	112	97	14.4				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	108	95	12.8				70 - 130	20	
1,4-dioxane	ND	100	108	97	10.7				40 - 160	20	
2,2-Dichloropropane	ND	1.0	121	103	16.1				70 - 130	20	
2-Chlorotoluene	ND	1.0	111	97	13.5				70 - 130	20	
2-Hexanone	ND	5.0	103	86	18.0				40 - 160	20	
4-Chlorotoluene	ND	1.0	110	98	11.5				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	106	90	16.3				40 - 160	20	
Acetone	ND	5.0	116	102	12.8				40 - 160	20	
Benzene	ND	0.70	112	99	12.3				70 - 130	20	
Bromobenzene	ND	1.0	109	96	12.7				70 - 130	20	
Bromochloromethane	ND	1.0	110	97	12.6				70 - 130	20	
Bromodichloromethane	ND	0.50	113	99	13.2				70 - 130	20	
Bromoform	ND	1.0	117	99	16.7				70 - 130	20	
Bromomethane	ND	1.0	123	109	12.1				40 - 160	20	
Carbon Disulfide	ND	1.0	118	103	13.6				70 - 130	20	
Carbon tetrachloride	ND	1.0	133	97	31.3				70 - 130	20	l,r
Chlorobenzene	ND	1.0	112	98	13.3				70 - 130	20	
Chloroethane	ND	1.0	125	113	10.1				70 - 130	20	
Chloroform	ND	1.0	114	101	12.1				70 - 130	20	

QA/QC Data

SDG I.D.: GCJ34748

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloromethane	ND	1.0	118	103	13.6				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	113	95	17.3				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	115	99	15.0				70 - 130	20
Dibromochloromethane	ND	0.50	117	102	13.7				70 - 130	20
Dibromomethane	ND	1.0	110	96	13.6				70 - 130	20
Dichlorodifluoromethane	ND	1.0	115	100	14.0				40 - 160	20
Di-isopropyl ether	ND	1.0	112	98	13.3				70 - 130	20
Ethyl ether	ND	1.0	111	97	13.5				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	112	98	13.3				70 - 130	20
Ethylbenzene	ND	1.0	116	101	13.8				70 - 130	20
Hexachlorobutadiene	ND	0.40	111	96	14.5				70 - 130	20
Isopropylbenzene	ND	1.0	113	98	14.2				70 - 130	20
m&p-Xylene	ND	1.0	115	101	13.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	104	89	15.5				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	116	102	12.8				70 - 130	20
Methylene chloride	ND	1.0	120	106	12.4				70 - 130	20
Naphthalene	ND	1.0	110	94	15.7				70 - 130	20
n-Butylbenzene	ND	1.0	119	103	14.4				70 - 130	20
n-Propylbenzene	ND	1.0	112	98	13.3				70 - 130	20
o-Xylene	ND	1.0	114	98	15.1				70 - 130	20
p-Isopropyltoluene	ND	1.0	116	100	14.8				70 - 130	20
sec-Butylbenzene	ND	1.0	116	100	14.8				70 - 130	20
Styrene	ND	1.0	117	103	12.7				70 - 130	20
tert-amyl methyl ether	ND	1.0	108	94	13.9				70 - 130	20
tert-Butylbenzene	ND	1.0	112	98	13.3				70 - 130	20
Tetrachloroethene	ND	1.0	108	96	11.8				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	100	86	15.1				70 - 130	20
Toluene	ND	1.0	113	98	14.2				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	118	102	14.5				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	116	102	12.8				70 - 130	20
Trichloroethene	ND	1.0	113	98	14.2				70 - 130	20
Trichlorofluoromethane	ND	1.0	129	113	13.2				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	106	94	12.0				70 - 130	20
Vinyl chloride	ND	1.0	125	108	14.6				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	99	100	1.0				70 - 130	20
% Bromofluorobenzene	97	%	101	102	1.0				70 - 130	20
% Dibromofluoromethane	98	%	100	99	1.0				70 - 130	20
% Toluene-d8	100	%	100	100	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 595254 (ug/L), QC Sample No: CJ49664 (CJ34748 (20X))

Volatiles - Ground Water

Trichloroethene	ND	1.0	98	100	2.0				70 - 130	20
% 1,2-dichlorobenzene-d4	102	%	100	99	1.0				70 - 130	20
% Bromofluorobenzene	95	%	101	101	0.0				70 - 130	20
% Dibromofluoromethane	100	%	98	97	1.0				70 - 130	20
% Toluene-d8	100	%	100	100	0.0				70 - 130	20

QA/QC Data

SDG I.D.: GCJ34748

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 07, 2021

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ34748 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ34748	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CJ34748	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	26	5.0	2	2	ug/L
CJ34748	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	760	20	5	5	ug/L
CJ34748	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	360	5.0	5	5	ug/L
CJ34748	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.6	0.6	ug/L
CJ34748	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CJ34748	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	340	5.0	20	20	ug/L
CJ34748	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CJ34748	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CJ34748	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CJ34748	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ34748	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	760	20	5	5	ug/L
CJ34748	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	360	5.0	5	5	ug/L
CJ34748	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CJ34748	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ34748	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CJ34748	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	5.0	2	2	ug/L
CJ34748	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	340	5.0	20	20	ug/L
CJ34748	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	26	5.0	2	2	ug/L
CJ34748	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	340	5.0	20	20	ug/L
CJ34748	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	360	5.0	50	50	ug/L
CJ34748	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	760	20	5	5	ug/L
CJ34748	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	760	20	5	5	ug/L
CJ34748	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	26	5.0	2	2	ug/L
CJ34748	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CJ34748	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	360	5.0	5	5	ug/L
CJ34748	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CJ34748	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	340	5.0	70	70	ug/L
CJ34748	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	760	20	5	5	ug/L
CJ34748	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	26	5.0	2	2	ug/L
CJ34748	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	340	5.0	20	20	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ34748 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ34748	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ34748	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	360	5.0	50	50	ug/L
CJ34748	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.3	0.3	ug/L
CJ34748	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.3	0.3	ug/L
CJ34748	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.3	0.3	ug/L
CJ34749	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CJ34749	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	100	5.0	20	20	ug/L
CJ34749	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.6	0.6	ug/L
CJ34749	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	610	100	5	5	ug/L
CJ34749	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CJ34749	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CJ34749	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CJ34749	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3500	100	5	5	ug/L
CJ34749	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.9	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CJ34749	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ34749	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	610	100	5	5	ug/L
CJ34749	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CJ34749	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.9	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ34749	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3500	100	5	5	ug/L
CJ34749	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CJ34749	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	100	5.0	20	20	ug/L
CJ34749	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.0	5.0	7	7	ug/L
CJ34749	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.9	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3500	100	5	5	ug/L
CJ34749	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	610	100	50	50	ug/L
CJ34749	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	100	5.0	20	20	ug/L
CJ34749	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	3500	100	5	5	ug/L
CJ34749	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CJ34749	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CJ34749	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	610	100	5	5	ug/L
CJ34749	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ34748 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ34749	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	9.0	5.0	7	7	ug/L
CJ34749	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.9	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	100	5.0	70	70	ug/L
CJ34749	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.9	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	610	100	50	50	ug/L
CJ34749	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ34749	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	100	5.0	20	20	ug/L
CJ34749	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	3500	100	5	5	ug/L
CJ34749	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.3	0.3	ug/L
CJ34749	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.3	0.3	ug/L
CJ34749	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.3	0.3	ug/L
CJ34750	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	870	10	5	5	ug/L
CJ34750	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CJ34750	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.6	0.6	ug/L
CJ34750	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	210	5.0	20	20	ug/L
CJ34750	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CJ34750	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CJ34750	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CJ34750	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	350	5.0	5	5	ug/L
CJ34750	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	14	5.0	2	2	ug/L
CJ34750	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CJ34750	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CJ34750	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CJ34750	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CJ34750	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	870	10	5	5	ug/L
CJ34750	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	5.0	2	2	ug/L
CJ34750	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	350	5.0	5	5	ug/L
CJ34750	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CJ34750	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ34750	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ34750	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ34750	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	210	5.0	20	20	ug/L
CJ34750	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CJ34750	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CJ34750	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CJ34750	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	870	10	5	5	ug/L
CJ34750	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	14	5.0	2	2	ug/L
CJ34750	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	210	5.0	20	20	ug/L
CJ34750	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ34748 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ34750	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	350	5.0	50	50	ug/L
CJ34750	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CJ34750	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ34750	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	14	5.0	2	2	ug/L
CJ34750	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CJ34750	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	870	10	5	5	ug/L
CJ34750	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CJ34750	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	350	5.0	5	5	ug/L
CJ34750	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CJ34750	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	210	5.0	70	70	ug/L
CJ34750	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	14	5.0	2	2	ug/L
CJ34750	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	350	5.0	50	50	ug/L
CJ34750	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	210	5.0	20	20	ug/L
CJ34750	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ34750	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	870	10	5	5	ug/L
CJ34750	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CJ34750	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.3	0.3	ug/L
CJ34750	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.3	0.3	ug/L
CJ34750	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.3	0.3	ug/L
CJ34751	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.00075	0.00075	ug/L
CJ34751	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.47	0.47	ug/L
CJ34751	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	350	20	5	5	ug/L
CJ34751	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.2	2.0	2	2	ug/L
CJ34751	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.47	0.47	ug/L
CJ34751	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	180	2.0	5	5	ug/L
CJ34751	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.6	0.6	ug/L
CJ34751	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.0075	0.0075	ug/L
CJ34751	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	69	2.0	20	20	ug/L
CJ34751	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CJ34751	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.2	2.0	2	2	ug/L
CJ34751	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	69	2.0	20	20	ug/L
CJ34751	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ34751	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CJ34751	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	180	2.0	5	5	ug/L
CJ34751	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	350	20	5	5	ug/L
CJ34751	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CJ34751	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CJ34751	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.2	2.0	2	2	ug/L
CJ34751	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	69	2.0	20	20	ug/L
CJ34751	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	350	20	5	5	ug/L
CJ34751	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	180	2.0	50	50	ug/L

Thursday, October 07, 2021

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCJ34748 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ34751	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CJ34751	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	180	2.0	5	5	ug/L
CJ34751	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	350	20	5	5	ug/L
CJ34751	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.2	2.0	2	2	ug/L
CJ34751	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CJ34751	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	180	2.0	50	50	ug/L
CJ34751	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	69	2.0	20	20	ug/L
CJ34751	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	350	20	5	5	ug/L
CJ34751	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.2	2.0	2	2	ug/L
CJ34751	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	200	0.3	0.3	ug/L
CJ34751	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	0.3	0.3	ug/L
CJ34751	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	200	0.3	0.3	ug/L
CJ34752	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CJ34752	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	72	1.0	5	5	ug/L
CJ34752	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	25	1.0	5	5	ug/L
CJ34752	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CJ34752	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CJ34752	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CJ34752	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	25	1.0	5	5	ug/L
CJ34752	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	72	1.0	5	5	ug/L
CJ34752	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	72	1.0	5	5	ug/L
CJ34752	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CJ34752	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	25	1.0	5	5	ug/L
CJ34752	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	72	1.0	5	5	ug/L
CJ34752	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	72	1.0	5	5	ug/L
CJ34752	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CJ34752	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	0.3	0.3	ug/L
CJ34752	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CJ34748, CJ34749, CJ34750, CJ34751, CJ34752

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☑	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Thursday, October 07, 2021

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 07, 2021

SDG I.D.: GCJ34748

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Beryllium, Nickel, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

Mercury Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

MERLIN 09/23/21 08:05 Alex Purdue, Chemist 09/23/21

CJ34748, CJ34749, CJ34750, CJ34751, CJ34752

The method preparation blank, ICB, and CCBs contain all of the acids and reagents as the samples.
The initial calibration met all criteria including a standard run at or below the reporting level.
All calibration verification standards (ICV, CCV) met criteria.
All calibration blank verification standards (ICB, CCB) met criteria.
The matrix spike sample is used to identify spectral interference for each batch of samples, if within 85-115%, no interference is observed and no further action is taken.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 593201 (CJ34748)

CJ34748, CJ34749, CJ34750, CJ34751, CJ34752

All LCS recoveries were within 75 - 125 with the following exceptions: None.
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/25/21 08:25 Cindy Pearce, Chemist 09/25/21

CJ34748, CJ34749, CJ34750, CJ34751, CJ34752

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.

Environmental Laboratories, Inc.
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NY # 11301

Certification Report

October 07, 2021

SDG I.D.: GCJ34748

ICP Metals Narration

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 593498 (CJ39571)

CJ34748, CJ34749, CJ34750, CJ34751, CJ34752

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 595031 (Samples: CJ34749, CJ34750, CJ34751): -----

The LCS recovery is above the upper range for one analyte that was not reported in the sample(s). No significant bias is suspected. (Carbon tetrachloride)

The LCS/LCSD RPD exceeds the method criteria for one analyte. This analyte was not reported in the sample(s). No significant variability is suspected. (Carbon tetrachloride)

Instrument:

CHEM23 10/04/21-1 Michael Hahn, Chemist 10/04/21

CJ34748 (5X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1004_03-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.186 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/04/21-2 Michael Hahn, Chemist 10/04/21

CJ34749 (5X), CJ34750 (10X), CJ34751 (20X), CJ34752 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 07, 2021

SDG I.D.: GCJ34748

VOA Narration

Continuing Calibration Verification (CHEM23/1004_34-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon tetrachloride 23%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/05/21-1 Michael Hahn, Chemist 10/05/21

CJ34749 (100X), CJ34750 (5X), CJ34751 (2X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1005_03-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/06/21-1 Michael Hahn, Chemist 10/06/21

CJ34748 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_100121):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1006_03-VOA23_100121) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 594857 (CJ33733) CHEM23 10/4/2021-1

CJ34748(5X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 07, 2021

SDG I.D.: GCJ34748

VOA Narration

The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 594862 (CJ40166) CHEM23 10/4/2021-2

CJ34749(5X), CJ34750(10X), CJ34751(20X), CJ34752(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 595031 (CJ47060) CHEM23 10/5/2021-1

CJ34749(100X), CJ34750(5X), CJ34751(2X)

All LCS recoveries were within 70 - 130 with the following exceptions: Carbon tetrachloride(133%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Carbon tetrachloride(31.3%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 595254 (CJ49664) CHEM23 10/6/2021-1

CJ34748(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

CHAIN OF CUSTODY RECORD

Temp 6 °C Pg of

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
nicole.callahan@aeom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Nicole Callahan (Asst PM) 631-806-9411

Project: Lockheed - Wilmington MA 60552044.25
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2021 Project PO: 137485

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature [signature] Date: 9/22/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	~~Total & Dissolved [FF] As (6010C) - HNO3~~ Total RCRA8 Metals	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
34748	21A-IDW1-092221-1	GW	9/22/21	1345	3			1				X				X					
34749	21A-IDW2-092221-1	GW	9/22/21	1355	3			1				X				X					
34750	21A-IDW3-092221-1	GW	9/22/21	1405	3			1				X				X					
34751	21A-IDW4-092221-1	GW	9/22/21	1415	3			1				X				X					
34752	21A-IDW5-092221-1	GW	9/22/21	1425	3			1				X				X					

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-22-21	14:40
[signature]	Krysta Hall	9/22/21	16:50

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/17/2021

Report # 221090918

Project LMC Wilmington 60552044.25

Samples Collected 9/1/21

Deliver To	***Additional Recipients***
Scott Olson AECOM 250 Apollo Drive Chelmsford, MA 01824 978.846.5238	Lori Herberich, AECOM Nicole Callahan, AECOM

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

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MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
Pace Gulf Coast Report 221090918

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 221090918

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22109091801	21A-AE26R2-090121-1	Water	9/01/21 10:00	9/08/21 16:45
22109091802	21A-AE26R2-090121-1	Bubble Strip	9/01/21 11:25	9/08/21 16:45
22109091803	21A-AE28R2-090121-1	Water	9/01/21 14:15	9/08/21 16:45
22109091804	21A-AE28R2-090121-1	Bubble Strip	9/01/21 15:25	9/08/21 16:45

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22109091801	21A-AE26R2-090121-1	Ethene	ug/L	2.9	1	NA
22109091801	21A-AE26R2-090121-1	Methane	ug/L	38	1	NA
22109091802	21A-AE26R2-090121-1	Hydrogen	nM	4.9	1	NA
22109091803	21A-AE28R2-090121-1	Ethane	ug/L	6.2	1	NA
22109091803	21A-AE28R2-090121-1	Ethene	ug/L	10	1	NA
22109091803	21A-AE28R2-090121-1	Methane	ug/L	120	1	NA
22109091803	21A-AE28R2-090121-1	Propane	ug/L	0.63J	1	NA
22109091804	21A-AE28R2-090121-1	Hydrogen	nM	6.1	1	NA

Sample Results

21A-AE26R2-090121-1

Collect Date	09/01/2021 10:00	Lab ID	22109091801
Receive Date	09/08/2021 16:45	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/14/21 15:14	720855	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	**Ethene**	**2.9**	**0.24**	**1.0**	**ug/L**
74-82-8	**Methane**	**38**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-AE26R2-090121-1

Collect Date	09/01/2021 11:25	Lab ID	22109091802
Receive Date	09/08/2021 16:45	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/13/21 13:39	720702	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**4.9**	**0.49**	**1.9**	**nM**

21A-AE28R2-090121-1

Collect Date	09/01/2021 14:15	Lab ID	22109091803
Receive Date	09/08/2021 16:45	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/14/21 15:28	720855	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**6.2**	**0.17**	**1.0**	**ug/L**
74-85-1	**Ethene**	**10**	**0.24**	**1.0**	**ug/L**
74-82-8	**Methane**	**120**	**2.0**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.63J**	**0.29**	**1.0**	**ug/L**

Sample Results

21A-AE28R2-090121-1				
	Collect Date	09/01/2021 15:25	Lab ID	22109091804
	Receive Date	09/08/2021 16:45	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/13/21 13:52	720702	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	6.1	0.49	1.9	nM

General Chromatography QC Summary

Analytical Batch	Client ID	MB720702		LCS720702				LCSD720702				
720702	Lab ID	2237538		2237539				2237540				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	09/13/21 13:02		09/13/21 13:14				09/13/21 13:26				
	Matrix	Bubble Strip		Bubble Strip				Bubble Strip				
AM20GAX		Units Result	nM DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0	0.49U	0.49	12	9.7	82	70 - 130	12	9.9	83	2	20

Analytical Batch	Client ID	MB720855		LCS720855				LCSD720855				
720855	Lab ID	2238067		2238068				2238069				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	09/14/21 14:34		09/14/21 14:47				09/14/21 14:59				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.13U	0.13	33	35	107	70 - 130	33	38	117	10	20
Ethane	74-84-0	0.17U	0.17	38	40	105	70 - 130	38	41	108	2	20
Ethene	74-85-1	0.24U	0.24	35	37	105	70 - 130	35	38	108	3	20
Methane	74-82-8	2.0U	2.0	750	740	99	70 - 130	750	730	98	1	20
Propane	74-98-6	0.29U	0.29	56	58	104	70 - 130	56	60	107	3	20

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- A

ALL

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA

SDG: 221090918

PM: RWe

Company: AECOM

Billing Information: Accts Payable AECOM

Address: 250 Apollo Drive, Chelmsford, MA 01824

Report To: Scott Olson

Email To: lori.herberich@aecom.com

Copy To: Lori Herberich / Nicole Callahan

Site Collection Info/Address: 40 Fordham Rd

Customer Project Name/Number: LMC Wilmington 60552041.25

State: MA County/City: Wilmington Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: 978-302-0059
Email: lori.herberich@aecom.com

Site/Facility ID #: LMC-Wilmington

Compliance Monitoring? [ ] Yes [ ] No

Collected By (print): Dylan Potter

Purchase Order #:
Quote #: 2017-2021

DW PWS ID #:
DW Location Code:

Collected By (signature): [signature]

Turnaround Date Required: Standard / 15-day

Immediately Packed on Ice: [X] Yes [ ] No

Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preser

U O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other benzalkonium chloride

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	Dissolved Hydrogen	Diss. gases - Meth, Ethe, Ethe,	Ace, Prop.								Lab Profile/Line:
21A-AE26R2-090121-1	GW	Grab	9/1/21	1000	–	–		3		X									-1
21A-AE26R2-090121-1	GW	Comp	9/1/21	1055	9/1/21	1125		1	X										-2
21A-AE28R2-090121-1	GW	Grab	9/1/21	1415	–	–		3		X									-3
21A-AE28R2-090121-1	GW	COMP	9/1/21	1500	9/1/21	1525		1	X										-4
~~21A-TB01-090121-1~~	~~GW~~	~~Grab~~	~~9/1/21~~	~~0800~~				~~2~~		~~X~~	DP 9/7/21								

Lab Sample Receipt Checklist:

Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:

LAB USE ONLY:
Lab Sample # / Comments:

1 2 3 4

AWL 9/10/21

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2681812

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments: 2834 0967 0540 5.8E34 69cpm

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
[signature] AECOM	9/7/21 1630		
[signature]	9/8/21 1645	[signature]	9/8/21 1645

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Non Conformance(s): YES / NO

Page: ____ of: ____

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 221090918	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method** FEDEX
Profile Number 284674	**Received By** Jenkins, Mark A.
Line Item(s) 1 - MEE, Propane, Acetylene 2 - Hydrogen	**Receive Date(s)** 09/08/21

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E34	Temp °C
2834 0967 0540		5.8

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/27/2021

Report # 221091509

Project LMC Wilmington 60552044.25

Samples Collected 9/8/21 - 9/13/21

Deliver To	***Additional Recipients***
Scott Olson AECOM 250 Apollo Drive Chelmsford, MA 01824 978.846.5238	Lori Herberich, AECOM Nicole Callahan, AECOM

Laboratory Endorsement

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L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

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Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
Pace Gulf Coast Report 221091509

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 221091509

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22109150901	21A-EMW11R2-090821-1	Water	9/08/21 09:35	9/14/21 10:45
22109150902	21A-EMW10R-090821-1	Water	9/08/21 09:55	9/14/21 10:45
22109150903	21A-STM8D-090821-1	Water	9/08/21 10:50	9/14/21 10:45
22109150904	21A-AE100R1-090921-1	Water	9/09/21 11:25	9/14/21 10:45
22109150905	21A-AE100R5-090921-1	Water	9/09/21 11:30	9/14/21 10:45
22109150906	21A-EMW11R2-090821-1(H2)	Bubble Strip	9/09/21 10:26	9/14/21 10:45
22109150907	21A-EMW10R-090821-1(H2)	Bubble Strip	9/09/21 10:35	9/14/21 10:45
22109150908	21A-STM8D-090821-1(H2)	Bubble Strip	9/08/21 11:30	9/14/21 10:45
22109150909	21A-AE100R1-090921-1(H2)	Bubble Strip	9/09/21 14:30	9/14/21 10:45
22109150910	21A-AE100R5-090921-1(H2)	Bubble Strip	9/09/21 14:55	9/14/21 10:45
22109150911	21A-AE103R1-090921-1	Water	9/09/21 11:10	9/14/21 10:45
22109150912	21A-AE103R5-090921-1	Water	9/09/21 11:30	9/14/21 10:45
22109150913	21A-AE108R1-090921-1	Water	9/09/21 12:05	9/14/21 10:45
22109150914	21A-TRC301R3-091321-1	Water	9/13/21 11:05	9/14/21 10:45
22109150915	21A-AE106D-091321-1	Water	9/13/21 11:50	9/14/21 10:45
22109150916	21A-AE103R5-090921-1(H2)	Bubble Strip	9/09/21 16:00	9/14/21 10:45
22109150917	21A-AE108R1-090921-1(H2)	Bubble Strip	9/09/21 13:50	9/14/21 10:45
22109150918	21A-TRC301R3-091321-1(H2)	Bubble Strip	9/13/21 11:55	9/14/21 10:45
22109150919	21A-AE106D-091321-1(H2)	Bubble Strip	9/13/21 13:13	9/14/21 10:45
22109150920	21A-AE105R1-091321-1	Water	9/13/21 13:55	9/14/21 10:45
22109150921	21A-AE106R3-091321-1	Water	9/13/21 14:50	9/14/21 10:45
22109150922	21A-AE106R3-091321-1(H2)	Bubble Strip	9/13/21 14:36	9/14/21 10:45
22109150923	21A-AE105R1-091321-1(H2)	Bubble Strip	9/13/21 17:00	9/14/21 10:45
22109150924	21A-AE103R1-090921-1(H2)	Bubble Strip	9/13/21 15:25	9/14/21 10:45

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22109150901	21A-EMW11R2-090821-1	Ethane	ug/L	0.91J	1	NA
22109150901	21A-EMW11R2-090821-1	Ethene	ug/L	9.1	1	NA
22109150901	21A-EMW11R2-090821-1	Methane	ug/L	100	1	NA
22109150903	21A-STM8D-090821-1	Methane	ug/L	6.6	1	NA
22109150904	21A-AE100R1-090921-1	Ethane	ug/L	2.0	1	NA
22109150904	21A-AE100R1-090921-1	Ethene	ug/L	3.5	1	NA
22109150905	21A-AE100R5-090921-1	Ethane	ug/L	2.0	1	NA
22109150905	21A-AE100R5-090921-1	Ethene	ug/L	2.4	1	NA
22109150905	21A-AE100R5-090921-1	Methane	ug/L	42	1	NA
22109150906	21A-EMW11R2-090821-1(H2)	Hydrogen	nM	3.6	1	NA
22109150907	21A-EMW10R-090821-1(H2)	Hydrogen	nM	3.4	1	NA
22109150908	21A-STM8D-090821-1(H2)	Hydrogen	nM	3.8	1	NA
22109150909	21A-AE100R1-090921-1(H2)	Hydrogen	nM	3.6	1	NA
22109150910	21A-AE100R5-090921-1(H2)	Hydrogen	nM	5.6	1	NA
22109150911	21A-AE103R1-090921-1	Ethane	ug/L	0.35J	1	NA
22109150911	21A-AE103R1-090921-1	Ethene	ug/L	2.9	1	NA
22109150911	21A-AE103R1-090921-1	Methane	ug/L	66	1	NA
22109150912	21A-AE103R5-090921-1	Ethane	ug/L	0.49J	1	NA
22109150912	21A-AE103R5-090921-1	Ethene	ug/L	29	1	NA
22109150912	21A-AE103R5-090921-1	Methane	ug/L	60	1	NA
22109150914	21A-TRC301R3-091321-1	Ethane	ug/L	1.0	1	NA
22109150914	21A-TRC301R3-091321-1	Ethene	ug/L	1.9	1	NA
22109150914	21A-TRC301R3-091321-1	Methane	ug/L	56	1	NA
22109150914	21A-TRC301R3-091321-1	Propane	ug/L	0.30J	1	NA
22109150915	21A-AE106D-091321-1	Methane	ug/L	39	1	NA
22109150916	21A-AE103R5-090921-1(H2)	Hydrogen	nM	3.9	1	NA
22109150917	21A-AE108R1-090921-1(H2)	Hydrogen	nM	3.7	1	NA
22109150918	21A-TRC301R3-091321-1(H2)	Hydrogen	nM	3.5	1	NA
22109150919	21A-AE106D-091321-1(H2)	Hydrogen	nM	4.3	1	NA
22109150920	21A-AE105R1-091321-1	Ethane	ug/L	0.37J	1	NA
22109150920	21A-AE105R1-091321-1	Ethene	ug/L	1.4	1	NA
22109150920	21A-AE105R1-091321-1	Methane	ug/L	150	1	NA
22109150921	21A-AE106R3-091321-1	Ethene	ug/L	1.5	1	NA
22109150921	21A-AE106R3-091321-1	Methane	ug/L	300	1	NA
22109150922	21A-AE106R3-091321-1(H2)	Hydrogen	nM	4.4	1	NA
22109150923	21A-AE105R1-091321-1(H2)	Hydrogen	nM	2.6	1	NA
22109150924	21A-AE103R1-090921-1(H2)	Hydrogen	nM	5.6	1	NA

Sample Results

21A-EMW11R2-090821-1

Collect Date	09/08/2021 09:35	Lab ID	22109150901
Receive Date	09/14/2021 10:45	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 12:19	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.91J**	**0.17**	**1.0**	**ug/L**
74-85-1	**Ethene**	**9.1**	**0.24**	**1.0**	**ug/L**
74-82-8	**Methane**	**100**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-EMW10R-090821-1

Collect Date	09/08/2021 09:55	Lab ID	22109150902
Receive Date	09/14/2021 10:45	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 12:32	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-STM8D-090821-1

Collect Date	09/08/2021 10:50	Lab ID	22109150903
Receive Date	09/14/2021 10:45	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 12:45	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**6.6**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

21A-AE100R1-090921-1

Collect Date	09/09/2021 11:25	**Lab ID**	22109150904
Receive Date	09/14/2021 10:45	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 12:58	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**2.0**	**0.17**	**1.0**	**ug/L**
74-85-1	**Ethene**	**3.5**	**0.24**	**1.0**	**ug/L**
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-AE100R5-090921-1

Collect Date	09/09/2021 11:30	**Lab ID**	22109150905
Receive Date	09/14/2021 10:45	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 13:12	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**2.0**	**0.17**	**1.0**	**ug/L**
74-85-1	**Ethene**	**2.4**	**0.24**	**1.0**	**ug/L**
74-82-8	**Methane**	**42**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-EMW11R2-090821-1(H2)

Collect Date	09/09/2021 10:26	**Lab ID**	22109150906
Receive Date	09/14/2021 10:45	**Matrix**	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 14:41	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**3.6**	**0.49**	**1.9**	**nM**

Sample Results

21A-EMW10R-090821-1(H2)				
	Collect Date	09/09/2021 10:35	Lab ID	22109150907
	Receive Date	09/14/2021 10:45	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 14:53	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.4	0.49	1.9	nM

21A-STM8D-090821-1(H2)				
	Collect Date	09/08/2021 11:30	Lab ID	22109150908
	Receive Date	09/14/2021 10:45	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 15:05	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.8	0.49	1.9	nM

21A-AE100R1-090921-1(H2)				
	Collect Date	09/09/2021 14:30	Lab ID	22109150909
	Receive Date	09/14/2021 10:45	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 15:17	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.6	0.49	1.9	nM

21A-AE100R5-090921-1(H2)				
	Collect Date	09/09/2021 14:55	Lab ID	22109150910
	Receive Date	09/14/2021 10:45	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 15:30	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	5.6	0.49	1.9	nM

Sample Results

21A-AE103R1-090921-1

Collect Date	09/09/2021 11:10	**Lab ID**	22109150911
Receive Date	09/14/2021 10:45	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 13:51	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.35J**	**0.17**	**1.0**	**ug/L**
74-85-1	**Ethene**	**2.9**	**0.24**	**1.0**	**ug/L**
74-82-8	**Methane**	**66**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-AE103R5-090921-1

Collect Date	09/09/2021 11:30	**Lab ID**	22109150912
Receive Date	09/14/2021 10:45	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 13:39	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.49J**	**0.17**	**1.0**	**ug/L**
74-85-1	**Ethene**	**29**	**0.24**	**1.0**	**ug/L**
74-82-8	**Methane**	**60**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-AE108R1-090921-1

Collect Date	09/09/2021 12:05	**Lab ID**	22109150913
Receive Date	09/14/2021 10:45	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 14:04	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

21A-TRC301R3-091321-1				
	Collect Date	09/13/2021 11:05	Lab ID	22109150914
	Receive Date	09/14/2021 10:45	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 14:17	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**1.0**	**0.17**	**1.0**	**ug/L**
74-85-1	**Ethene**	**1.9**	**0.24**	**1.0**	**ug/L**
74-82-8	**Methane**	**56**	**2.0**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.30J**	**0.29**	**1.0**	**ug/L**

21A-AE106D-091321-1				
	Collect Date	09/13/2021 11:50	Lab ID	22109150915
	Receive Date	09/14/2021 10:45	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 14:32	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**39**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-AE103R5-090921-1(H2)				
	Collect Date	09/09/2021 16:00	Lab ID	22109150916
	Receive Date	09/14/2021 10:45	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 15:42	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**3.9**	**0.49**	**1.9**	**nM**

Sample Results

21A-AE108R1-090921-1(H2)				
	Collect Date	09/09/2021 13:50	Lab ID	22109150917
	Receive Date	09/14/2021 10:45	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 15:58	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.7	0.49	1.9	nM

21A-TRC301R3-091321-1(H2)				
	Collect Date	09/13/2021 11:55	Lab ID	22109150918
	Receive Date	09/14/2021 10:45	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 16:10	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.5	0.49	1.9	nM

21A-AE106D-091321-1(H2)				
	Collect Date	09/13/2021 13:13	Lab ID	22109150919
	Receive Date	09/14/2021 10:45	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 16:26	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	4.3	0.49	1.9	nM

21A-AE105R1-091321-1				
	Collect Date	09/13/2021 13:55	Lab ID	22109150920
	Receive Date	09/14/2021 10:45	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 14:45	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.37J	0.17	1.0	ug/L
74-85-1	Ethene	1.4	0.24	1.0	ug/L
74-82-8	Methane	150	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

21A-AE106R3-091321-1

Collect Date	09/13/2021 14:50	**Lab ID**	22109150921
Receive Date	09/14/2021 10:45	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 14:57	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	**Ethene**	**1.5**	**0.24**	**1.0**	**ug/L**
74-82-8	**Methane**	**300**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-AE106R3-091321-1(H2)

Collect Date	09/13/2021 14:36	**Lab ID**	22109150922
Receive Date	09/14/2021 10:45	**Matrix**	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 16:38	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**4.4**	**0.49**	**1.9**	**nM**

21A-AE105R1-091321-1(H2)

Collect Date	09/13/2021 17:00	**Lab ID**	22109150923
Receive Date	09/14/2021 10:45	**Matrix**	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 16:50	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**2.6**	**0.49**	**1.9**	**nM**

21A-AE103R1-090921-1(H2)

Collect Date	09/13/2021 15:25	**Lab ID**	22109150924
Receive Date	09/14/2021 10:45	**Matrix**	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/17/21 17:05	721177	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**5.6**	**0.49**	**1.9**	**nM**

General Chromatography QC Summary

Analytical Batch 721177	Client ID	MB721177		LCS721177				LCSD721177				
	Lab ID	2239708		2239709				2239710				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	09/17/21 14:04		09/17/21 14:16				09/17/21 14:29				
	Matrix	Bubble Strip		Bubble Strip				Bubble Strip				
AM20GAX		Units Result	nM DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0	0.49U	0.49	12	10	89	70 - 130	12	11	92	3	20

Analytical Batch 721390	Client ID	MB721390		LCS721390				LCSD721390				
	Lab ID	2240766		2240767				2240768				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	09/22/21 12:06		09/22/21 11:40				09/22/21 11:53				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.13U	0.13	33	35	107	70 - 130	33	38	114	7	20
Ethane	74-84-0	0.17U	0.17	38	43	114	70 - 130	38	45	118	4	20
Ethene	74-85-1	0.24U	0.24	35	41	116	70 - 130	35	41	116	0	20
Methane	74-82-8	2.0U	2.0	750	680	91	70 - 130	750	710	95	3	20
Propane	74-98-6	0.29U	0.29	56	63	113	70 - 130	56	62	112	1	20

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 221091509
PM: RWe

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Wor

ALL SHAI

Company: AECOM	Billing Information: Accounts Payable AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824	
Report To: Scott Olson	Email To: lori.herberich@aecom.com
Copy To: Lori Herberich / Nicole Culkeen	Site Collection Info/Address: 40 Fordham Rd
Customer Project Name/Number: LMC Wilmington 60552044.25	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0084 Email:	Site/Facility ID #: LMC-Wilmington
Collected By (print): Dylan Potter	Purchase Order #: Quote #: 2017-2021
Collected By (signature):	Turnaround Date Required: Standard / 15-day
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #: DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type: U O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

Analyses: Dissolved Hydrogen; Diss. gases (Meth, Eth, Ethe, Ace, Prop.)

Lab Profile/Line:

Lab Sample Receipt Checklist:

| | | |

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 221091509
PM: RWe

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix W

ALL SH

Company: AECOM	Billing Information: Accounts Payable AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824	
Report To: Scott Olson	Email To: lori.herberich@aecom.com
Copy To: Lori Herberich / Nicole Callahan	Site Collection Info/Address: 40 Fordham Rd
Customer Project Name/Number: CMC Wilmington 60552044.25	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0089 Email:	Site/Facility ID #: CMC-Wilmington
Collected By (print): Dylan Potter	Purchase Order #: Quote #: 2017-2021
Collected By (signature):	Turnaround Date Required: Standard / 15-day
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Compliance Monitoring? [ ] Yes [ ] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [X] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

Container Preservativ

U O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Dissolved Hydrogen	Diss gases (meth, Eth, Ethe, Ace, Prop.)	Lab Sample # / Comments
21A-AE103R1-090921-1	GW	Grab	9/9/21	1110	—	—		3		X	11
21A-AE103R1-090921-1	GW	COMP	9/9/21	1505	9/9/21	1525		1	X		04 ~~16~~ JNH
21A-AE103RS-090921-1	GW	Grab	9/9/21	1130	—	—		3		X	12
21A-AE103RS-090921-1	GW	COMP	9/9/21	1540	9/9/21	1600		1	X		16 ~~17~~
21A-AE108R1-090921-1	GW	Grab	9/9/21	1205	—	—		3		X	13
21A-AE108R1-090921-1	GW	COMP	9/9/21	1330	9/9/21	1350		1	X		17 ~~18~~ JNH
21A-TRC301R3-091321-1	GW	Grab	9/13/21	1105	—	—		3		X	14
21A-TRC301R3-091321-1	GW	COMP	9/13/21	1135	9/13/21	1155		1	X		18 ~~19~~ JNH
21A-AE106D-091321-1	GW	Grab	9/13/21	1150	—	—		3		X	15
21A-AE106D-091321-1	GW	COMP	9/13/21	1253	9/13/21	1313		1	X		18 ~~20~~ JNH

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2681811

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: _____oC
Cooler 1 Therm Corr. Factor: _____oC
Cooler 1 Corrected Temp: _____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
AECOM	9/13/21 1730		
FedEx	9-14-21 10:45	Doug McClure	9-14-21 10:45

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

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ALL SHAD

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 221091509
PM: RWe

Company: AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824
Report To: Scott Olson
Copy To: Lori Herberich / Nicole Callahan
Customer Project Name/Number: LMC Wilmington 60552044.25
Phone: 978-302-0089
Email:
Collected By (print): Dylan Potter
Collected By (signature): [signature]
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____

Billing Information: Accts Payable AECOM
Email To: lori.herberich@aecom.com
Site Collection Info/Address: 40 Fordham Rd
State: MA / County/City: Wilmington
Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET
Site/Facility ID #: LMC-Wilmington
Purchase Order #:
Quote #: 2017-2021
Turnaround Date Required: Standard / 15-day
Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No
DW PWS ID #:
DW Location Code:
Immediately Packed on Ice: [X] Yes [ ] No
Field Filtered (if applicable): [ ] Yes [ ] No
Analysis: ____

Container Preservative Ty: U O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	Dissolved Hydrogen	Dissolved gases (Metha, Etha, Ethe)	Ace, Prop.)								Lab Profile/Line:
21A-AE105R1-091321-1	GW	Grab	9/13/21	1355	—	—		3		X									20 ~~21~~ JNH
~~21A-AE105R1-091321-1~~	~~GW~~	~~Comp~~	~~9/13/21~~	~~1416~~	~~9/13/21~~	~~1436~~		~~1~~	~~X~~		DP								
21A-AE106R3-091321-1	GW	Grab	9/13/21	1450	—	—		3		X									21 ~~22~~ JNH
21A-AE106R3-091321-1	GW	Comp	9/13/21	1416	9/13/21	1436		1	X										22 ~~23~~ JNH
21A-AE105R1-091321-1	GW	Comp	9/13/21	1650	9/13/21	1700		1	X										23 ~~24~~ JNH

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: ____	
Sample pH Acceptable	Y N NA
pH Strips: ____	
Sulfide Present	Y N NA
Lead Acetate Strips: ____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #: 2681809
Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ____
Cooler 1 Temp Upon Receipt: ____ oC
Cooler 1 Therm Corr. Factor: ____ oC
Cooler 1 Corrected Temp: ____ oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
[signature] AECOM	9/13/21 1730		
FedEX	9-14-21 10:45	Dodie McCune	9-14-21 10:45

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: ____ of: ____

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 221091509	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method** FEDEX
Profile Number 284674	**Received By** Henderson, Jacob R.
Line Item(s) 1 - MEE, Propane, Acetylene 2 - Hydrogen	**Receive Date(s)** 09/14/21

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☐	☑

COOLERS

Airbill	Thermometer ID: E34	Temp °C
		2.6

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/27/2021

Report # 221092013

Project LMC Wilmington 60552044.25

Samples Collected 9/14/21

Deliver To	***Additional Recipients***
Scott Olson AECOM 250 Apollo Drive Chelmsford, MA 01824 978.846.5238	Lori Herberich, AECOM Nicole Callahan, AECOM

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
Pace Gulf Coast Report 221092013

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 221092013

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22109201301	2IA-AE29R6-091421-1	Water	9/14/21 11:40	9/18/21 11:50

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22109201301	2IA-AE29R6-091421-1	Ethane	ug/L	0.61J	1	NA
22109201301	2IA-AE29R6-091421-1	Ethene	ug/L	1.1	1	NA

Sample Results

2IA-AE29R6-091421-1				
	Collect Date	09/14/2021 11:40	Lab ID	22109201301
	Receive Date	09/18/2021 11:50	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/22/21 15:11	721390	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.61J**	**0.17**	**1.0**	**ug/L**
74-85-1	**Ethene**	**1.1**	**0.24**	**1.0**	**ug/L**
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

General Chromatography QC Summary

Analytical Batch	Client ID	MB721390		LCS721390				LCSD721390				
721390	Lab ID	2240766		2240767				2240768				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	09/22/21 12:06		09/22/21 11:40				09/22/21 11:53				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.13U	0.13	33	35	107	70 - 130	33	38	114	7	20
Ethane	74-84-0	0.17U	0.17	38	43	114	70 - 130	38	45	118	4	20
Ethene	74-85-1	0.24U	0.24	35	41	116	70 - 130	35	41	116	0	20
Methane	74-82-8	2.0U	2.0	750	680	91	70 - 130	750	710	95	3	20
Propane	74-98-6	0.29U	0.29	56	63	113	70 - 130	56	62	112	1	20

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 221092013
PM: RWe

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

☐ Email:

Customer: AECOM
Address: 250 Apollo Dr
Chelmsford, MA 01824

Project: LMC Wilmington 60552044.25
Report to: Scott Olson, Lori Herbarich
Invoice to: Accounts Payable
QUOTE # 2017-2021

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/17/21

Analysis Request

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil
B=Bulk L=Liquid X = _____(Other)

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Dissolved 8260 - Methyl, Ethyl, Ethe, Act, Prop	MS/MSD *	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCL	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
	21A-AE24R6-091421-1	GW	9/14/21	1140	X													

Relinquished by:	Accepted by:	Date:	Time:
[signature] FedEx	[signature]	9/14/21	1600
		9/18	1150

Comments, Special Requirements or Regulations:
2838 3166 7650
2.3 E34 37cpm

*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

Turnaround Time:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☐ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ (Residential) Direct Exposure
☐ (Comm/Industrial) Direct Exposure
☐ GA Leachability
☐ GB Leachability
☐ GA-GW Objectives
☐ GB-GW Objectives

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
☐ MCP Certification
☐ GW-1 ☐ MWRA eSMART
☐ GW-2 ☐ S-1 10% CALC
☐ GW-3
☐ S-1 GW-1 ☐ S-1 GW-2 ☐ S-1 GW-3
☐ S-2 GW-1 ☐ S-2 GW-2 ☐ S-2 GW-3
☐ S-3 GW-1 ☐ S-3 GW-2 ☐ S-3 GW-3
☐ SW Protection

State where samples were collected: _____

Data Format
☐ Excel
☐ PDF
☐ GIS/Key
☐ EQuIS
☐ Other

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

PEL-126 REV. 06/20

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 221092013	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method** FEDEX
Profile Number 284674	**Received By** Roberts, George S.
Line Item(s) 1 - MEE, Propane, Acetylene	**Receive Date(s)** 09/18/21

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E34	Temp °C
		2.3

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.6

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/24/2021

Report # 221092102

Project LMC Wilmington 60552044.25

Samples Collected 9/14/21 - 9/16/21

Deliver To	***Additional Recipients***
Scott Olson AECOM 250 Apollo Drive Chelmsford, MA 01824 978.846.5238	Lori Herberich, AECOM Nicole Callahan, AECOM

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
Pace Gulf Coast Report 221092102

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 221092102

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

COC ANOMALIES

COC Anomalies\Changes - All samples for SDG 221092102 were received outside of the prescribed temperature range. Please refer to the preservative checklist for details on the temperature upon receipt. (Ruth Welsh(Do Not 09/21/2021 13:08)

PROJECT MANAGER COMMENTS

Project Manager Comments - The samples were recollected for the dissolved gas analyses. These initial samples were canceled. (Ruth Welsh(Do Not 09/24/2021 14:17)

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22109210218	21A-GZA105R-091421-1 H2	Bubble Strip	9/14/21 12:33	9/20/21 11:00
22109210219	21A-AE103D-091421-1 H2	Bubble Strip	9/14/21 12:23	9/20/21 11:00
22109210220	21A-GZA12-091421-1 H2	Bubble Strip	9/14/21 16:23	9/20/21 11:00
22109210221	21A-TRC101-091421-1 H2	Bubble Strip	9/14/21 15:37	9/20/21 11:00
22109210222	21A-AE03-091521-1 H2	Bubble Strip	9/15/21 13:02	9/20/21 11:00
22109210223	21A-AE102M-091521-1 H2	Bubble Strip	9/15/21 11:32	9/20/21 11:00
22109210224	21A-GZA105D-091521-1 H2	Bubble Strip	9/15/21 11:44	9/20/21 11:00
22109210225	21A-STM8R1-091621-1 H2	Bubble Strip	9/16/21 13:23	9/20/21 11:00
22109210226	21A-AE112R6-091621-1 H2	Bubble Strip	9/16/21 15:30	9/20/21 11:00
22109210227	21A-AE29R6-091421-1 H2	Bubble Strip	9/14/21 14:03	9/20/21 11:00
22109210229	21A-GZA101R-091421-1 H2	Bubble Strip	9/14/21 14:57	9/20/21 11:00

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22109210218	21A-GZA105R-091421-1 H2	Hydrogen	nM	6.9	1	NA
22109210219	21A-AE103D-091421-1 H2	Hydrogen	nM	3.8	1	NA
22109210220	21A-GZA12-091421-1 H2	Hydrogen	nM	4.2	1	NA
22109210221	21A-TRC101-091421-1 H2	Hydrogen	nM	5.7	1	NA
22109210222	21A-AE03-091521-1 H2	Hydrogen	nM	6.6	1	NA
22109210223	21A-AE102M-091521-1 H2	Hydrogen	nM	3.8	1	NA
22109210224	21A-GZA105D-091521-1 H2	Hydrogen	nM	5.0	1	NA
22109210225	21A-STM8R1-091621-1 H2	Hydrogen	nM	3.7	1	NA
22109210226	21A-AE112R6-091621-1 H2	Hydrogen	nM	7.6	1	NA
22109210227	21A-AE29R6-091421-1 H2	Hydrogen	nM	11	1	NA
22109210229	21A-GZA101R-091421-1 H2	Hydrogen	nM	4.4	1	NA

Sample Results

21A-GZA105R-091421-1 H2				
	Collect Date	09/14/2021 12:33	Lab ID	22109210218
	Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 13:29	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	6.9	0.49	1.9	nM

21A-AE103D-091421-1 H2				
	Collect Date	09/14/2021 12:23	Lab ID	22109210219
	Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 13:41	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.8	0.49	1.9	nM

21A-GZA12-091421-1 H2				
	Collect Date	09/14/2021 16:23	Lab ID	22109210220
	Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 14:03	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	4.2	0.49	1.9	nM

21A-TRC101-091421-1 H2				
	Collect Date	09/14/2021 15:37	Lab ID	22109210221
	Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 14:16	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	5.7	0.49	1.9	nM

Sample Results

21A-AE03-091521-1 H2

Collect Date	09/15/2021 13:02	Lab ID	22109210222
Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 14:29	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	6.6	0.49	1.9	nM

21A-AE102M-091521-1 H2

Collect Date	09/15/2021 11:32	Lab ID	22109210223
Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 14:42	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.8	0.49	1.9	nM

21A-GZA105D-091521-1 H2

Collect Date	09/15/2021 11:44	Lab ID	22109210224
Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 14:54	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	5.0	0.49	1.9	nM

21A-STM8R1-091621-1 H2

Collect Date	09/16/2021 13:23	Lab ID	22109210225
Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 15:06	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.7	0.49	1.9	nM

Sample Results

21A-AE112R6-091621-1 H2				
	Collect Date	09/16/2021 15:30	Lab ID	22109210226
	Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 15:19	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	7.6	0.49	1.9	nM

21A-AE29R6-091421-1 H2				
	Collect Date	09/14/2021 14:03	Lab ID	22109210227
	Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 15:33	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	11	0.49	1.9	nM

21A-GZA101R-091421-1 H2				
	Collect Date	09/14/2021 14:57	Lab ID	22109210229
	Receive Date	09/20/2021 11:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/21/21 15:45	721347	AWE	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	4.4	0.49	1.9	nM

General Chromatography QC Summary

Analytical Batch 721347	Client ID	MB721347		LCS721347				LCSD721347				
	Lab ID	2240647		2240648				2240649				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	09/21/21 11:09		09/21/21 10:42				09/21/21 10:56				
	Matrix	Bubble Strip		Bubble Strip				Bubble Strip				
AM20GAX		Units Result	nM DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0	0.49U	0.49	12	8.9	75	70 - 130	12	10	87	15	20

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

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LAB USE ONLY- Affix Wor

ALL SHAD

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA

SDG: 221092102

PM: RWe

Company: AECOM	Billing Information: Accts Payable AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824	
Report To: Scott Olson	Email To: lori.herberich@aecom.com
Copy To: Lori Herberich / Nicole Callahan	Site Collection Info/Address: 40 Fordham Rd
Customer Project Name/Number: LMC Wilmington 60552044.25	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0089 Email:	Site/Facility ID #: LMC-Wilmington
Collected By (print): Dylan Potter	Purchase Order #: Quote #: 2017-2021
Collected By (signature):	Turnaround Date Required: Standard / 15-day
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
Compliance Monitoring? [ ] Yes [ ] No	DW PWS ID #: DW Location Code:
Immediately Packed on Ice: [X] Yes [ ] No	Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:	

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Ty: U, O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

Analyses: Dissolved Hydrogen; Dissolved gases (Methane, Ethane, Ethene); Ace, Prop.

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Dissolved Hydrogen	Dissolved gases (Methane, Ethane, Ethene); Ace, Prop.								Lab Sample # / Comments	
21A-GZA105R-091421-1	GW	Grab	9/14/21	1140	—	—		3		X									1
21A-GZA105R-091421-1	GW	COMP	9/14/21	1208	9/14/21	1233		1	X										18
21A-AE103D-091421-1	GW	Grab	9/14/21	1045	—	—		9		X								MS/MSD	2,3,4
21A-AE103D-091421-1	GW	COMP	9/14/21	1208	9/14/21	1223		1	X										19
21A-GZA12-091421-1	GW	Grab	9/14/21	1525	—	—		3		X									5
21A-GZA12-091421-1	GW	COMP	9/14/21	1603	9/14/21	1623		1	X										20
21A-TRC101-091421-1	GW	Grab	9/14/21	1500	—	—		3		X									6
21A-TRC101-091421-1	GW	COMP	9/14/21	1522	9/14/21	1537		1	X										21
21A-GZA101R-091421-1	GW	Grab	9/14/21	1405	—	—		3		X									7
21A-GZA101R-091421-1	GW	COMP	9/14/21	1427	9/14/21	1457		1	X										28 22 MH

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 2837 7812 1319

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2681808

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments: 24.5 E34 30cpm

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
AECOM	9/16/21 1600		
FedEx	9/20/21 11:00		9/20/21 1100

MTJL LAB USE ONLY

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 221092102
PM: RWe

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

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Company: AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824
Report To: Scott Olson
Copy To: Lori Herberich / Nicole Callahan
Customer Project Name/Number: LMC Wilmington 60552044.25
Phone: 978-302-0089
Email:
Collected By (print): Dylan Potter
Collected By (signature):
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____

Billing Information: Accts Payable AECOM
Email To: lori.herberich@aecom.com
Site Collection Info/Address: 40 Fordham Rd
State: MA County/City: Wilmington Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET
Site/Facility ID #: LMC-Wilmington
Purchase Order #: Quote #: 2017-2021
Turnaround Date Required: Standard / 15-day
Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
Compliance Monitoring? [ ] Yes [ ] No
DW PWS ID #:
DW Location Code:
Immediately Packed on Ice: [X] Yes [ ] No
Field Filtered (if applicable): [ ] Yes [ ] No
Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: U O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

Analyses: Dissolved Hydrogen; Dissolved gases (Methane, Ethane, Ethene); Ace, Prop

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Dissolved Hydrogen	Dissolved gases (Methane, Ethane, Ethene)	Ace, Prop	Lab Profile/Line:
21A-AE03-091521-1	GW	Grab	9/15/21	0955	—	—		8		X		MS/MSD 8,9,10
21A-AE03-091521-1	GW	COMP	9/15/21	1242	9/15/21	1302		1	X			22 ~~23~~ JRH
21A-AE102M-091521-1	GW	Grab	9/15/21	1040	—	—		3		X		11
21A-AE102M-091521-1	GW	COMP	9/15/21	1117	9/15/21	1132		1	X			23 ~~25~~ ~~24~~ JRH
21A-GZA105D-091521-1	GW	Grab	9/15/21	1005	—	—		3		X		12
21A-GZA105D-091521-1	GW	COMP	9/15/21	1124	9/15/21	1144		1	X			24 ~~25~~ JRH
21A-GZA105D-091521-2	GW	Grab	9/15/21	1010	—	—		3		X		13
21A-STM8R1-091621-1	GW	Grab	9/16/21	1350	—	—		3		X		14
21A-STM8R1-091621-2	GW	Grab	9/16/21	1355	—	—		3		X		15
21A-STM8R1-091621-1	GW	COMP	9/16/21	1308	9/16/21	1323		1	X			25 ~~26~~ JRH

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None
Packing Material Used: 2837 7812 1319
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #: 2681806
Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: _____oC
Cooler 1 Therm Corr. Factor: _____oC
Cooler 1 Corrected Temp: _____oC
Comments: 24.5 E34 30 cpm

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: _____ of: _____

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
AECOM	9/16/21		
FedEx	9/20/21 11:00		9/20/21 1100

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

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ALL SHADE

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA

SDG: 221092102

PM: RWe

Company: AECOM	Billing Information: Accts Payable AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824	
Report To: Scott Olson	Email To: lori.herbarich@aecom.com
Copy To: Lori Herbarich / Nicole Callahan	Site Collection Info/Address: 40 Fordham Rd
Customer Project Name/Number: LMC Wilmington 60552044.25	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0089 Email:	Site/Facility ID #: LMC-Wilmington
Collected By (print): Dylan Potter	Purchase Order #: Quote #: 2017-2021
Collected By (signature):	Turnaround Date Required: standard / 15-day
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type: U O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

Analyses: Dissolved Hydrogen; Dissolved gases (Methane, Ethane, Ethene, Ace, Prop.)

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Dissolved Hydrogen	Dissolved gases (Methane, Ethane, Ethene, Ace, Prop.)	Lab Profile/Line
21A-AE112RG-091621-1	GW	Grab	9/16/21	1315	—	—		3		X	16
21A-AE112RG-091621-1	GW	COMP	9/16/21	1510	9/16/21	1530		1	X		26 27 MH
21A-EB01-091621-1	GW	Grab	9/16/21	1415	—	—		3		X	17
21A-AE24RG-091421-1	GW	COMP	9/14/21	1333	9/14/21	1403		1	X		27 28 MH

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 2837 7812 1319

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2681807

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#:

Cooler 1 Temp Upon Receipt: ____oC

Cooler 1 Therm Corr. Factor: ____oC

Cooler 1 Corrected Temp: ____oC

Comments: 25.8 E34 18cpm

Relinquished by/Company: (Signature) AECOM	Date/Time: 9/16/21 1600	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature) FedEx	Date/Time: 9/20/21 1100	Received by/Company: (Signature)	Date/Time: 9/20/21 1100
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 221092102	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method** FEDEX
Profile Number 284674	**Received By** Henderson, Jacob R.
Line Item(s) 1 - MEE, Propane, Acetylene 2 - Hydrogen	**Receive Date(s)** 09/20/21

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☐	☑

COOLERS

Airbill	Thermometer ID: E34	Temp °C
		24.5

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES DISSOLVED HYDROGEN OC

Revision 1.6

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 10/07/2021

Report # 221092428

Project LMC Wilmington 60552044.25

Samples Collected 9/22/21

Deliver To	***Additional Recipients***
Scott Olson AECOM 250 Apollo Drive Chelmsford, MA 01824 978.846.5238	Lori Herberich, AECOM Nicole Callahan, AECOM

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
Pace Gulf Coast Report 221092428

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 221092428

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

COC ANOMALIES

COC Anomalies\Changes - one container received broken for the MSD sample for 21A-AE103D-092221-1 (Ruth Welsh(Do Not 09/24/2021 13:46)

VOLATILES GAS CHROMATOGRAPHY

After the initial AM20_LHC analysis was completed on this work order, a second analysis was done for confirmation on a few of the samples. The failures exhibited in the MS/MSD for each of the referenced container IDs were consistent on both runs

In the AM20GAX analysis for analytical batch 722684, the MS/MSD exhibited sporadic recovery failures. The LCS recoveries were acceptable.

In the AM20GAX analysis for analytical batch 722684, the MS/MSD exhibited RPD failures.The LCS/LCSD recoveries are acceptable.

MISCELLANEOUS

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22109242801	21A-GZA105D-092221-1	Water	9/22/21 11:55	9/23/21 11:20
22109242802	21A-GZA105D-092221-2	Water	9/22/21 12:00	9/23/21 11:20
22109242803	21A-GZA105R-092221-1	Water	9/22/21 12:15	9/23/21 11:20
22109242804	21A-TRC101-092221-1	Water	9/22/21 11:35	9/23/21 11:20
22109242805	21A-EB01-092221-1	Water	9/22/21 12:30	9/23/21 11:20
22109242806	21A-AE03-092221-1	Water	9/22/21 11:15	9/23/21 11:20
22109242807	21A-AE03-092221-1-MS	Water	9/22/21 11:15	9/23/21 11:20
22109242808	21A-AE03-092221-1-MSD	Water	9/22/21 11:15	9/23/21 11:20
22109242809	21A-AE102M-092221-1	Water	9/22/21 12:15	9/23/21 11:20
22109242810	21A-STM8RI-092221-1	Water	9/22/21 12:40	9/23/21 11:20
22109242811	21A-STM8RI-092221-2	Water	9/22/21 12:42	9/23/21 11:20
22109242812	21A-AE103D-092221-1	Water	9/22/21 11:50	9/23/21 11:20
22109242813	21A-AE103D-092221-1-MS	Water	9/22/21 11:50	9/23/21 11:20
22109242814	21A-AE103D-092221-1-MSD	Water	9/22/21 11:50	9/23/21 11:20
22109242815	21A-GZA12-092221-1	Water	9/22/21 11:28	9/23/21 11:20
22109242816	21A-GZA101R-092221-1	Water	9/22/21 11:15	9/23/21 11:20
22109242817	21A-AE112R6-092221-1	Water	9/22/21 13:30	9/23/21 11:20

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22109242801	21A-GZA105D-092221-1	Ethane	ug/L	1.0	1	NA
22109242801	21A-GZA105D-092221-1	Methane	ug/L	370	1	NA
22109242802	21A-GZA105D-092221-2	Ethane	ug/L	0.96J	1	NA
22109242802	21A-GZA105D-092221-2	Methane	ug/L	320	1	NA
22109242803	21A-GZA105R-092221-1	Ethane	ug/L	2.3	1	NA
22109242803	21A-GZA105R-092221-1	Ethene	ug/L	1.6	1	NA
22109242803	21A-GZA105R-092221-1	Methane	ug/L	88	1	NA
22109242806	21A-AE03-092221-1	Ethane	ug/L	2.3	1	NA
22109242806	21A-AE03-092221-1	Methane	ug/L	3100	1	NA
22109242810	21A-STM8RI-092221-1	Ethene	ug/L	0.31J	1	NA
22109242811	21A-STM8RI-092221-2	Ethene	ug/L	0.25J	1	NA
22109242816	21A-GZA101R-092221-1	Methane	ug/L	2.2J	1	NA
22109242817	21A-AE112R6-092221-1	Ethane	ug/L	1.3	1	NA
22109242817	21A-AE112R6-092221-1	Ethene	ug/L	0.25J	1	NA
22109242817	21A-AE112R6-092221-1	Methane	ug/L	1400	1	NA
22109242817	21A-AE112R6-092221-1	Propane	ug/L	0.45J	1	NA

Sample Results

21A-GZA105D-092221-1

Collect Date	09/22/2021 11:55	**Lab ID**	22109242801
Receive Date	09/23/2021 11:20	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/21 12:32	722477	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**1.0**	**0.17**	**1.0**	**ug/L**
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**370**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-GZA105D-092221-2

Collect Date	09/22/2021 12:00	**Lab ID**	22109242802
Receive Date	09/23/2021 11:20	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/21 12:47	722477	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.96J**	**0.17**	**1.0**	**ug/L**
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**320**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-GZA105R-092221-1

Collect Date	09/22/2021 12:15	**Lab ID**	22109242803
Receive Date	09/23/2021 11:20	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/21 13:08	722477	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**2.3**	**0.17**	**1.0**	**ug/L**
74-85-1	**Ethene**	**1.6**	**0.24**	**1.0**	**ug/L**
74-82-8	**Methane**	**88**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

21A-TRC101-092221-1

Collect Date	09/22/2021 11:35	Lab ID	22109242804
Receive Date	09/23/2021 11:20	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/21 13:21	722477	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-EB01-092221-1

Collect Date	09/22/2021 12:30	Lab ID	22109242805
Receive Date	09/23/2021 11:20	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/21 13:37	722477	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-AE03-092221-1

Collect Date	09/22/2021 11:15	Lab ID	22109242806
Receive Date	09/23/2021 11:20	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/21 12:08	722684	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**2.3**	**0.17**	**1.0**	**ug/L**
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**3100**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

21A-AE03-092221-1-MS

Collect Date	09/22/2021 11:15	Lab ID	22109242807
Receive Date	09/23/2021 11:20	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/21 12:20	722684	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	38	0.13	0.50	ug/L
74-84-0	Ethane	45	0.17	1.0	ug/L
74-85-1	Ethene	40	0.24	1.0	ug/L
74-82-8	Methane	3800	2.0	5.0	ug/L
74-98-6	Propane	59	0.29	1.0	ug/L

21A-AE03-092221-1-MSD

Collect Date	09/22/2021 11:15	Lab ID	22109242808
Receive Date	09/23/2021 11:20	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/21 12:33	722684	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	36	0.13	0.50	ug/L
74-84-0	Ethane	40	0.17	1.0	ug/L
74-85-1	Ethene	39	0.24	1.0	ug/L
74-82-8	Methane	530	2.0	5.0	ug/L
74-98-6	Propane	54	0.29	1.0	ug/L

21A-AE102M-092221-1

Collect Date	09/22/2021 12:15	Lab ID	22109242809
Receive Date	09/23/2021 11:20	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/21 12:47	722684	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

21A-STM8RI-092221-1

Collect Date: 09/22/2021 12:40 | Lab ID: 22109242810
Receive Date: 09/23/2021 11:20 | Matrix: Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/21 15:11	722477	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	**Ethene**	**0.31J**	**0.24**	**1.0**	**ug/L**
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-STM8RI-092221-2

Collect Date: 09/22/2021 12:42 | Lab ID: 22109242811
Receive Date: 09/23/2021 11:20 | Matrix: Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/21 15:23	722477	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	**Ethene**	**0.25J**	**0.24**	**1.0**	**ug/L**
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-AE103D-092221-1

Collect Date: 09/22/2021 11:50 | Lab ID: 22109242812
Receive Date: 09/23/2021 11:20 | Matrix: Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/21 13:01	722684	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

21A-AE103D-092221-1-MS

Collect Date	09/22/2021 11:50	Lab ID	22109242813
Receive Date	09/23/2021 11:20	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/21 13:13	722684	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-AE103D-092221-1-MSD

Collect Date	09/22/2021 11:50	Lab ID	22109242814
Receive Date	09/23/2021 11:20	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/21 13:25	722684	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-GZA12-092221-1

Collect Date	09/22/2021 11:28	Lab ID	22109242815
Receive Date	09/23/2021 11:20	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/21 16:15	722477	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

21A-GZA101R-092221-1

Collect Date	09/22/2021 11:15	**Lab ID**	22109242816
Receive Date	09/23/2021 11:20	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/21 16:30	722477	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**2.2J**	**2.0**	**5.0**	**ug/L**
74-98-6	Propane	0.29U	0.29	1.0	ug/L

21A-AE112R6-092221-1

Collect Date	09/22/2021 13:30	**Lab ID**	22109242817
Receive Date	09/23/2021 11:20	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/21 16:42	722477	CWB	

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**1.3**	**0.17**	**1.0**	**ug/L**
74-85-1	**Ethene**	**0.25J**	**0.24**	**1.0**	**ug/L**
74-82-8	**Methane**	**1400**	**2.0**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.45J**	**0.29**	**1.0**	**ug/L**

General Chromatography QC Summary

Analytical Batch	Client ID	MB722477	LCS722477	LCSD722477
722477	Lab ID	2247377	2247378	2247379
	Sample Type	MB	LCS	LCSD
	Prep Date	NA	NA	NA
	Analysis Date	10/05/21 12:10	10/05/21 11:46	10/05/21 11:58
	Matrix	Water	Water	Water

AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.13U	0.13	33	32	98	70 - 130	33	29	90	9	20
Ethane	74-84-0	0.17U	0.17	38	42	112	70 - 130	38	42	111	1	20
Ethene	74-85-1	0.24U	0.24	35	40	113	70 - 130	35	40	112	0	20
Methane	74-82-8	2.0U	2.0	750	690	92	70 - 130	750	600	80	14	20
Propane	74-98-6	0.29U	0.29	56	61	110	70 - 130	56	61	110	1	20

Analytical Batch	Client ID	MB722684	LCS722684	LCSD722684
722684	Lab ID	2248638	2248639	2248640
	Sample Type	MB	LCS	LCSD
	Prep Date	NA	NA	NA
	Analysis Date	10/06/21 11:56	10/06/21 11:11	10/06/21 11:44
	Matrix	Water	Water	Water

AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.13U	0.13	33	39	119	70 - 130	33	38	117	2	20
Ethane	74-84-0	0.17U	0.17	38	42	112	70 - 130	38	43	114	1	20
Ethene	74-85-1	0.24U	0.24	35	40	115	70 - 130	35	41	116	1	20
Methane	74-82-8	2.0U	2.0	750	640	85	70 - 130	750	540	73	16	20
Propane	74-98-6	0.29U	0.29	56	58	104	70 - 130	56	63	114	10	20

Analytical Batch	Client ID	21A-AE03-092221-1	21A-AE03-092221-1-MS	21A-AE03-092221-1-MSD
722684	Lab ID	22109242806	22109242807	22109242808
	Sample Type	SAMPLE	MS	MSD
	Prep Date	NA	NA	NA
	Analysis Date	10/06/2021 12:08	10/06/21 12:20	10/06/21 12:33
	Matrix	Water	Water	Water

AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.0	0.13	33	38	116	70 - 130	33	36	109	6	20
Ethane	74-84-0	2.3	0.17	38	45	112	70 - 130	38	40	101	10	20
Ethene	74-85-1	0.081	0.24	35	40	112	70 - 130	35	39	109	2	20
Methane	74-82-8	3100	2.0	750	3800	98	70 - 130	750	530	-346*	152*	20
Propane	74-98-6	0.030	0.29	56	59	106	70 - 130	56	54	98	9	20

Analytical Batch	Client ID	21A-AE103D-092221-1	21A-AE103D-092221-1-MS	21A-AE103D-092221-1-MSD
722684	Lab ID	22109242812	22109242813	22109242814
	Sample Type	SAMPLE	MS	MSD
	Prep Date	NA	NA	NA
	Analysis Date	10/06/2021 13:01	10/06/21 13:13	10/06/21 13:25
	Matrix	Water	Water	Water

AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.0	0.13	33	0.0	0*	70 - 130	33	0.0	0*	0	20
Ethane	74-84-0	0.0	0.17	38	0.012	0*	70 - 130	38	0.022	0*	59*	20
Ethene	74-85-1	0.0	0.24	35	0.029	0*	70 - 130	35	0.028	0*	4	20
Methane	74-82-8	0.0	2.0	750	0.10	0*	70 - 130	750	0.18	0*	56*	20
Propane	74-98-6	0.0	0.29	56	0.038	0*	70 - 130	56	0.076	0*	67*	20

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 221092428
PM: RWe

CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Phone:
Email:

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824
T: 978-905-2100

Project: LMC Wilmington / 60552044.25 Project P.O:
Report to: Lori Herberich
Invoice to: Accounts Payable / Scott Olson
QUOTE # 2017-2021

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/22/2021

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil
B=Bulk L=Liquid X = _____(Other)

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Dissolved gases (Methane, Ethane, Ethene, Acetylene, Propane)	MS/MSD *	GL Amber 8 oz. wH3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container [ ] oz	GL Soil container [ ] oz	40 ml VOA Vial [ ] As is [ ] HCL	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is	
	21A-GZA105D-092221-1	GW	9/22/21	1155	X														1
	~~21A-GZA110~~ DUP																		2
	21A-GZA103D-092221-2	GW	9/22/21	1200	X														3
	21A-GZA105R-092221-1	GW	9/22/21	1215	X														4
	21A-TRC101-092221-1	GW	9/22/21	1135	X														5
	21A-EB01-092221-1	GW	9/22/21	1230	X														6
	21A-AE03-092221-1	GW	9/22/21	1115	X	X													6,7,8
	21A-AE102M-092221-1	GW	9/22/21	1215	X														9
	21A-STM8R1-092221-1	GW	9/22/21	1240	X														10
	21A-STM8R1-092221-2	GW	9/22/21	1242	X														11
	21A-AE103D-092221-1	GW	9/22/21	1150	X	X													12,13,14
	21A-GZA12-092221-1	GW	9/22/21	1128	X														15

Relinquished by:	Accepted by:	Date:	Time:
[signature]		9/22/21	1645
FedEx	[signature]	9/23/21	1120

Comments, Special Requirements or Regulations:
MS/MSD on:
21A-AE03-092221-1
21A-AE103D-092221-1

*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

Turnaround Time:
- [ ] 1 Day*
- [ ] 2 Days*
- [ ] 3 Days*
- [x] Standard
- [ ] Other

* SURCHARGE APPLIES

RI
- [ ] (Residential) Direct Exposure
- [ ] (Comm/Industrial) Direct Exposure
- [ ] GA Leachability
- [ ] GB Leachability
- [ ] GA-GW Objectives
- [ ] GB-GW Objectives

CT
- [ ] RCP Cert
- [ ] GW Protection
- [ ] SW Protection
- [ ] GA Mobility
- [ ] GB Mobility
- [ ] Residential DEC
- [ ] I/C DEC
- [ ] Other

MA
- [x] MCP Certification
- [x] GW-1
- [x] GW-2
- [x] GW-3
- [ ] MWRA eSMART
- [ ] S-1 10% CALC
- [ ] S-1 GW-1 [ ] S-1 GW-2 [ ] S-1 GW-3
- [ ] S-2 GW-1 [ ] S-2 GW-2 [ ] S-2 GW-3
- [ ] S-3 GW-1 [ ] S-3 GW-2 [ ] S-3 GW-3
- [ ] SW Protection

State where samples were collected: MA

Data Format
- [ ] Excel
- [x] PDF
- [ ] GIS/Key
- [x] EQuIS
- [ ] Other

Data Package
- [ ] Tier II Checklist
- [ ] Full Data Package*
- [ ] Phoenix Std Report
- [ ] Other

* SURCHARGE APPLIES

PEL-126 REV. 06/20

28410 4593 1626
4.1 E34 48cqm

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 221092428
PM: RWe

CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

☐ Email:

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford MA 01824
T: 978-905-2100

Project: LMC Wilmington / 60552044.25
Report to: Lori Herberich
Invoice to: Accounts Payable / Scott Olson
QUOTE # 2017-2021

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/22/21

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil
B=Bulk L=Liquid X = _____(Other)

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	dissolved gases (Methane, Ethane, Ethene, Acetylene, Propane)	MS/MSD*	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCL	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is	
	21A-GZA101R-092221-1	GW	9/22/21	1115	X														16
	21A-AE112R6-092221-1	GW	9/22/21	1330	X														17

Relinquished by:	Accepted by:	Date:	Time:
[signature]		9/22/21	1645
FedEx	[signature]	9/23/21	1120

Comments, Special Requirements or Regulations:

*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

Turnaround Time:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☒ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ (Residential) Direct Exposure
☐ (Comm/Industrial) Direct Exposure
☐ GA Leachability
☐ GB Leachability
☐ GA-GW Objectives
☐ GB-GW Objectives

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
☒ MCP Certification
☒ GW-1 ☐ MWRA eSMART
☒ GW-2 ☐ S-1 10% CALC
☒ GW-3
☐ S-1 GW-1 ☐ S-1 GW-2 ☐ S-1 GW-3
☐ S-2 GW-1 ☐ S-2 GW-2 ☐ S-2 GW-3
☐ S-3 GW-1 ☐ S-3 GW-2 ☐ S-3 GW-3
☐ SW Protection

State where samples were collected: MA

Data Format
☐ Excel
☒ PDF
☐ GIS/Key
☒ EQuIS
☐ Other

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

PEL-126 REV. 06/20

2840 4593 1626
4.1 E34 48cpm

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 221092428	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method** FEDEX
Profile Number 284674	**Received By** McCune, Dodie N.
Line Item(s) 1 - MEE, Propane, Acetylene	**Receive Date(s)** 09/23/21

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☐	☑
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E34	Temp °C
284045931626		4.1

DISCREPANCIES

22109242814 - 21A-AE103D-092221-1-MSD:
Broken Container (Container C - Unassigned)

LAB PRESERVATIONS

None

NOTES

1 OF 3 VIALS RECEIVED BROKE

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

SITE LOGIC Report

QuantArray®-Chlor Study

Contact: Lori Herberich
Phone: 978-302-0089
Address: AECOM
250 Apollo Drive
Chelmsford, MA 1824
Email: lori.herberich@aecom.com

MI Identifier: 020SI

Report Date: 09/29/2021

Project: LMC Wilmington, 60552044.25
Comments:

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

The QuantArray®-Chlor Approach

Quantification of *Dehalococcoides*, the only known bacterial group capable of complete reductive dechlorination of PCE and TCE to ethene, has become an indispensable component of assessment, remedy selection, and performance monitoring at sites impacted by chlorinated solvents. While undeniably a key group of halorespiring bacteria, *Dehalococcoides* are not the only bacteria of interest in the subsurface because reductive dechlorination is not the only potential biodegradation pathway operative at contaminated sites, and chlorinated ethenes are not always the primary contaminants of concern. The QuantArray®-Chlor not only includes a variety of halorespiring bacteria (*Dehalococcoides*, *Dehalobacter*, *Dehalogenimonas*, etc.) to assess the potential for reductive dechlorination of chloroethenes, chloroethanes, chlorobenzenes, chlorophenols, and chloroform, but also provides quantification of functional genes involved in aerobic (co)metabolic pathways for biodegradation of chlorinated solvents and even competing biological processes. Thus, the QuantArray®-Chlor will give site managers the ability to simultaneously yet economically evaluate the potential for biodegradation of a spectrum of common chlorinated contaminants through a multitude of anaerobic and aerobic (co) metabolic pathways to give a much more clear and comprehensive view of contaminant biodegradation.

The QuantArray®-Chlor is used to quantify specific microorganisms and functional genes to evaluate the following:

Anaerobic Reductive Dechlorination	Quantification of important halorespiring bacteria (e.g. *Dehalococcoides*, *Dehalobacter*, *Dehalogenimonas*, *Desulfitobacterium* spp.) and key functional genes (e.g. vinyl chloride reductases, TCE reductase, chloroform reductase) responsible for reductive dechlorination of a broad spectrum of chlorinated solvents.
Aerobic Cometabolism	Several different types of bacteria including methanotrophs and some toluene/phenol utilizing bacteria can co-oxidize TCE, DCE, and vinyl chloride. The QuantArray®-Chlor quantifies functional genes like soluble methane monooxygenase encoding enzymes capable of co-oxidation of chlorinated ethenes.
Aerobic (Co)metabolism of Vinyl Chloride	Ethene oxidizing bacteria are capable of cometabolism of vinyl chloride. In some cases, ethenotrophs can also utilize vinyl chloride as a growth supporting substrate. The QuantArray®-Chlor targets key functional genes in ethene metabolism.

How do QuantArrays® work?

The QuantArray®-Chlor in many respects is a hybrid technology combining the highly parallel detection of microarrays with the accurate and precise quantification provided by qPCR into a single platform. The key to highly parallel qPCR reactions is the nanoliter fluidics platform for low volume, solution phase qPCR reactions.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

How are QuantArray® results reported?

One of the primary advantages of the QuantArray®-Chlor is the simultaneous quantification of a broad spectrum of different microorganisms and key functional genes involved in a variety of pathways for chlorinated hydrocarbon biodegradation. However, highly parallel quantification combined with the various metabolic and cometabolic capabilities of different target organisms can complicate data presentation. Therefore, in addition to Summary Tables, QuantArray® results will be presented as Microbial Population Summary and Comparison Figures to aid in data interpretation and subsequent evaluation of site management activities.

Types of Tables and Figures:

Microbial Population Summary	Figure presenting the concentrations of QuantArray®-Chlor target populations (e.g. *Dehalococcoides*) and functional genes (e.g. vinyl chloride reductase) relative to typically observed values.
Summary Tables	Tables of target population concentrations grouped by biodegradation pathway and contaminant type.
Comparison Figures	Depending on the project, sample results can be presented to compare changes over time or examine differences in microbial populations along a transect of the dissolved plume.

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Results

Table 1: Summary of the QuantArray®-Chlor results obtained for samples 21A-AE26R2-090121-1, 21A-AE28R2-090121-1, 21A-AE108R1-090921-1, 21A-AE100R1-090921-1, and 21A-AE100R5-090921-1.

Sample Name	21A-AE26R2-090121-1	21A-AE28R2-090121-1	21A-AE108R1-090921-1	21A-AE100R1-090921-1	21A-AE100R5-090921-1
Sample Date	**09/01/2021**	**09/01/2021**	**09/09/2021**	**09/09/2021**	**09/09/2021**
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Dehalococcoides (DHC)	**8.53E+01**	**2.00E+04**	**3.00E-01 (J)**	**5.14E+03**	**8.59E+03**
tceA Reductase (TCE)	**2.00E-01 (J)**	**9.60E+01**	<5.00E-01	<5.00E-01	**2.00E-01 (J)**
BAV1 Vinyl Chloride Reductase (BVC)	<5.00E-01	<5.00E-01	<5.00E-01	**3.00E-01 (J)**	**3.90E+00**
Vinyl Chloride Reductase (VCR)	<5.00E-01	<5.00E-01	<5.00E-01	**3.36E+02**	**6.55E+02**
Dehalobacter spp. (DHBt)	**2.30E+02**	**1.35E+03**	<5.00E+00	**1.31E+03**	<5.00E+00
Dehalobacter DCM (DCM)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas spp. (DHG)	**9.70E+03**	**2.85E+04**	<5.00E+00	**2.72E+03**	**7.00E+03**
cerA Reductase (CER)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
trans-1,2-DCE Reductase (TDR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Desulfitobacterium spp. (DSB)	<5.00E+00	**1.16E+03**	**2.10E+00 (J)**	**8.62E+03**	**1.06E+05**
Dehalobium chlorocoercia (DECO)	**4.00E+01**	<5.00E+00	**4.00E+00 (J)**	**5.94E+03**	**2.77E+03**
Desulfuromonas spp. (DSM)	<5.00E+00	**3.93E+01**	<5.00E+00	**4.59E+02**	<5.00E+00
PCE Reductase (PCE-1)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	**3.46E+01**
PCE Reductase (PCE-2)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Chloroform Reductase (CFR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Aerobic (Co)Metabolic					
Soluble Methane Monooxygenase (SMMO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	**4.96E+01**
Toluene Dioxygenase (TOD)	**8.80E+00**	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Phenol Hydroxylase (PHE)	<5.00E+00	<5.00E+00	<5.00E+00	**2.26E+01**	**7.35E+02**
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00	<5.00E+00	<5.00E+00	**1.12E+02**	**1.97E+02**
Toluene Monooxygenase (RMO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	**1.14E+02**
Ethene Monooxygenase (EtnC)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Epoxyalkane Transferase (EtnE)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	**3.39E+01**
Dichloromethane Dehalogenase (DCMA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Other					
Total Eubacteria (EBAC)	**3.07E+04**	**2.72E+05**	**1.63E+03**	**9.22E+05**	**1.55E+06**
Sulfate Reducing Bacteria (APS)	**4.72E+03**	**4.72E+04**	<5.00E+00	**2.44E+04**	**1.03E+05**
Methanogens (MGN)	**6.84E+01**	**9.00E+00**	**1.00E-01 (J)**	**1.47E+04**	**2.59E+03**

Legend:
NA = Not Analyzed
I = Inhibited
NS = Not Sampled
< = Result Not Detected
J = Estimated Gene Copies Below PQL but Above LQL

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Table 2: Summary of the QuantArray®-Chlor results obtained for samples 21A-AE103R5-090921-1, 21A-TRC301R3-091321-1, 21A-GZA105D-091521-1, 21A-AE102M-091521-1, and 21A-AE03-091521-1.

Sample Name	21A-AE103R5-090921-1	21A-TRC301R3-091321-1	21A-GZA105D-091521-1	21A-AE102M-091521-1	21A-AE03-091521-1
Sample Date	**09/09/2021**	**09/13/2021**	**09/15/2021**	**09/15/2021**	**09/15/2021**
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Dehalococcoides (DHC)	**1.14E+03**	**1.22E+02**	**2.61E+02**	**1.19E+02**	**7.02E+03**
tceA Reductase (TCE)	<5.00E-01	<5.00E-01	<5.00E-01	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase (BVC)	<5.00E-01	**6.00E-01**	**3.70E+00**	**1.00E-01 (J)**	**3.80E+00**
Vinyl Chloride Reductase (VCR)	**7.77E+01**	**3.80E+00**	**4.90E+00**	**5.50E+00**	**4.09E+02**
Dehalobacter spp. (DHBt)	**2.08E+02**	**2.10E+03**	<5.00E+00	**1.31E+03**	<5.00E+00
Dehalobacter DCM (DCM)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas spp. (DHG)	**1.21E+04**	**2.97E+03**	**1.92E+03**	**1.14E+05**	**2.47E+03**
cerA Reductase (CER)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
trans-1,2-DCE Reductase (TDR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Desulfitobacterium spp. (DSB)	**8.94E+03**	**1.20E+03**	**1.91E+04**	**4.49E+03**	**1.16E+03**
Dehalobium chlorocoercia (DECO)	<5.00E+00	**5.53E+02**	**2.22E+03**	**3.03E+03**	**5.94E+03**
Desulfuromonas spp. (DSM)	<5.00E+00	<5.00E+00	<5.00E+00	**7.80E+00**	**5.10E+00**
PCE Reductase (PCE-1)	**1.27E+02**	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-2)	<5.00E+00	<5.00E+00	<5.00E+00	**6.60E+01**	<5.00E+00
Chloroform Reductase (CFR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Aerobic (Co)Metabolic					
Soluble Methane Monooxygenase (SMMO)	<5.00E+00	<5.00E+00	<5.00E+00	**2.36E+02**	**1.11E+02**
Toluene Dioxygenase (TOD)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Phenol Hydroxylase (PHE)	**2.45E+02**	<5.00E+00	**1.60E+01**	**9.30E+00**	**1.98E+02**
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00	<5.00E+00	<5.00E+00	**3.73E+03**	**1.82E+03**
Toluene Monooxygenase (RMO)	**3.34E+02**	<5.00E+00	<5.00E+00	<5.00E+00	**3.83E+02**
Ethene Monooxygenase (EtnC)	<5.00E+00	<5.00E+00	<5.00E+00	**1.39E+02**	<5.00E+00
Epoxyalkane Transferase (EtnE)	<5.00E+00	<5.00E+00	**2.26E+01**	**1.17E+02**	<5.00E+00
Dichloromethane Dehalogenase (DCMA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Other					
Total Eubacteria (EBAC)	**2.85E+05**	**1.89E+05**	**5.33E+06**	**3.38E+06**	**1.43E+07**
Sulfate Reducing Bacteria (APS)	**6.54E+03**	**3.65E+04**	**3.32E+05**	**2.50E+04**	**1.35E+05**
Methanogens (MGN)	**4.30E+00 (J)**	**3.10E+00 (J)**	**1.73E+01**	<5.00E+00	**8.77E+02**

Legend:
NA = Not Analyzed
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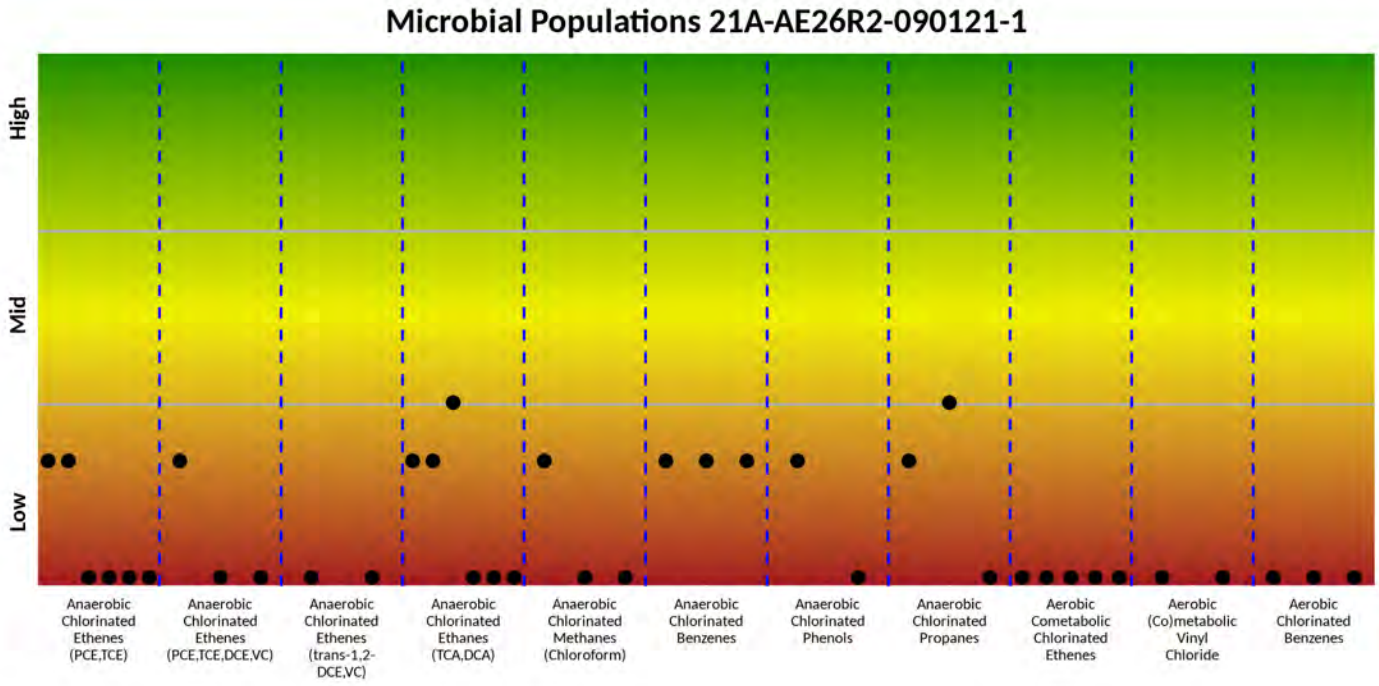

Figure 1: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

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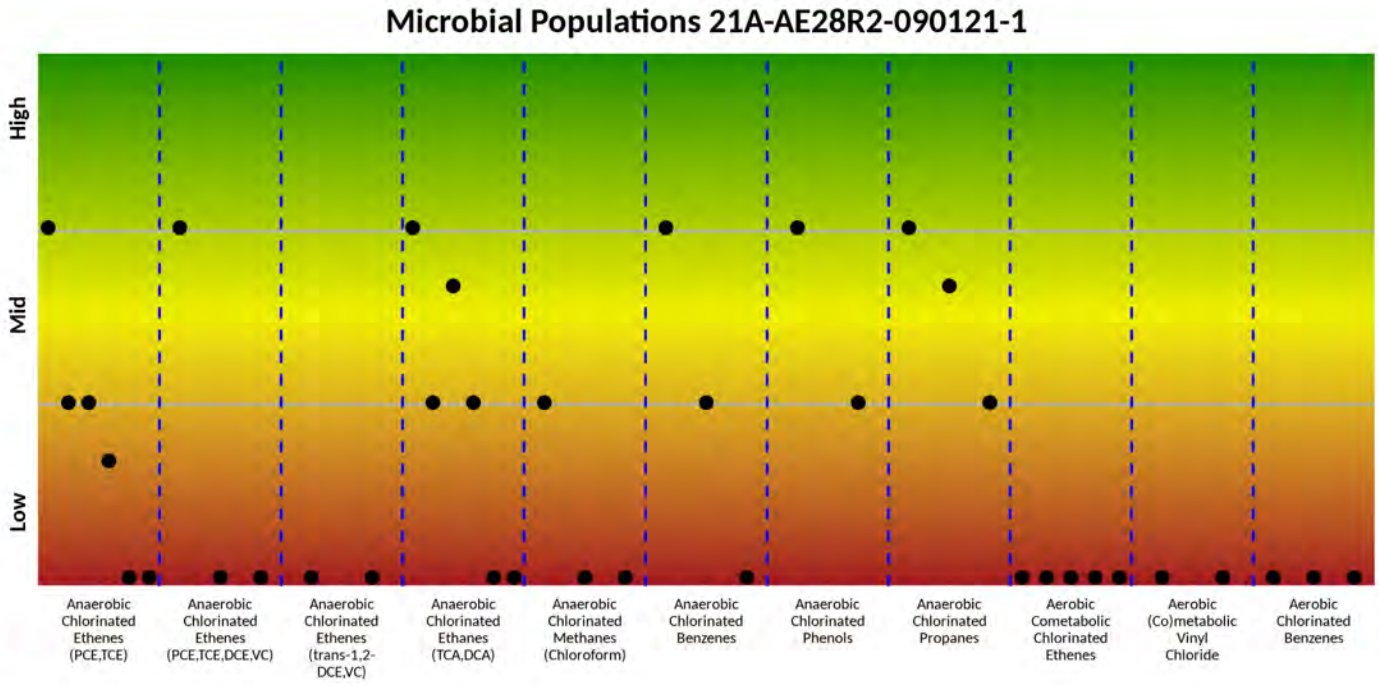

Figure 2: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

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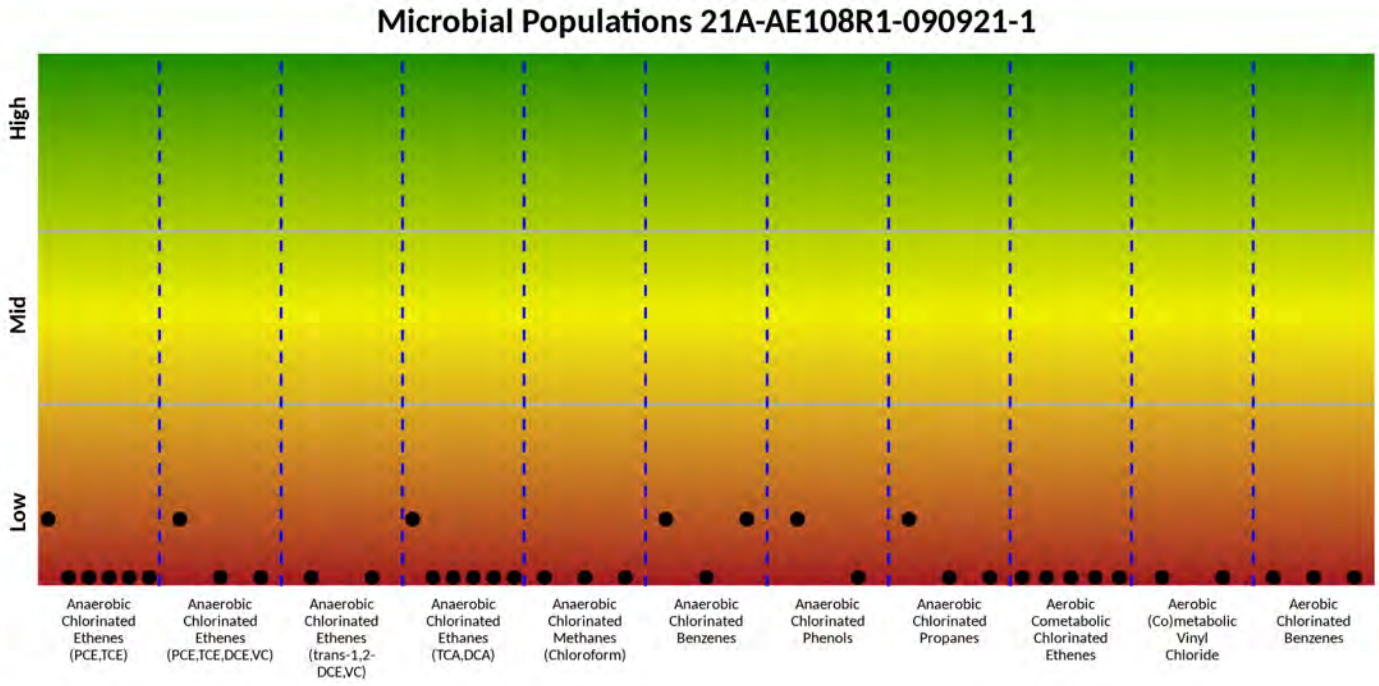

Figure 3: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

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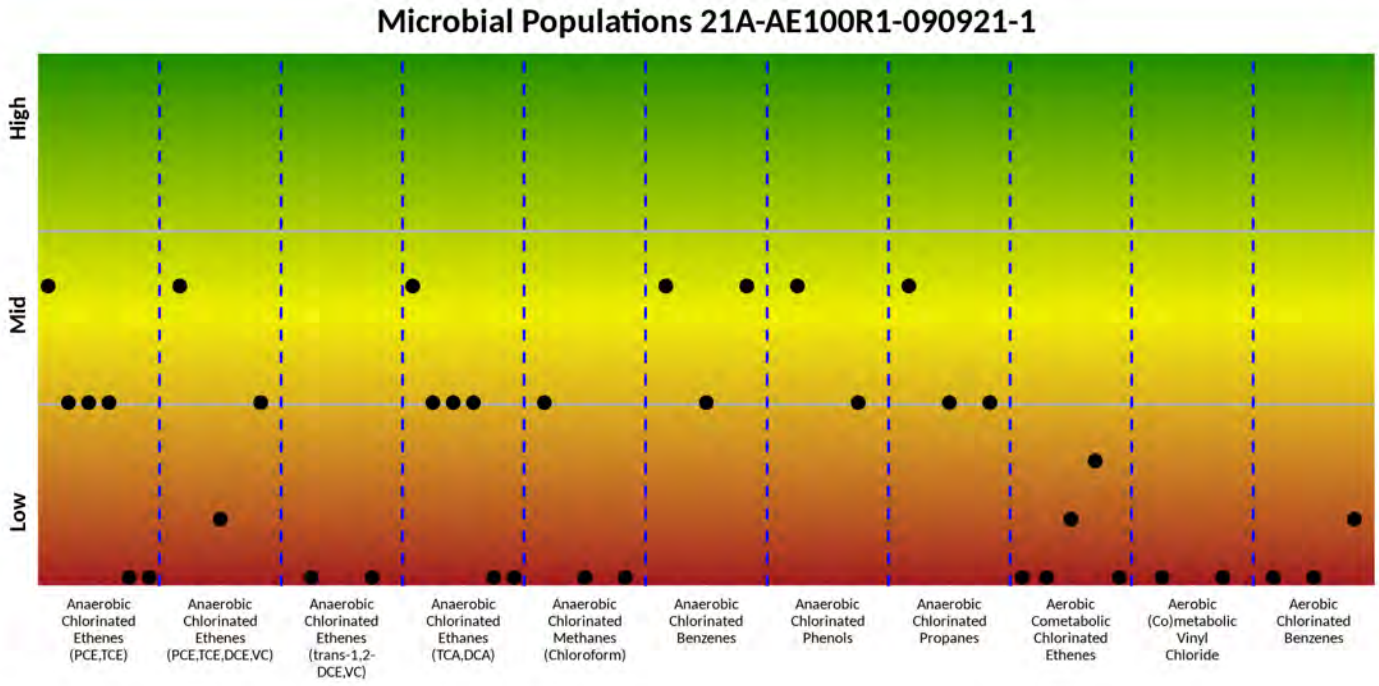

Figure 4: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

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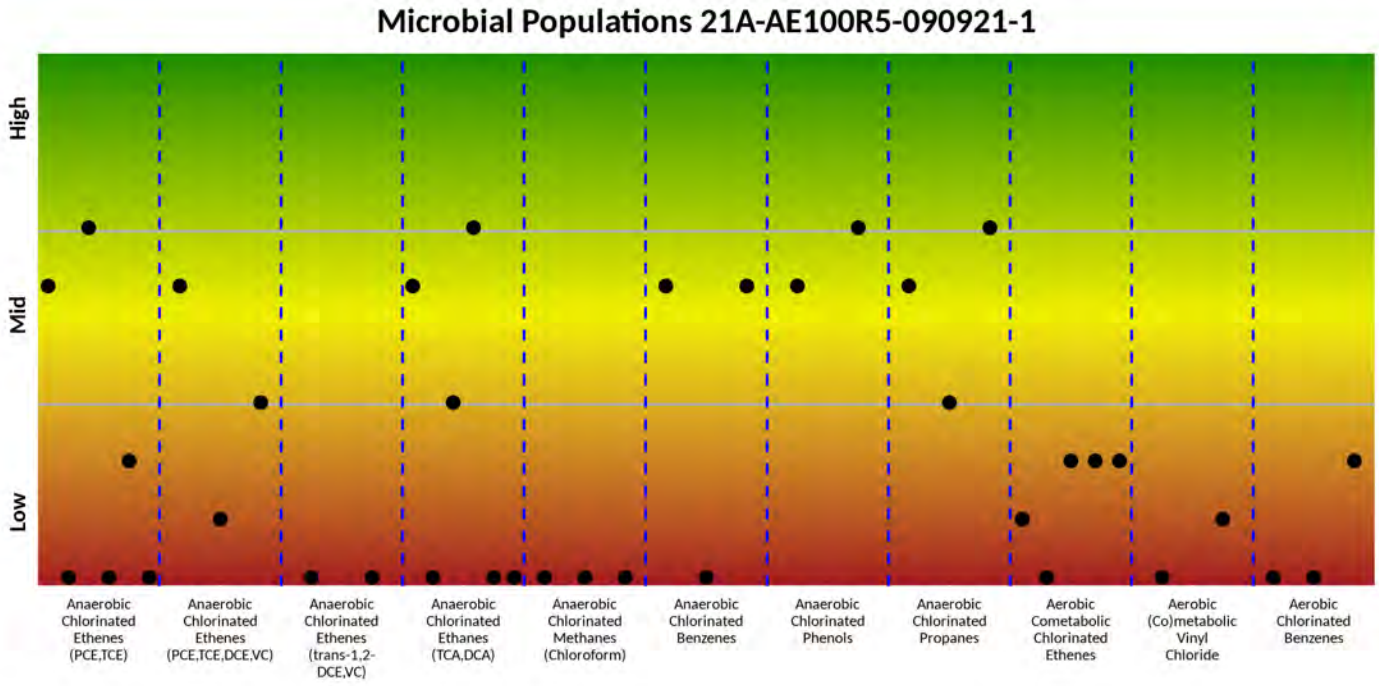

Figure 5: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

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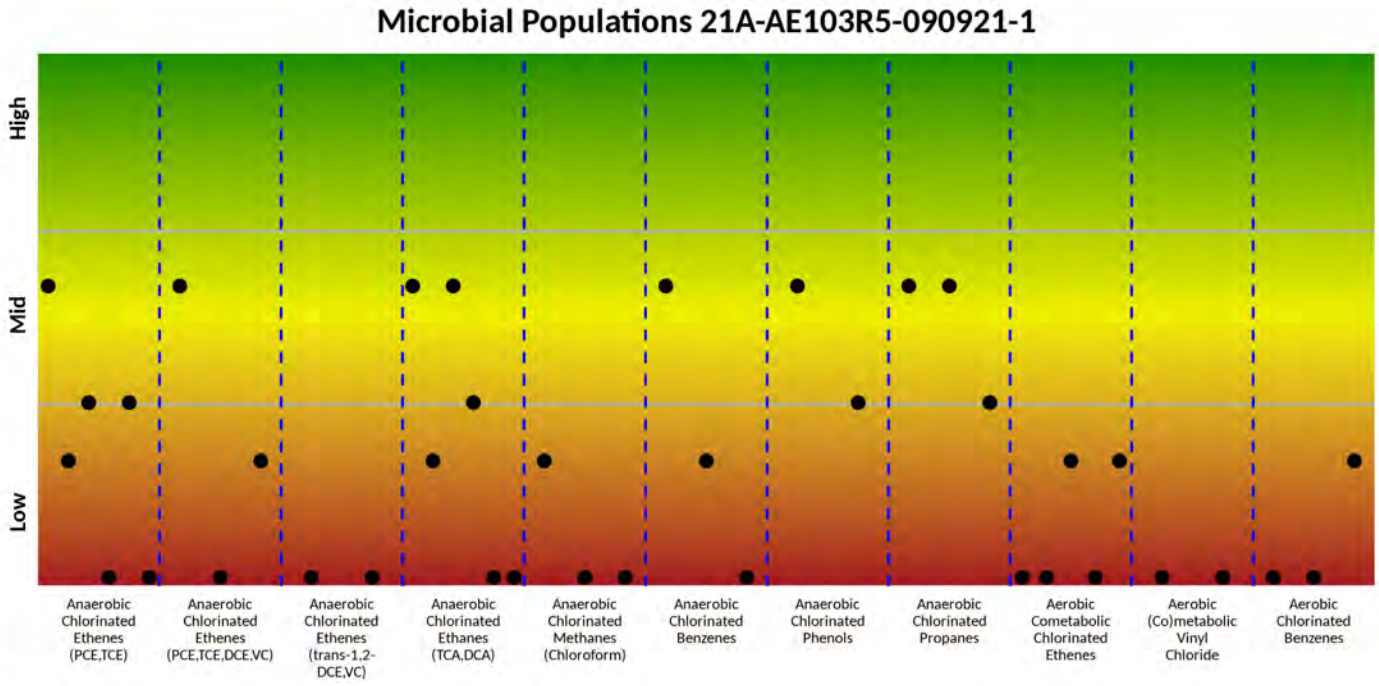

Figure 6: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

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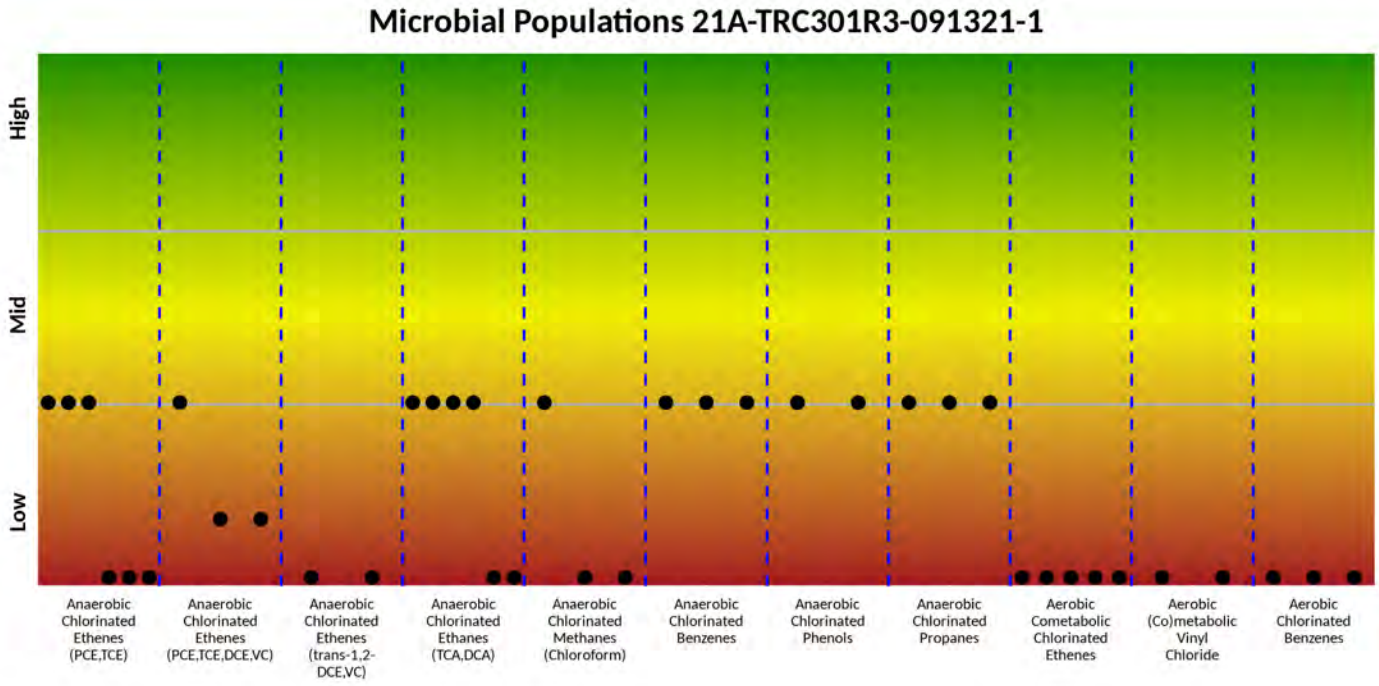

Figure 7: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

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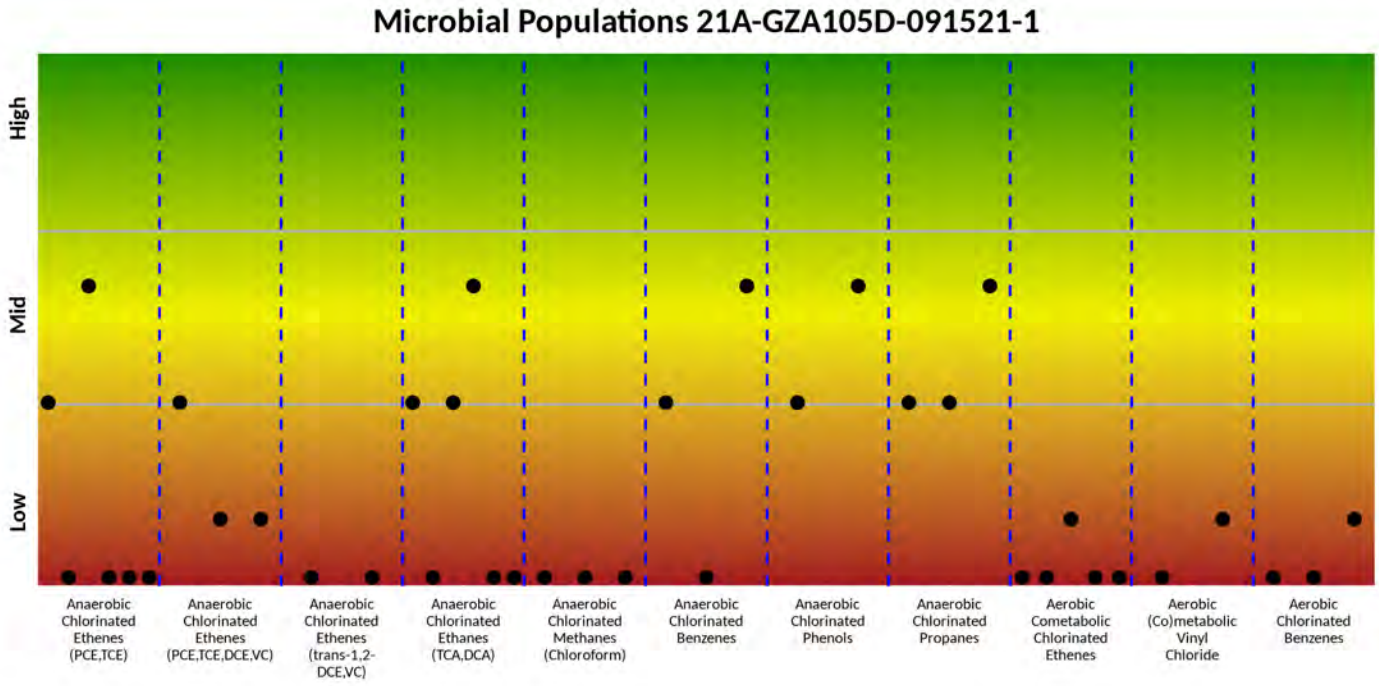

Figure 8: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

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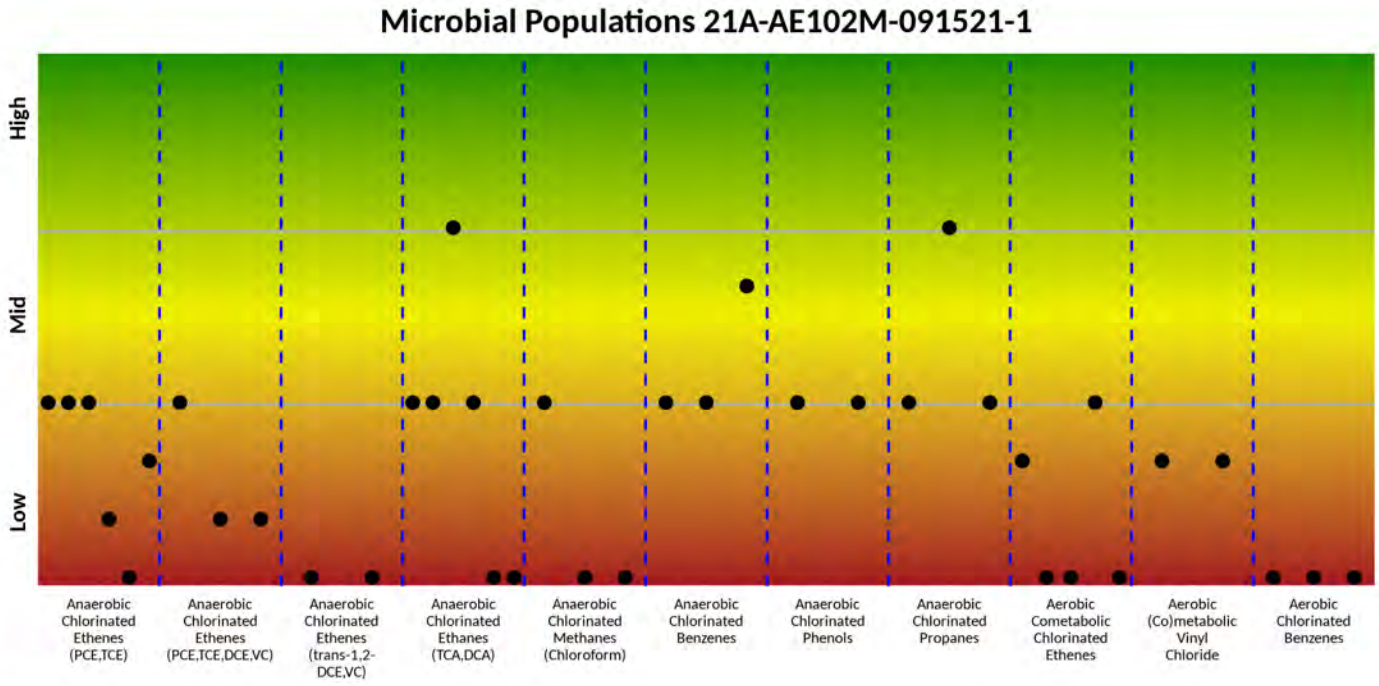

Figure 9: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

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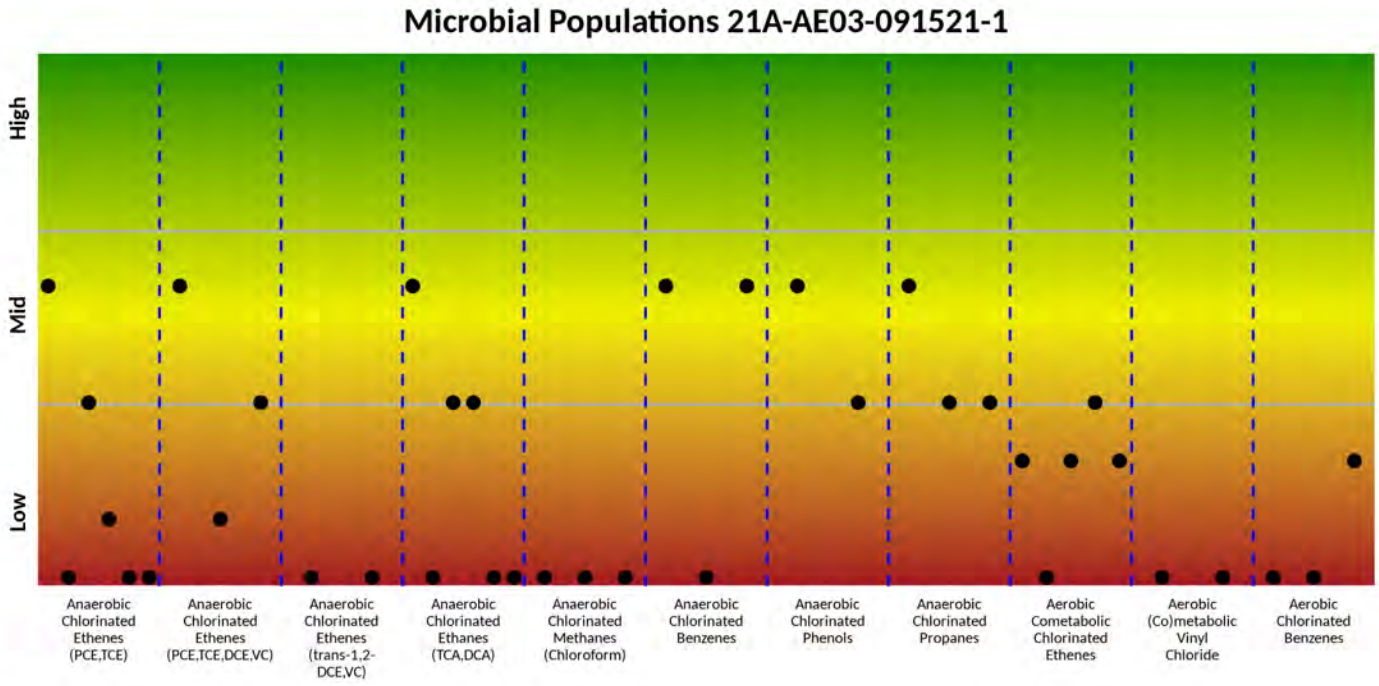

Figure 10: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

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Table 3: Summary of the QuantArray®-Chlor results for microorganisms responsible for reductive dechlorination for samples 21A-AE26R2-090121-1, 21A-AE28R2-090121-1, 21A-AE108R1-090921-1, 21A-AE100R1-090921-1, and 21A-AE100R5-090921-1.

Sample Name Sample Date	21A-AE26R2-090121-1 09/01/2021	21A-AE28R2-090121-1 09/01/2021	21A-AE108R1-090921-1 09/09/2021	21A-AE100R1-090921-1 09/09/2021	21A-AE100R5-090921-1 09/09/2021
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Dehalococcoides (DHC)	**8.53E+01**	**2.00E+04**	**3.00E-01 (J)**	**5.14E+03**	**8.59E+03**
tceA Reductase (TCE)	**2.00E-01 (J)**	**9.60E+01**	<5.00E-01	<5.00E-01	**2.00E-01 (J)**
BAV1 Vinyl Chloride Reductase (BVC)	<5.00E-01	<5.00E-01	<5.00E-01	**3.00E-01 (J)**	**3.90E+00**
Vinyl Chloride Reductase (VCR)	<5.00E-01	<5.00E-01	<5.00E-01	**3.36E+02**	**6.55E+02**
Dehalobacter spp. (DHBt)	**2.30E+02**	**1.35E+03**	<5.00E+00	**1.31E+03**	<5.00E+00
Dehalobacter DCM (DCM)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas spp. (DHG)	**9.70E+03**	**2.85E+04**	<5.00E+00	**2.72E+03**	**7.00E+03**
Desulfitobacterium spp. (DSB)	<5.00E+00	**1.16E+03**	**2.10E+00 (J)**	**8.62E+03**	**1.06E+05**
Dehalobium chlorocoercia (DECO)	**4.00E+01**	<5.00E+00	**4.00E+00 (J)**	**5.94E+03**	**2.77E+03**
Desulfuromonas spp. (DSM)	<5.00E+00	**3.93E+01**	<5.00E+00	**4.59E+02**	<5.00E+00

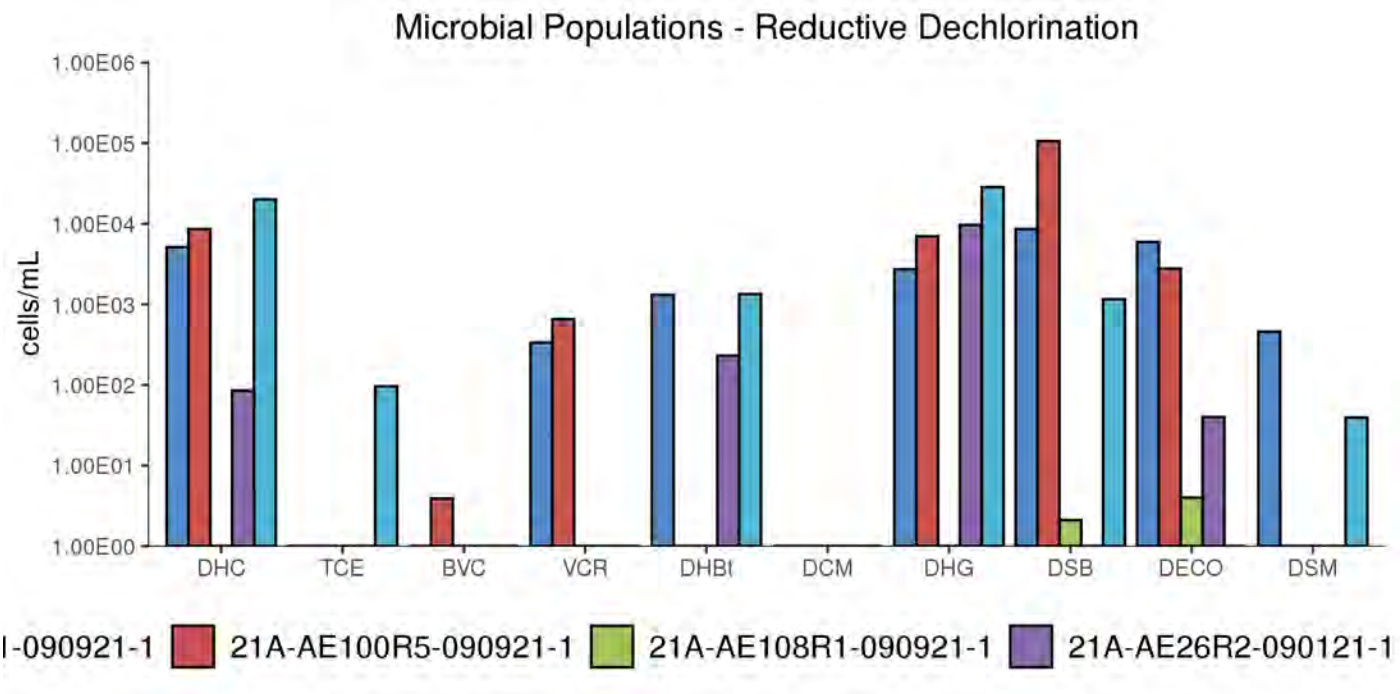

Figure 11: Comparison - microbial populations involved in reductive dechlorination.

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Table 4: Summary of the QuantArray®-Chlor results for microorganisms responsible for reductive dechlorination for samples 21A-AE26R2-090121-1, 21A-AE28R2-090121-1, 21A-AE108R1-090921-1, 21A-AE100R1-090921-1, and 21A-AE100R5-090921-1.

Sample Name Sample Date	21A-AE26R2-090121-1 09/01/2021	21A-AE28R2-090121-1 09/01/2021	21A-AE108R1-090921-1 09/09/2021	21A-AE100R1-090921-1 09/09/2021	21A-AE100R5-090921-1 09/09/2021
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Chloroform Reductase (CFR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-1)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	**3.46E+01**
PCE Reductase (PCE-2)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas trans-1,2-DCE Reductase (TDR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas cerA Reductase (CER)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00

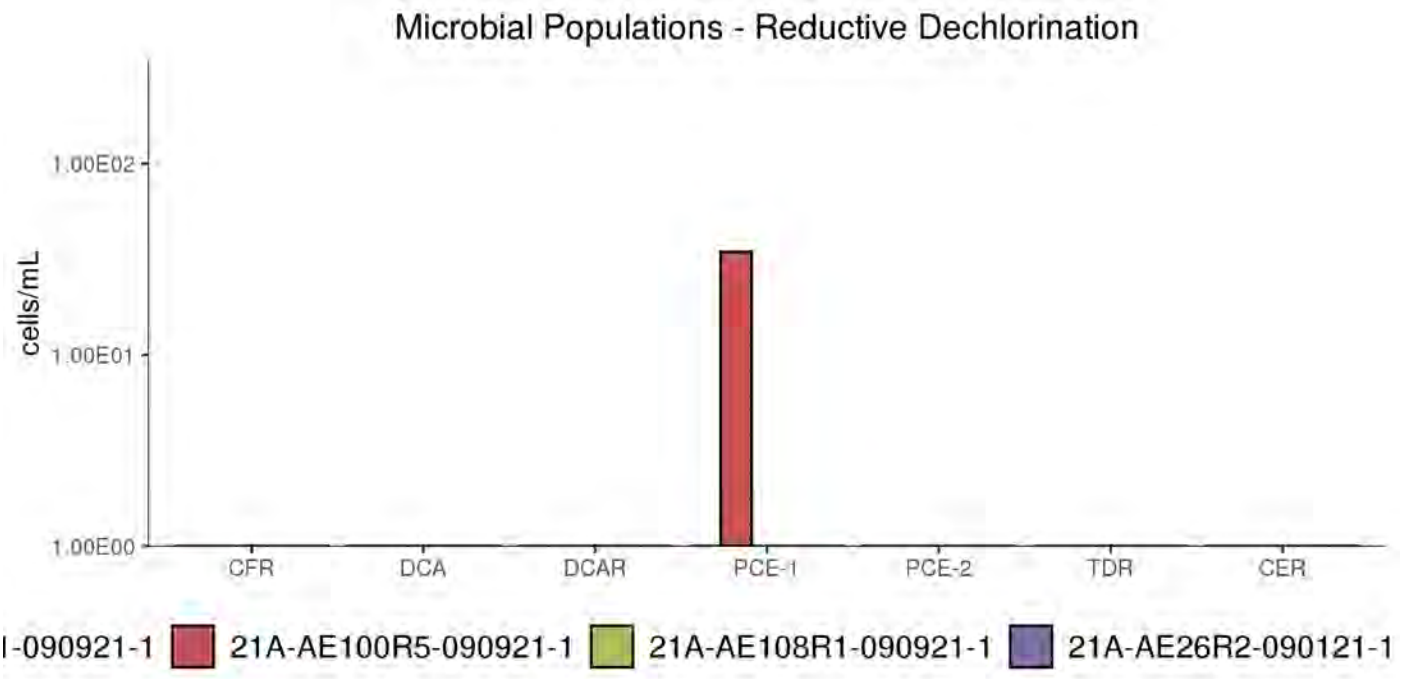

Figure 12: Comparison - microbial populations involved in reductive dechlorination.

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Table 5: Summary of the QuantArray®-Chlor results for microorganisms responsible for reductive dechlorination for samples 21A-AE103R5-090921-1, 21A-TRC301R3-091321-1, 21A-GZA105D-091521-1, 21A-AE102M-091521-1, and 21A-AE03-091521-1.

Sample Name Sample Date	21A-AE103R5-090921-1 09/09/2021	21A-TRC301R3-091321-1 09/13/2021	21A-GZA105D-091521-1 09/15/2021	21A-AE102M-091521-1 09/15/2021	21A-AE03-091521-1 09/15/2021
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Dehalococcoides (DHC)	**1.14E+03**	**1.22E+02**	**2.61E+02**	**1.19E+02**	**7.02E+03**
tceA Reductase (TCE)	<5.00E-01	<5.00E-01	<5.00E-01	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase (BVC)	<5.00E-01	**6.00E-01**	**3.70E+00**	**1.00E-01 (J)**	**3.80E+00**
Vinyl Chloride Reductase (VCR)	**7.77E+01**	**3.80E+00**	**4.90E+00**	**5.50E+00**	**4.09E+02**
Dehalobacter spp. (DHBt)	**2.08E+02**	**2.10E+03**	<5.00E+00	**1.31E+03**	<5.00E+00
Dehalobacter DCM (DCM)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas spp. (DHG)	**1.21E+04**	**2.97E+03**	**1.92E+03**	**1.14E+05**	**2.47E+03**
Desulfitobacterium spp. (DSB)	**8.94E+03**	**1.20E+03**	**1.91E+04**	**4.49E+03**	**1.16E+03**
Dehalobium chlorocoercia (DECO)	<5.00E+00	**5.53E+02**	**2.22E+03**	**3.03E+03**	**5.94E+03**
Desulfuromonas spp. (DSM)	<5.00E+00	<5.00E+00	<5.00E+00	**7.80E+00**	**5.10E+00**

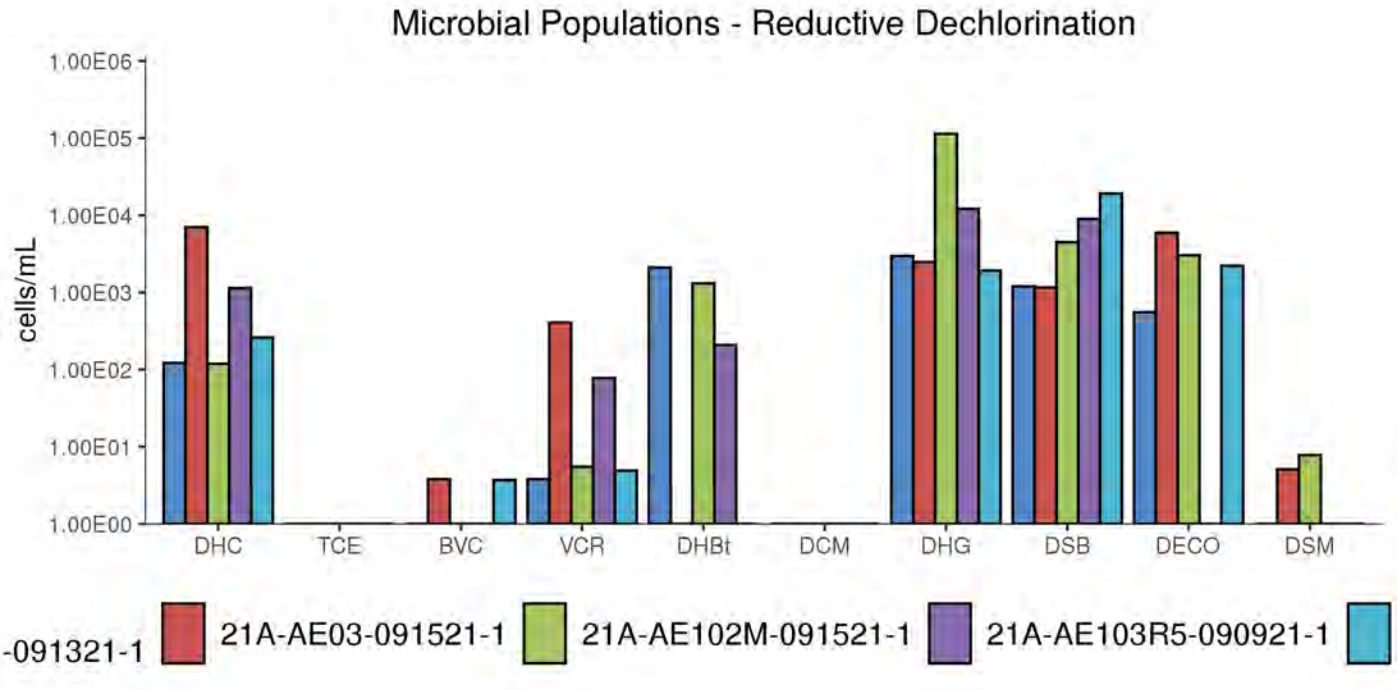

Figure 13: Comparison - microbial populations involved in reductive dechlorination.

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Table 6: Summary of the QuantArray®-Chlor results for microorganisms responsible for reductive dechlorination for samples 21A-AE103R5-090921-1, 21A-TRC301R3-091321-1, 21A-GZA105D-091521-1, 21A-AE102M-091521-1, and 21A-AE03-091521-1.

Sample Name	21A-AE103R5-090921-1	21A-TRC301R3-091321-1	21A-GZA105D-091521-1	21A-AE102M-091521-1	21A-AE03-091521-1
Sample Date	09/09/2021	09/13/2021	09/15/2021	09/15/2021	09/15/2021
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Chloroform Reductase (CFR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-1)	**1.27E+02**	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-2)	<5.00E+00	<5.00E+00	<5.00E+00	**6.60E+01**	<5.00E+00
Dehalogenimonas trans-1,2-DCE Reductase (TDR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas cerA Reductase (CER)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00

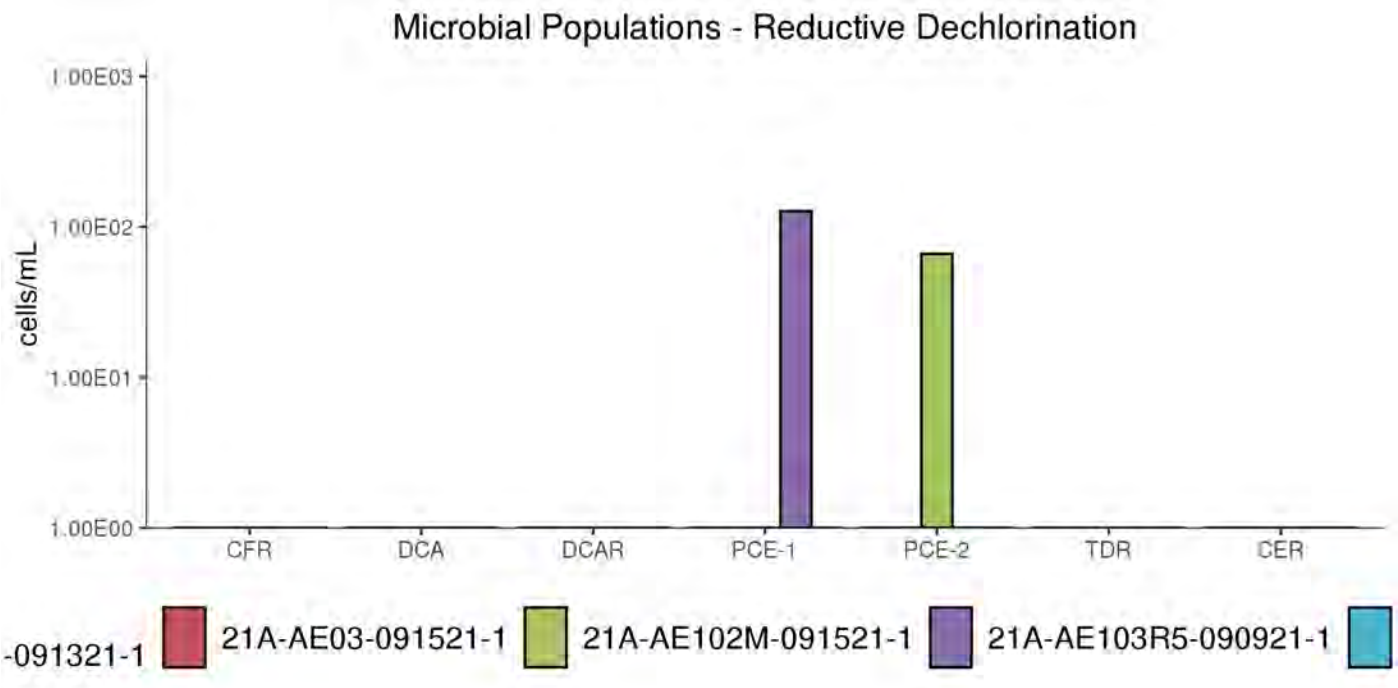

Figure 14: Comparison - microbial populations involved in reductive dechlorination.

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Table 7: Summary of the QuantArray®-Chlor results for microorganisms responsible for aerobic (co)metabolism for samples 21A-AE26R2-090121-1, 21A-AE28R2-090121-1, 21A-AE108R1-090921-1, 21A-AE100R1-090921-1, and 21A-AE100R5-090921-1.

Sample Name Sample Date	21A-AE26R2-090121-1 09/01/2021	21A-AE28R2-090121-1 09/01/2021	21A-AE108R1-090921-1 09/09/2021	21A-AE100R1-090921-1 09/09/2021	21A-AE100R5-090921-1 09/09/2021
Aerobic (Co)Metabolic	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Soluble Methane Monooxygenase (SMMO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	**4.96E+01**
Toluene Dioxygenase (TOD)	**8.80E+00**	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Phenol Hydroxylase (PHE)	<5.00E+00	<5.00E+00	<5.00E+00	**2.26E+01**	**7.35E+02**
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00	<5.00E+00	<5.00E+00	**1.12E+02**	**1.97E+02**
Toluene Monooxygenase (RMO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	**1.14E+02**
Ethene Monooxygenase (EtnC)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Epoxyalkane Transferase (EtnE)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	**3.39E+01**
Dichloromethane Dehalogenase (DCMA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00

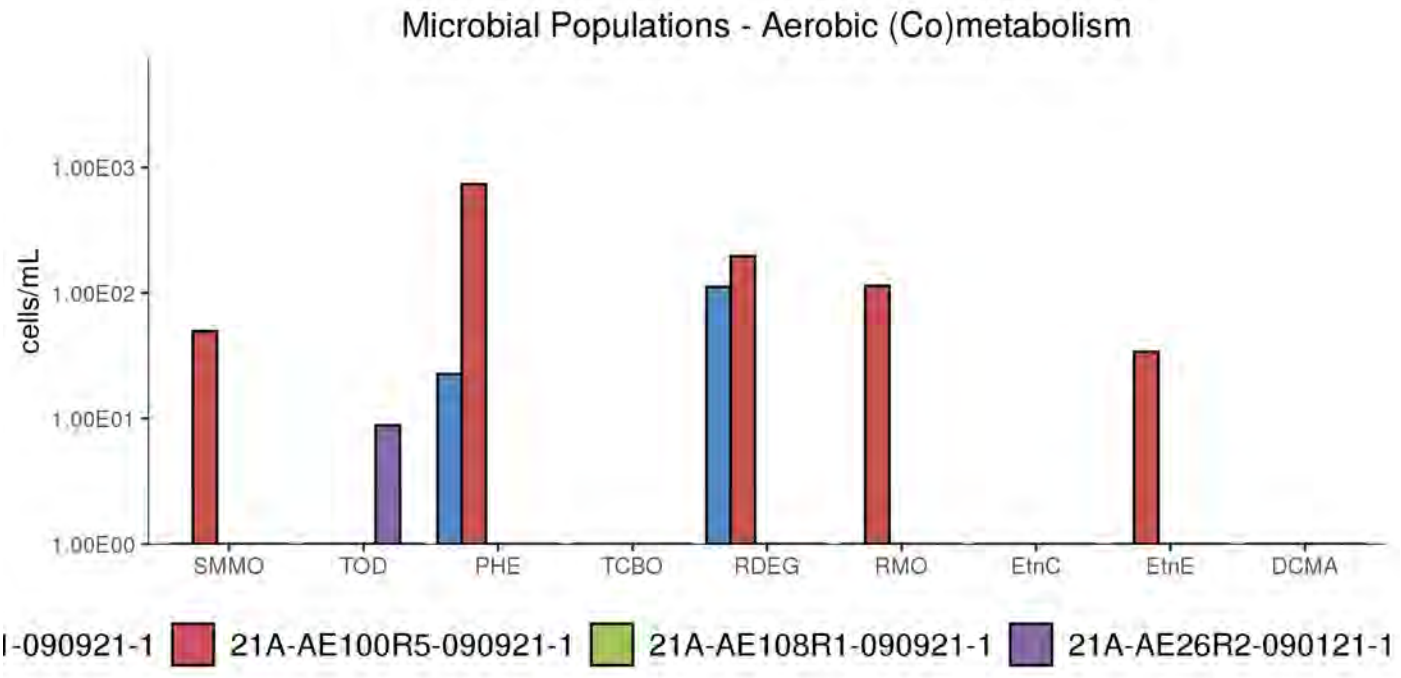

Figure 15: Comparison - microbial populations involved in aerobic (co)metabolism.

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Table 8: Summary of the QuantArray®-Chlor results for microorganisms responsible for aerobic (co)metabolism for samples 21A-AE103R5-090921-1, 21A-TRC301R3-091321-1, 21A-GZA105D-091521-1, 21A-AE102M-091521-1, and 21A-AE03-091521-1.

Sample Name	21A-AE103R5-090921-1	21A-TRC301R3-091321-1	21A-GZA105D-091521-1	21A-AE102M-091521-1	21A-AE03-091521-1
Sample Date	09/09/2021	09/13/2021	09/15/2021	09/15/2021	09/15/2021
Aerobic (Co)Metabolic	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Soluble Methane Monooxygenase (SMMO)	<5.00E+00	<5.00E+00	<5.00E+00	**2.36E+02**	**1.11E+02**
Toluene Dioxygenase (TOD)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Phenol Hydroxylase (PHE)	**2.45E+02**	<5.00E+00	**1.60E+01**	**9.30E+00**	**1.98E+02**
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00	<5.00E+00	<5.00E+00	**3.73E+03**	**1.82E+03**
Toluene Monooxygenase (RMO)	**3.34E+02**	<5.00E+00	<5.00E+00	<5.00E+00	**3.83E+02**
Ethene Monooxygenase (EtnC)	<5.00E+00	<5.00E+00	<5.00E+00	**1.39E+02**	<5.00E+00
Epoxyalkane Transferase (EtnE)	<5.00E+00	<5.00E+00	**2.26E+01**	**1.17E+02**	<5.00E+00
Dichloromethane Dehalogenase (DCMA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00

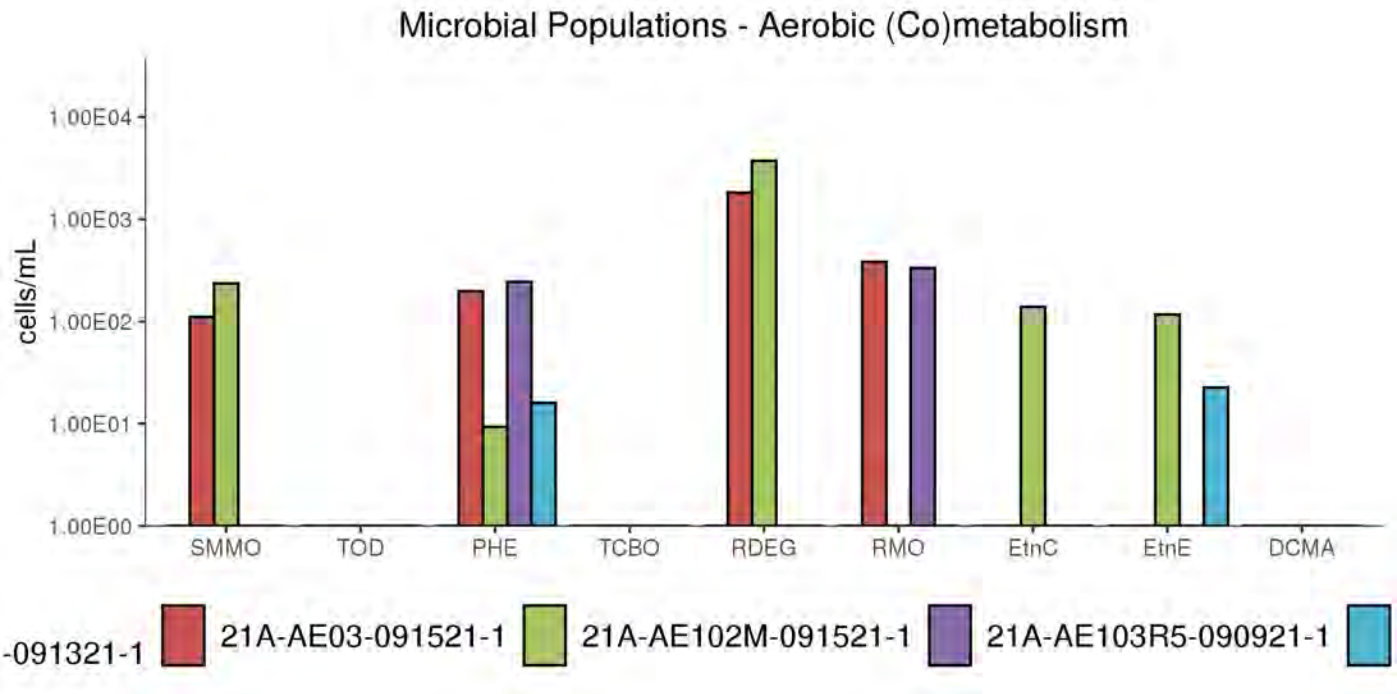

Figure 16: Comparison - microbial populations involved in aerobic (co)metabolism.

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Table 9: Summary of the QuantArray® results for total bacteria and other populations for samples 21A-AE26R2-090121-1, 21A-AE28R2-090121-1, 21A-AE108R1-090921-1, 21A-AE100R1-090921-1, and 21A-AE100R5-090921-1.

Sample Name Sample Date	21A-AE26R2-090121-1 09/01/2021	21A-AE28R2-090121-1 09/01/2021	21A-AE108R1-090921-1 09/09/2021	21A-AE100R1-090921-1 09/09/2021	21A-AE100R5-090921-1 09/09/2021
Other	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Total Eubacteria (EBAC)	**3.07E+04**	**2.72E+05**	**1.63E+03**	**9.22E+05**	**1.55E+06**
Sulfate Reducing Bacteria (APS)	**4.72E+03**	**4.72E+04**	<5.00E+00	**2.44E+04**	**1.03E+05**
Methanogens (MGN)	**6.84E+01**	**9.00E+00**	**1.00E-01 (J)**	**1.47E+04**	**2.59E+03**

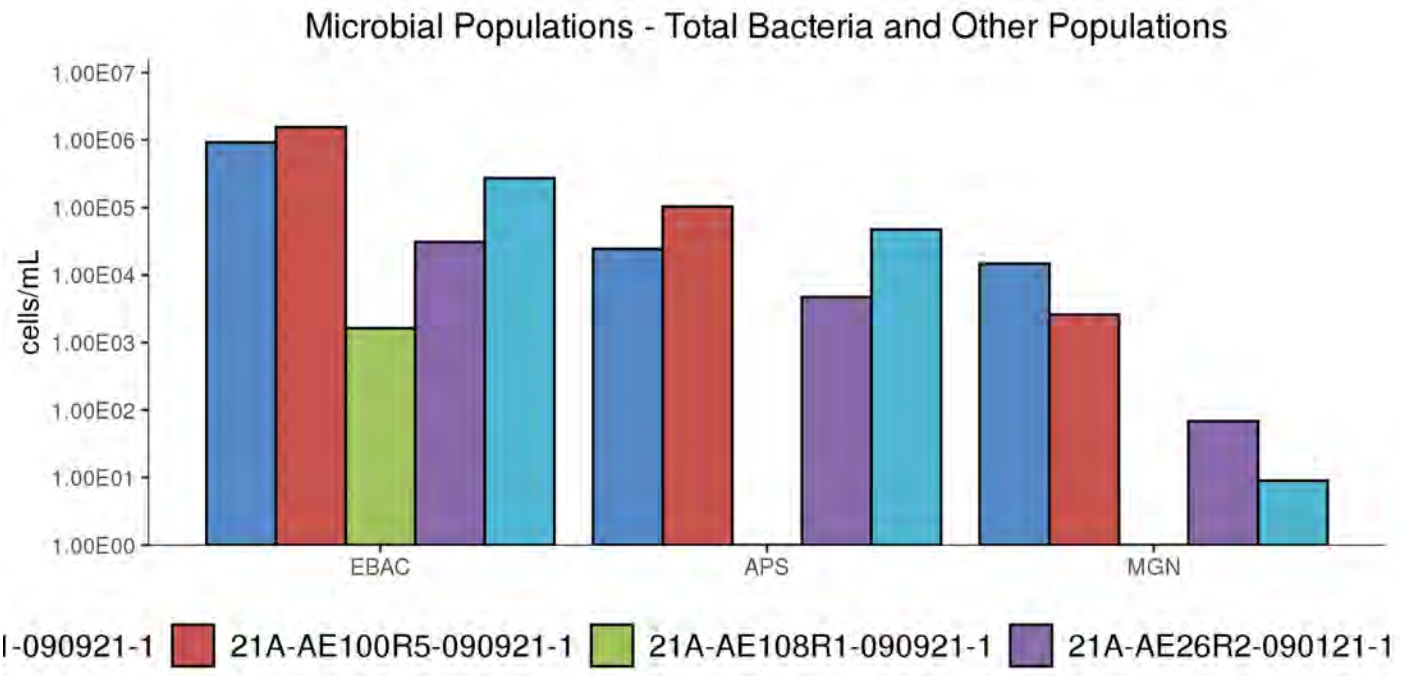

Figure 17: Comparison - microbial populations.

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Table 10: Summary of the QuantArray® results for total bacteria and other populations for samples 21A-AE103R5-090921-1, 21A-TRC301R3-091321-1, 21A-GZA105D-091521-1, 21A-AE102M-091521-1, and 21A-AE03-091521-1.

Sample Name	21A-AE103R5-090921-1	21A-TRC301R3-091321-1	21A-GZA105D-091521-1	21A-AE102M-091521-1	21A-AE03-091521-1
Sample Date	**09/09/2021**	**09/13/2021**	**09/15/2021**	**09/15/2021**	**09/15/2021**
Other	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Total Eubacteria (EBAC)	**2.85E+05**	**1.89E+05**	**5.33E+06**	**3.38E+06**	**1.43E+07**
Sulfate Reducing Bacteria (APS)	**6.54E+03**	**3.65E+04**	**3.32E+05**	**2.50E+04**	**1.35E+05**
Methanogens (MGN)	**4.30E+00 (J)**	**3.10E+00 (J)**	**1.73E+01**	<5.00E+00	**8.77E+02**

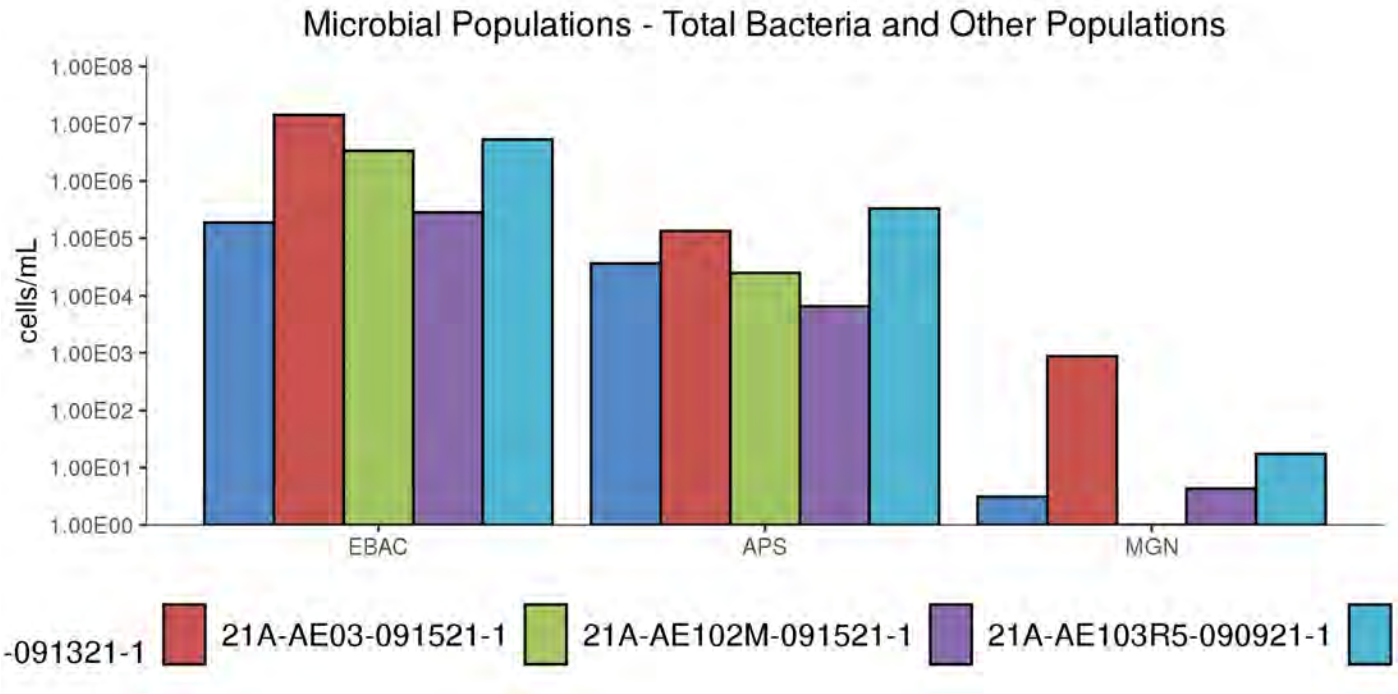

Figure 18: Comparison - microbial populations.

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Interpretation

The overall purpose of the QuantArray®-Chlor is to give site managers the ability to simultaneously yet economically evaluate the potential for biodegradation of a spectrum of common chlorinated contaminants through a multitude of anaerobic and aerobic (co)metabolic pathways in order to provide a clearer and more comprehensive view of contaminant biodegradation. The following discussion describes the interpretation of results in general terms and is meant to serve as a guide.

Reductive Dechlorination - Chlorinated Ethenes: While a number of bacterial cultures including *Dehalococcoides*, *Dehalobacter*, *Desulfitobacterium*, and *Desulfuromonas* spp. capable of utilizing PCE and TCE as growth-supporting electron acceptors have been isolated [1–5], *Dehalococcoides* may be the most important because they are the only bacterial group that has been isolated to date which is capable of complete reductive dechlorination of PCE to ethene [6]. In fact, the presence of *Dehalococcoides* has been associated with complete reductive dechlorination to ethene at sites across North America and Europe [7], and Lu et al. [8] have proposed using a *Dehalococcoides* concentration of 1 x 10^4 cells/mL as a screening criterion to identify sites where biological reductive dechlorination is predicted to proceed at "generally useful" rates.

At chlorinated ethene sites, any "stall" leading to the accumulation of daughter products, especially vinyl chloride, would be a substantial concern. While *Dehalococcoides* concentrations greater than 1 x 10^4 cells/mL correspond to ethene production and useful rates of dechlorination, the range of chlorinated ethenes degraded varies by strain within the *Dehalococcoides* genus [6, 9], and the presence of co-contaminants and competitors can have complex impacts on the halorespiring microbial community [10–15]. Therefore, QuantArray®-Chlor also provides quantification of a suite of reductive dehalogenase genes (PCE, TCE, BVC, VCR, CER, and TDR) to more definitively confirm the potential for reductive dechlorination of all chlorinated ethene compounds including vinyl chloride.

Perhaps most importantly, QuantArray®-Chlor quantifies TCE reductase (TCE) and both known vinyl chloride reductase genes (BVC, VCR) from *Dehalococcoides* to conclusively evaluate the potential for complete reductive dechlorination of chlorinated ethenes to nontoxic ethene [16–18]. In addition, the analysis also includes quantification of reductive dehalogenase genes from *Dehalogenimonas* spp. capable of reductive dechlorination of chlorinated ethenes. More specifically, these are the trans-1,2-DCE dehalogenase gene (TDR) from strain WBC-2 [19] and the vinyl chloride reductase gene (CER) from GP, the only known organisms other than *Dehalococcoides* capable of vinyl chloride reduction [20]. Finally, PCE reductase genes responsible for sequential reductive dechlorination of PCE to *cis*-DCE by *Sulfurospirillum* and *Geobacter* spp. are also quantified. In mixed cultures, evidence increasingly suggests that partial dechlorinators like *Sulfurospirillum* and *Geobacter* may be responsible for the majority of reductive dechlorination of PCE to TCE and *cis*-DCE while *Dehalococcoides* functions more as *cis*-DCE and vinyl chloride reducing specialists [10, 21].

Reductive Dechlorination - Chlorinated Ethanes: Under anaerobic conditions, chlorinated ethanes are susceptible to reductive dechlorination by several groups of halorespiring bacteria including *Dehalobacter*, *Dehalogenimonas*, and *Dehalococcoides*. While the reported range of chlorinated ethanes utilized varies by genus, species, and sometimes at the strain level, several general observations can be made regarding biodegradation pathways and daughter product formation. *Dehalobacter* spp. have been isolated that are capable of sequential reductive dechlorination of 1,1,1-TCA through 1,1-DCA to chloroethane [13]. Biodegradation of 1,1,2-TCA by several halorespiring bacteria including *Dehalobacter* and *Dehalogenimonas* spp. proceeds via dichloroelimination producing vinyl chloride [22–24]. Similarly, 1,2-DCA biodegradation by *Dehalobacter*, *Dehalogenimonas*, and *Dehalococcoides* occurs via dichloroelimination producing ethene. While not utilized by many *Desulfitobacterium* isolates, at least one strain, *Desulfitobacterium dichloroeliminans* strain DCA1, is also capable of dichloroelimination of 1,2-DCA [25]. The 1,2-dichloroethane reductive dehalogenase gene (DCAR) from members of *Desulfitobacterium* and *Dehalobacter* is known to dechlorinate 1,2-DCA to ethene, while the 1,1-dichloroethane reductive dehalogenase (DCA) targets the gene responsible for 1,1-DCA dechlorination in some strains of *Dehalobacter*. In addition to chloroform,chloroform reductase (CFR) has also been shown to be responsible for reductivedechlorination of 1,1,1-TCA [26].

Reductive Dechlorination - Chlorinated Methanes: Chloroform is a common co-contaminant at chlorinated solvent sites and can inhibit reductive dechlorination of chlorinated ethenes. Grostern et al. demonstrated that a *Dehalobacter* population was capable of reductive dechlorination of chloroform to produce dichloromethane [27]. The *cfrA* gene encodes the reductase which catalyzes this initial step in chloroform biodegradation [26]. Justicia-Leon et al. have since shown that dichloromethane can support growth of a distinct group of *Dehalobacter* strains via fermentation [28]. The *Dehalobacter* DCM assay targets the 16S rRNA gene of these strains.

Reductive Dechlorination - Chlorinated Benzenes: Chlorinated benzenes are an important class of industrial solvents and chemical intermediates in the production of drugs, dyes, herbicides, and insecticides. The physical-chemical properties of chlorinated benzenes as well as susceptibility to biodegradation are functions of their degree of chlorination and the positions of chlorine substituents. Under anaerobic conditions, reductive dechlorination of higher chlorinated benzenes including hexachlorobenzene (HCB),

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pentachlorobenzene (PeCB), tetrachlorobenzene (TeCB) isomers, and trichlorobenzene (TCB) isomers has been well documented [29], although biodegradation of individual compounds and isomers varies between isolates. For example, *Dehalococcoides* strain CBDB1 reductively dechlorinats HCB, PeCB, all three TeCB isomers, 1,2,3-TCB, and 1,2,4-TCB [9, 30]. *Dehalobium chlorocoercia* DF-1 has been shown to be capable of reductive dechlorination of HCB, PeCB, and 1,2,3,5-TeCB [31]. The dichlorobenzene (DCB) isomers and chlorobenzene (CB) were considered relatively recalcitrant under anaerobic conditions. However, new evidence has demonstrated reductive dechlorination of DCBs to CB and CB to benzene [32] with corresponding increases in concentrations of *Dehalobacter* spp. [33].

Reductive Dechlorination - Chlorinated Phenols: Pentachlorophenol (PCP) was one of the most widely used biocides in the U.S. and despite residential use restrictions, is still extensively used industrially as a wood preservative. Along with PCP, the tetrachlorophenol and trichlorophenol isomers were also used as fungicides in wood preserving formulations. 2,4-Dichlorophenol and 2,4,5-TCP were used as chemical intermediates in herbicide production (e.g. 2,4-D) and chlorophenols are known byproducts of chlorine bleaching in the pulp and paper industry. While the range of compounds utilized varies by strain, some *Dehalococcoides* isolates are capable of reductive dechlorination of PCP and other chlorinated phenols. For example, *Dehalococcoides* strain CBDB1 is capable of utilizing PCP, all three tetrachlorophenol (TeCP) congeners, all six trichlorophenol (TCP) congeners, and 2,3-dichlorophenol (2,3-DCP). PCP dechlorination by strain CBDB1 produces a mixture of 3,5-DCP, 3,4-DCP, 2,4-DCP, 3-CP, and 4-CP [34]. In the same study, however, *Dehalococcoides* strain 195 dechlorinated a more narrow spectrum of chlorophenols which included 2,3-DCP, 2,3,4-TCP, and 2,3,6-TCP, but no other TCPs or PCP. Similar to *Dehalococcoides*, some species and strains of *Desulfitobacterium* are capable of utilizing PCP and other chlorinated phenols. *Desulfitobacterium hafniense* PCP-1 is capable of reductive dechlorination of PCP to 3-CP [35]. However, the ability to biodegrade PCP is not universal among *Desulfitobacterium* isolates. *Desulfitobacterium* sp. strain PCE1 and *D. chlororespirans* strain Co23, for example, can utilize some TCP and DCP isomers, but not PCP for growth [2, 36].

Reductive Dechlorination - Chlorinated Propanes: *Dehalogenimonas* is a recently described bacterial genus of the phylum Chloroflexi which also includes the well-known chloroethene-respiring *Dehalococcoides* [23]. The *Dehalogenimonas* isolates characterized to date are also halorespiring bacteria, but utilize a rather unique range of chlorinated compounds as electron acceptors including chlorinated propanes (1,2,3-TCP and 1,2-DCP) and a variety of other vicinally chlorinated alkanes including 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, and 1,2-dichloroethane [23].

Aerobic - Chlorinated Ethene Cometabolism: Under aerobic conditions, several different types of bacteria including methane-oxidizing bacteria (methanotrophs), and many benzene, toluene, ethylbenzene, xylene, and (BTEX)-utilizing bacteria can cometabolize or co-oxidize TCE, DCE, and vinyl chloride [37]. In general, cometabolism of chlorinated ethenes is mediated by monooxygenase enzymes with "relaxed' specificity that oxidize a primary (growth supporting) substrate (*e.g.* methane) and co-oxidize the chlorinated compound (*e.g.*TCE). QuantArray®-Chlor provides quantification of a suite of genes encoding oxygenase enzymes capable of co-oxidation of chlorinated ethenes including soluble methane monooxygenase (sMMO). Soluble methane monooxygenases co-oxidize a broad range of chlorinated compounds [38–41] including TCE, *cis*-DCE, and vinyl chloride. Furthermore, soluble methane monooxygenases are generally believed to support greater rates of aerobic cometabolism [40]. QuantArray®-Chlor also quantifies aromatic oxygenase genes encoding ring hydroxylating toluene monooxygenase genes (RMO, RDEG), toluene dioxygenase (TOD) and phenol hydroxylases (PHE) capable of TCE co-oxidation [42–46]. TCE or a degradation product has been shown to induce expression of toluene monooxygenases in some laboratory studies [43, 47] raising the possibility of TCE cometabolism with an alternative (non-aromatic) growth substrate. Moreover, while a number of additional factors must be considered, recent research under ESTCP Project 201584 has shown positive correlations between concentrations of monooxygenase genes (soluble methane monooxygenase, ring hydroxylating monooxygenases, and phenol hydroxylase) and the rate of TCE degradation [48].

Aerobic - Chlorinated Ethane Cometabolism: While less widely studied than cometabolism of chlorinated ethenes, some chlorinated ethanes are also susceptible to co-oxidation. As mentioned previously, soluble methane monooxygenases (sMMO) exhibit very relaxed specificity. In laboratory studies, sMMO has been shown to co-oxidize a number of chlorinated ethanes including 1,1,1-TCA and 1,2-DCA [38, 40].

Aerobic - Vinyl Chloride Cometabolism: Beginning in the early 1990s, numerous microcosm studies demonstrated aerobic oxidation of vinyl chloride under MNA conditions without the addition of exogenous primary substrates. Since then, strains of

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Mycobacterium, *Nocardioides*, *Pseudomonas*, *Ochrobactrum*, and *Ralstonia* species have been isolated which are capable of aerobic growth on both ethene and vinyl chloride (see Mattes et al. [49] for a review). The initial steps in the pathway are the monooxygenase (*etn*ABCD) catalyzed conversion of ethene and vinyl chloride to their respective epoxyalkanes (epoxyethane and chlorooxirane), followed by epoxyalkane:CoM transferase (*etn*E) mediated conjugation and breaking of the epoxide [50].

Aerobic - Chlorinated Benzenes: In general, chlorobenzenes with four or less chlorine groups are susceptible to aerobic biodegradation and can serve as growth-supporting substrates. Toluene dioxygenase (TOD) has a relatively relaxed substrate specificity and mediates the incorporation of both atoms of oxygen into the aromatic ring of benzene and substituted benzenes (toluene and chlorobenzene). Comparison of TOD levels in background and source zone samples from a CB-impacted site suggested that CBs promoted growth of TOD-containing bacteria [51]. In addition, aerobic biodegradation of some trichlorobenzene and even tetrachlorobenzene isomers is initiated by a group of related trichlorobenzene dioxygenase genes (TCBO). Finally, phenol hydroxylases catalyze the continued oxidation and in some cases, the initial oxidation of a variety of monoaromatic compounds. In an independent study, significant increases in numbers of bacteria containing PHE genes corresponded to increases in biodegradation of DCB isomers [51].

Aerobic - Chlorinated Methanes: Many aerobic methylotrophic bacteria, belonging to diverse genera (*Hyphomicrobium*, *Methylobacterium*, *Methylophilus*, *Pseudomonas*, *Paracoccus*, and *Alibacter*) have been isolated which are capable of utilizing dichloromethane (DCM) as a growth substrate. The DCM metabolic pathway in methylotrophic bacteria is initiated by a dichloromethane dehalogenase (DCMA) gene. DCMA is responsible for aerobic biodegradation of dichloromethane by methylotrophs by first producing formaldehyde which is then further oxidized [52]. As discussed in previous sections, soluble methane monooxygenase (sMMO) exhibits relaxed specificity and co-oxidizes a broad spectrum of chlorinated hydrocarbons. In addition to chlorinated ethenes, sMMO has been shown to co-oxidize chloroform in laboratory studies [38, 41].

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Identifier: 020SI **Date Rec:** 09/02/2021 **Report Date:** 10/15/2021

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Project: LMC Wilmington

MI Project Number: **020SI**
Date Received: 09/02/2021

Sample Information

Client Sample ID:	**21A-AE26R2-090121-1**	**21A-AE28R2-090121-1**	**21A-AE108R1-090921-1**	**21A-AE100R1-090921-1**	**21A-AE100R5-090921-1**
Sample Date:	09/01/2021	09/01/2021	09/09/2021	09/09/2021	09/09/2021
Analyst/Reviewer:	MW/KK	MW/KK	MW/KK	MW/KK	MW/KK

Carbon	**Units**					
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**-27.6**	**-32.0**	**NA**	**-21.7**	**-22.6**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**-24.0**	**NA**	**-25.6**	**-24.4**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-3.6**	**-25.4**	**NA**	**-26.5**	**-25.0**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**-13.1**	**NA**	**NA**	**ND**	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

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Client Sample ID:	21A-AE103R5-090921-1	21A-EMW11R2-090821-1	21A-EMW10R-090821-1	21A-STM8D-090821-1	21A-TRC301R3-091321-1
Sample Date:	09/09/2021	09/08/2021	09/08/2021	09/08/2021	09/13/2021
Analyst/Reviewer:	MW/KK	MW/KK	MW/KK	MW/KK	MW/KK

Carbon	Units					
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**-21.9**	**-28.9**	**-18.6**	**-22.1**	**-24.0**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**-22.1**	**NA**	**-11.2 (J)**	**NA**	**-24.2**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-25.6**	**-26.5**	**-2.9**	**NA**	**-23.4**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**NA**	**NA**	**NA**	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

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Sample Date:	09/13/2021	09/13/2021	09/13/2021	09/14/2021	09/14/2021
Analyst/Reviewer:	MW/KK	MW/KK	MW/KK	MW/KK	MW/KK

Carbon	**Units**					
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**-26.5**	**-17.9**	**-25.7**	**NA**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**-19.1**	**-23.8**	**ND**	**NA**	**-23.1**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-19.7**	**-23.3**	**-11.6**	**5.7**	**-25.7**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**NA**	**ND**	**NA**	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

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Client Sample ID:	**21A-GZA105D-0 91521-1**	**21A-AE102M-0 91521-1**	**21A-STM8R1-0 92221-1**	**21A-AE112R6-0 92221-1**
Sample Date:	09/15/2021	09/15/2021	09/22/2021	09/22/2021
Analyst/Reviewer:	MW/KK	MW/KK	MW/KK	MW/KK

Carbon	**Units**				
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**-25.7**	**-15.8**	**NA**	**-31.3**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**-21.5**	**-20.5**	**NA**	**NA**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-18.2**	**-16.2**	**-21.1**	**ND**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**ND**	**ND**	**NA**	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

Quality Assurance/Quality Control Data

Samples Received **9/2/2021**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control (‰ Std. Dev.)*	Blank
$^{13}C/^{12}C$ PCE (‰)	09/02/2021	10/13/2021	2 °C	0.0	Pass
$^{13}C/^{12}C$ TCE (‰)	09/02/2021	10/13/2021	2 °C	0.4	Pass
$^{13}C/^{12}C$ cis-DCE (‰)	09/02/2021	10/13/2021	2 °C	0.4	Pass
$^{13}C/^{12}C$ Vinyl Chloride (‰)	09/02/2021	10/13/2021	2 °C	0.3	Pass

* $\delta^{13}C$ positive control values are within +- 0.5‰ of true value.

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Identifier: 020SI **Date Rec:** 09/02/2021 **Report Date:** 10/15/2021

Client Project #: 60552044.25 **Client Project Name:** LMC Wilmington

Purchase Order #: 137519 Line#1, Task Code 25

Comments: VOC data for sample 1 received from client on 9/13/2021. VOC data for sample 2 received from client on 9/16/2021. VOC data for samples 7-9 received from client on 9/16/2021. VOC data for samples 3-6 and 10-11 received from client on 9/23/2021. VOC data for samples 12-17 and 21-22 received from client on 9/29/2021. Compounds that were expected to be above CSIA limit of detection (LOD) after required dilutions due to the given VOC data received from the client and were not found in the analysis have been listed as “Not Detected” (ND). Compounds expected to be below the CSIA limit of detection (LOD) after required dilutions were not analyzed (NA). Sample MI ID 020SI-8 (client ID # 21A-EMW10R-090821-1) results for 13C/12C Vinyl Chloride analysis revised 10/15/2021 from ND to NA.

ANALYTICAL REPORT

Lab Number:	L2147615
Client:	AECOM 250 Apollo Drive Chelmsford, MA 01824
ATTN:	Scott Olson
Phone:	(978) 905-2351
Project Name:	LOCKHEED MARTIN
Project Number:	60552044.25
Report Date:	09/17/21

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25

Lab Number: L2147615
Report Date: 09/17/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2147615-01	21A-AE26R1-090121-1	WATER	WILMINGTON, MA	09/01/21 11:50	09/03/21
L2147615-02	21A-AE28R2-090121-1	WATER	WILMINGTON, MA	09/01/21 14:15	09/03/21
L2147615-03	21A-AE109R5-090221-1	WATER	WILMINGTON, MA	09/02/21 14:25	09/03/21
L2147615-04	21A-AE104R4-090221-1	WATER	WILMINGTON, MA	09/02/21 13:50	09/03/21
L2147615-05	21A-AE23R-090321-1	WATER	WILMINGTON, MA	09/03/21 11:50	09/03/21

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2147615
Project Number:	60552044.25	**Report Date:**	09/17/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2147615
Project Number:	60552044.25	**Report Date:**	09/17/21

Case Narrative (continued)

MCP Related Narratives

Report Submission

All MCP required questions were answered with affirmative responses; therefore, there are no relevant protocol-specific QC and/or performance standard non-conformances to report.

Non-MCP Related Narratives

PIANO Volatile Organics

L2147615-02D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

L2147615-05D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The WG1546086-2/-3 LCS/LCSD recoveries, associated with L2147615-01, -02D, -03, -04, and -05D, are above the individual acceptance criteria for dodecane (c12) (157%/154%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects for these compounds are considered to have a potentially high bias.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 09/17/21

QC OUTLIER SUMMARY REPORT

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25

Lab Number: L2147615
Report Date: 09/17/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
PIANO Volatile Organics by GC/MS - Mansfield Lab								
8260B	Batch QC	WG1546086-3	Dodecane (C12)	LCS	157	50-130	01-05	potential high bias
8260B	Batch QC	WG1546086-4	Dodecane (C12)	LCSD	154	50-130	01-05	potential high bias

ORGANICS

VOLATILES

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2147615
Report Date: 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-01
Client ID: 21A-AE26R1-090121-1
Sample Location: WILMINGTON, MA
Date Collected: 09/01/21 11:50
Date Received: 09/03/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/13/21 17:03
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	2.00	--	1
Isopentane	ND		ug/l	2.00	--	1
1-Pentene	ND		ug/l	2.00	--	1
2-Methyl-1-Butene	ND		ug/l	2.00	--	1
Pentane	ND		ug/l	2.00	--	1
trans-2-Pentene	ND		ug/l	2.00	--	1
Isoprene	ND		ug/l	2.00	--	1
cis-2-Pentene	ND		ug/l	2.00	--	1
Tertiary Butanol	ND		ug/l	25.0	--	1
2,2-Dimethylbutane	ND		ug/l	2.00	--	1
4-Methyl-1-pentene	ND		ug/l	2.00	--	1
Cyclopentane	ND		ug/l	2.00	--	1
2,3-Dimethylbutane	ND		ug/l	2.00	--	1
2-Methylpentane	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	2.00	--	1
3-Methylpentane	ND		ug/l	2.00	--	1
1-Hexene	ND		ug/l	2.00	--	1
n-Hexane	ND		ug/l	2.00	--	1
Isopropyl Ether	ND		ug/l	2.00	--	1
trans-2-Hexene	ND		ug/l	2.00	--	1
2-Methyl-2-pentene	ND		ug/l	2.00	--	1
cis-2-Hexene	ND		ug/l	2.00	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--	1
2,2-Dimethylpentane	ND		ug/l	2.00	--	1
Methylcyclopentane	ND		ug/l	2.00	--	1
2,4-Dimethylpentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylbutane	ND		ug/l	2.00	--	1
1,2-Dichloroethane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-01 Date Collected: 09/01/21 11:50

Client ID: 21A-AE26R1-090121-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	2.00	--	1
Cyclohexane	ND		ug/l	2.00	--	1
2-Methylhexane	ND		ug/l	2.00	--	1
Benzene	ND		ug/l	2.00	--	1
2,3-Dimethylpentane	ND		ug/l	2.00	--	1
Thiophene	ND		ug/l	2.00	--	1
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--	1
3-Methylhexane	ND		ug/l	2.00	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--	1
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--	1
3-Ethylpentane	ND		ug/l	2.00	--	1
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--	1
Isooctane	ND		ug/l	2.00	--	1
trans-3-Heptene	ND		ug/l	2.00	--	1
Heptane	ND		ug/l	2.00	--	1
trans-2-Heptene	ND		ug/l	2.00	--	1
cis-2-Heptene	ND		ug/l	2.00	--	1
2,2-Dimethylhexane	ND		ug/l	2.00	--	1
Methylcyclohexane	ND		ug/l	2.00	--	1
2,5-Dimethylhexane	ND		ug/l	2.00	--	1
2,4-Dimethylhexane	ND		ug/l	2.00	--	1
Ethylcyclopentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,4-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,3-Trimethylpentane	ND		ug/l	2.00	--	1
Xylene (Total)[1]	ND		ug/l	2.00	--	1
2,3-Dimethylhexane	ND		ug/l	2.00	--	1
2-Methylheptane	ND		ug/l	2.00	--	1
4-Methylheptane	ND		ug/l	2.00	--	1
3-Methylheptane	ND		ug/l	2.00	--	1
3-Ethylhexane	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
2-Methylthiophene	ND		ug/l	2.00	--	1
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
3-Methylthiophene	ND		ug/l	2.00	--	1
1-Octene	ND		ug/l	5.00	--	1
Octane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-01 Date Collected: 09/01/21 11:50

Client ID: 21A-AE26R1-090121-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
1,2-Dibromoethane	ND		ug/l	2.00	--	1
cis-2-Octene	ND		ug/l	2.00	--	1
Isopropylcyclopentane	ND		ug/l	2.00	--	1
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--	1
2,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,3-Dimethylheptane	ND		ug/l	2.00	--	1
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--	1
2,3-Dimethylheptane	ND		ug/l	2.00	--	1
3,4-Dimethylheptane	ND		ug/l	2.00	--	1
4-Methyloctane	ND		ug/l	2.00	--	1
2-Methyloctane	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
2-Ethylthiophene	ND		ug/l	2.00	--	1
3-Methyloctane	ND		ug/l	2.00	--	1
3,3-Diethylpentane	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	4.00	--	1
1-Nonene	ND		ug/l	5.00	--	1
trans-3-Nonene	ND		ug/l	2.00	--	1
cis-3-Nonene	ND		ug/l	2.00	--	1
Nonane (C9)	ND		ug/l	2.00	--	1
Styrene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
2-Nonene	ND		ug/l	5.00	--	1
Isopropylcyclohexane	ND		ug/l	2.00	--	1
Isopropylbenzene	ND		ug/l	2.00	--	1
3,3-Dimethyloctane	ND		ug/l	2.00	--	1
n-Propylbenzene	ND		ug/l	2.00	--	1
2-Methylnonane	ND		ug/l	2.00	--	1
3-Methylnonane	ND		ug/l	2.00	--	1
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Decene	ND		ug/l	2.00	--	1
Isobutylcyclohexane	ND		ug/l	2.00	--	1
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-01 Date Collected: 09/01/21 11:50

Client ID: 21A-AE26R1-090121-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	2.00	--	1
tert-Butylbenzene	ND		ug/l	2.00	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--	1
Isobutylbenzene	ND		ug/l	2.00	--	1
sec-Butylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--	1
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--	1
Indane	ND		ug/l	2.00	--	1
1,3-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--	1
Indene	ND		ug/l	2.00	--	1
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--	1
n-Butylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--	1
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
Undecane	ND		ug/l	2.00	--	1
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
N-Pentylbenzene	ND		ug/l	2.00	--	1
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--	1
Dodecane (C12)	ND		ug/l	5.00	--	1
1,3,5-Triethylbenzene	ND		ug/l	2.00	--	1
Naphthalene	ND		ug/l	2.00	--	1
Benzothiophene	ND		ug/l	2.00	--	1
1,2,4-Triethylbenzene	ND		ug/l	2.00	--	1
Hexylbenzene	ND		ug/l	2.00	--	1
MMT	ND		ug/l	5.00	--	1
Tridecane	ND		ug/l	5.00	--	1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2147615
Report Date: 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-01
Client ID: 21A-AE26R1-090121-1
Sample Location: WILMINGTON, MA
Date Collected: 09/01/21 11:50
Date Received: 09/03/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	5.00	--	1
1-Methylnaphthalene	ND		ug/l	5.00	--	1
Tetradecane (C14)	ND		ug/l	5.00	--	1
Pentadecane	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	104		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	98		70-130

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2147615
Report Date: 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-02 D
Client ID: 21A-AE28R2-090121-1
Sample Location: WILMINGTON, MA

Date Collected: 09/01/21 14:15
Date Received: 09/03/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/13/21 18:15
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	10.0	--	5
Isopentane	ND		ug/l	10.0	--	5
1-Pentene	ND		ug/l	10.0	--	5
2-Methyl-1-Butene	ND		ug/l	10.0	--	5
Pentane	ND		ug/l	10.0	--	5
trans-2-Pentene	ND		ug/l	10.0	--	5
Isoprene	ND		ug/l	10.0	--	5
cis-2-Pentene	ND		ug/l	10.0	--	5
Tertiary Butanol	ND		ug/l	125	--	5
2,2-Dimethylbutane	ND		ug/l	10.0	--	5
4-Methyl-1-pentene	ND		ug/l	10.0	--	5
Cyclopentane	ND		ug/l	10.0	--	5
2,3-Dimethylbutane	ND		ug/l	10.0	--	5
2-Methylpentane	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	10.0	--	5
3-Methylpentane	ND		ug/l	10.0	--	5
1-Hexene	ND		ug/l	10.0	--	5
n-Hexane	ND		ug/l	10.0	--	5
Isopropyl Ether	ND		ug/l	10.0	--	5
trans-2-Hexene	ND		ug/l	10.0	--	5
2-Methyl-2-pentene	ND		ug/l	10.0	--	5
cis-2-Hexene	ND		ug/l	10.0	--	5
Ethyl-Tert-Butyl-Ether	ND		ug/l	10.0	--	5
2,2-Dimethylpentane	ND		ug/l	10.0	--	5
Methylcyclopentane	ND		ug/l	10.0	--	5
2,4-Dimethylpentane	ND		ug/l	10.0	--	5
2,2,3-Trimethylbutane	ND		ug/l	10.0	--	5
1,2-Dichloroethane	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-02 D
Client ID: 21A-AE28R2-090121-1
Sample Location: WILMINGTON, MA

Date Collected: 09/01/21 14:15
Date Received: 09/03/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	10.0	--	5
Cyclohexane	ND		ug/l	10.0	--	5
2-Methylhexane	ND		ug/l	10.0	--	5
Benzene	ND		ug/l	10.0	--	5
2,3-Dimethylpentane	ND		ug/l	10.0	--	5
Thiophene	ND		ug/l	10.0	--	5
1,1-Dimethylcyclopentane	ND		ug/l	10.0	--	5
3-Methylhexane	ND		ug/l	10.0	--	5
Tertiary-Amyl Methyl Ether	ND		ug/l	10.0	--	5
1,3-Dimethylcyclopentane (cis)	ND		ug/l	10.0	--	5
3-Ethylpentane	ND		ug/l	10.0	--	5
1-Heptene/1,2-DMCP (trans)	ND		ug/l	20.0	--	5
Isooctane	ND		ug/l	10.0	--	5
trans-3-Heptene	ND		ug/l	10.0	--	5
Heptane	ND		ug/l	10.0	--	5
trans-2-Heptene	ND		ug/l	10.0	--	5
cis-2-Heptene	ND		ug/l	10.0	--	5
2,2-Dimethylhexane	ND		ug/l	10.0	--	5
Methylcyclohexane	ND		ug/l	10.0	--	5
2,5-Dimethylhexane	ND		ug/l	10.0	--	5
2,4-Dimethylhexane	ND		ug/l	10.0	--	5
Ethylcyclopentane	ND		ug/l	10.0	--	5
2,2,3-Trimethylpentane	ND		ug/l	10.0	--	5
2,3,4-Trimethylpentane	ND		ug/l	10.0	--	5
2,3,3-Trimethylpentane	ND		ug/l	10.0	--	5
Xylene (Total)[1]	ND		ug/l	10.0	--	5
2,3-Dimethylhexane	ND		ug/l	10.0	--	5
2-Methylheptane	ND		ug/l	10.0	--	5
4-Methylheptane	ND		ug/l	10.0	--	5
3-Methylheptane	ND		ug/l	10.0	--	5
3-Ethylhexane	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
2-Methylthiophene	ND		ug/l	10.0	--	5
1,4-Dimethylcyclohexane (trans)	ND		ug/l	10.0	--	5
3-Methylthiophene	ND		ug/l	10.0	--	5
1-Octene	ND		ug/l	25.0	--	5
Octane	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-02 D
Client ID: 21A-AE28R2-090121-1
Sample Location: WILMINGTON, MA

Date Collected: 09/01/21 14:15
Date Received: 09/03/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	10.0	--	5
1,2-Dibromoethane	ND		ug/l	10.0	--	5
cis-2-Octene	ND		ug/l	10.0	--	5
Isopropylcyclopentane	ND		ug/l	10.0	--	5
1,2-Dimethylcyclohexane (cis)	ND		ug/l	10.0	--	5
2,5-Dimethylheptane	ND		ug/l	10.0	--	5
3,5-Dimethylheptane	ND		ug/l	10.0	--	5
3,3-Dimethylheptane	ND		ug/l	10.0	--	5
1,1,4-Trimethylcyclohexane	ND		ug/l	10.0	--	5
2,3-Dimethylheptane	ND		ug/l	10.0	--	5
3,4-Dimethylheptane	ND		ug/l	10.0	--	5
4-Methyloctane	ND		ug/l	10.0	--	5
2-Methyloctane	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
2-Ethylthiophene	ND		ug/l	10.0	--	5
3-Methyloctane	ND		ug/l	10.0	--	5
3,3-Diethylpentane	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	20.0	--	5
1-Nonene	ND		ug/l	25.0	--	5
trans-3-Nonene	ND		ug/l	10.0	--	5
cis-3-Nonene	ND		ug/l	10.0	--	5
Nonane (C9)	ND		ug/l	10.0	--	5
Styrene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
2-Nonene	ND		ug/l	25.0	--	5
Isopropylcyclohexane	ND		ug/l	10.0	--	5
Isopropylbenzene	ND		ug/l	10.0	--	5
3,3-Dimethyloctane	ND		ug/l	10.0	--	5
n-Propylbenzene	ND		ug/l	10.0	--	5
2-Methylnonane	ND		ug/l	10.0	--	5
3-Methylnonane	ND		ug/l	10.0	--	5
1-Methyl-3-Ethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,3,5-Trimethylbenzene	ND		ug/l	10.0	--	5
1-Decene	ND		ug/l	10.0	--	5
Isobutylcyclohexane	ND		ug/l	10.0	--	5
1-Methyl-2-Ethylbenzene	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-02 D
Client ID: 21A-AE28R2-090121-1
Sample Location: WILMINGTON, MA

Date Collected: 09/01/21 14:15
Date Received: 09/03/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	10.0	--	5
tert-Butylbenzene	ND		ug/l	10.0	--	5
1,2,4-Trimethylbenzene	11.3		ug/l	10.0	--	5
Isobutylbenzene	ND		ug/l	10.0	--	5
sec-Butylbenzene	ND		ug/l	10.0	--	5
1-Methyl-3-Isopropylbenzene	ND		ug/l	10.0	--	5
1-Methyl-4-Isopropylbenzene	ND		ug/l	10.0	--	5
1,2,3-Trimethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-2-Isopropylbenzene	ND		ug/l	10.0	--	5
Indane	ND		ug/l	10.0	--	5
1,3-Diethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-3-N-Propylbenzene	ND		ug/l	10.0	--	5
Indene	ND		ug/l	10.0	--	5
1-Methyl-4-N-Propylbenzene	ND		ug/l	10.0	--	5
n-Butylbenzene	ND		ug/l	10.0	--	5
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,2-Diethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-2-N-Propylbenzene	ND		ug/l	10.0	--	5
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	10.0	--	5
Undecane	ND		ug/l	10.0	--	5
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	10.0	--	5
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	10.0	--	5
1,2,4,5-Tetramethylbenzene	ND		ug/l	10.0	--	5
1,2,3,5-Tetramethylbenzene	ND		ug/l	10.0	--	5
N-Pentylbenzene	ND		ug/l	10.0	--	5
1,2,3,4-Tetramethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	10.0	--	5
Dodecane (C12)	ND		ug/l	25.0	--	5
1,3,5-Triethylbenzene	ND		ug/l	10.0	--	5
Naphthalene	ND		ug/l	10.0	--	5
Benzothiophene	ND		ug/l	10.0	--	5
1,2,4-Triethylbenzene	ND		ug/l	10.0	--	5
Hexylbenzene	ND		ug/l	10.0	--	5
MMT	ND		ug/l	25.0	--	5
Tridecane	ND		ug/l	25.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-02 D
Client ID: 21A-AE28R2-090121-1
Sample Location: WILMINGTON, MA

Date Collected: 09/01/21 14:15
Date Received: 09/03/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	25.0	--	5
1-Methylnaphthalene	ND		ug/l	25.0	--	5
Tetradecane (C14)	ND		ug/l	25.0	--	5
Pentadecane	ND		ug/l	25.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	102		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	99		70-130

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-03 Date Collected: 09/02/21 14:25
Client ID: 21A-AE109R5-090221-1 Date Received: 09/03/21
Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/13/21 19:26
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	2.00	--	1
Isopentane	ND		ug/l	2.00	--	1
1-Pentene	ND		ug/l	2.00	--	1
2-Methyl-1-Butene	ND		ug/l	2.00	--	1
Pentane	ND		ug/l	2.00	--	1
trans-2-Pentene	ND		ug/l	2.00	--	1
Isoprene	ND		ug/l	2.00	--	1
cis-2-Pentene	ND		ug/l	2.00	--	1
Tertiary Butanol	ND		ug/l	25.0	--	1
2,2-Dimethylbutane	ND		ug/l	2.00	--	1
4-Methyl-1-pentene	ND		ug/l	2.00	--	1
Cyclopentane	ND		ug/l	2.00	--	1
2,3-Dimethylbutane	ND		ug/l	2.00	--	1
2-Methylpentane	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	2.00	--	1
3-Methylpentane	ND		ug/l	2.00	--	1
1-Hexene	ND		ug/l	2.00	--	1
n-Hexane	ND		ug/l	2.00	--	1
Isopropyl Ether	ND		ug/l	2.00	--	1
trans-2-Hexene	ND		ug/l	2.00	--	1
2-Methyl-2-pentene	ND		ug/l	2.00	--	1
cis-2-Hexene	ND		ug/l	2.00	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--	1
2,2-Dimethylpentane	ND		ug/l	2.00	--	1
Methylcyclopentane	ND		ug/l	2.00	--	1
2,4-Dimethylpentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylbutane	ND		ug/l	2.00	--	1
1,2-Dichloroethane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-03 Date Collected: 09/02/21 14:25

Client ID: 21A-AE109R5-090221-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	2.00	--	1
Cyclohexane	ND		ug/l	2.00	--	1
2-Methylhexane	ND		ug/l	2.00	--	1
Benzene	ND		ug/l	2.00	--	1
2,3-Dimethylpentane	ND		ug/l	2.00	--	1
Thiophene	ND		ug/l	2.00	--	1
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--	1
3-Methylhexane	ND		ug/l	2.00	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--	1
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--	1
3-Ethylpentane	ND		ug/l	2.00	--	1
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--	1
Isooctane	ND		ug/l	2.00	--	1
trans-3-Heptene	ND		ug/l	2.00	--	1
Heptane	ND		ug/l	2.00	--	1
trans-2-Heptene	ND		ug/l	2.00	--	1
cis-2-Heptene	ND		ug/l	2.00	--	1
2,2-Dimethylhexane	ND		ug/l	2.00	--	1
Methylcyclohexane	ND		ug/l	2.00	--	1
2,5-Dimethylhexane	ND		ug/l	2.00	--	1
2,4-Dimethylhexane	ND		ug/l	2.00	--	1
Ethylcyclopentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,4-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,3-Trimethylpentane	ND		ug/l	2.00	--	1
Xylene (Total)[1]	ND		ug/l	2.00	--	1
2,3-Dimethylhexane	ND		ug/l	2.00	--	1
2-Methylheptane	ND		ug/l	2.00	--	1
4-Methylheptane	ND		ug/l	2.00	--	1
3-Methylheptane	ND		ug/l	2.00	--	1
3-Ethylhexane	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
2-Methylthiophene	ND		ug/l	2.00	--	1
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
3-Methylthiophene	ND		ug/l	2.00	--	1
1-Octene	ND		ug/l	5.00	--	1
Octane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-03 Date Collected: 09/02/21 14:25

Client ID: 21A-AE109R5-090221-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
1,2-Dibromoethane	ND		ug/l	2.00	--	1
cis-2-Octene	ND		ug/l	2.00	--	1
Isopropylcyclopentane	ND		ug/l	2.00	--	1
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--	1
2,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,3-Dimethylheptane	ND		ug/l	2.00	--	1
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--	1
2,3-Dimethylheptane	ND		ug/l	2.00	--	1
3,4-Dimethylheptane	ND		ug/l	2.00	--	1
4-Methyloctane	ND		ug/l	2.00	--	1
2-Methyloctane	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
2-Ethylthiophene	ND		ug/l	2.00	--	1
3-Methyloctane	ND		ug/l	2.00	--	1
3,3-Diethylpentane	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	4.00	--	1
1-Nonene	ND		ug/l	5.00	--	1
trans-3-Nonene	ND		ug/l	2.00	--	1
cis-3-Nonene	ND		ug/l	2.00	--	1
Nonane (C9)	ND		ug/l	2.00	--	1
Styrene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
2-Nonene	ND		ug/l	5.00	--	1
Isopropylcyclohexane	ND		ug/l	2.00	--	1
Isopropylbenzene	ND		ug/l	2.00	--	1
3,3-Dimethyloctane	ND		ug/l	2.00	--	1
n-Propylbenzene	ND		ug/l	2.00	--	1
2-Methylnonane	ND		ug/l	2.00	--	1
3-Methylnonane	ND		ug/l	2.00	--	1
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Decene	ND		ug/l	2.00	--	1
Isobutylcyclohexane	ND		ug/l	2.00	--	1
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-03 Date Collected: 09/02/21 14:25

Client ID: 21A-AE109R5-090221-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	2.00	--	1
tert-Butylbenzene	ND		ug/l	2.00	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--	1
Isobutylbenzene	ND		ug/l	2.00	--	1
sec-Butylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--	1
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--	1
Indane	ND		ug/l	2.00	--	1
1,3-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--	1
Indene	ND		ug/l	2.00	--	1
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--	1
n-Butylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--	1
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
Undecane	ND		ug/l	2.00	--	1
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
N-Pentylbenzene	ND		ug/l	2.00	--	1
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--	1
Dodecane (C12)	ND		ug/l	5.00	--	1
1,3,5-Triethylbenzene	ND		ug/l	2.00	--	1
Naphthalene	ND		ug/l	2.00	--	1
Benzothiophene	ND		ug/l	2.00	--	1
1,2,4-Triethylbenzene	ND		ug/l	2.00	--	1
Hexylbenzene	ND		ug/l	2.00	--	1
MMT	ND		ug/l	5.00	--	1
Tridecane	ND		ug/l	5.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-03 Date Collected: 09/02/21 14:25

Client ID: 21A-AE109R5-090221-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	5.00	--	1
1-Methylnaphthalene	ND		ug/l	5.00	--	1
Tetradecane (C14)	ND		ug/l	5.00	--	1
Pentadecane	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	102		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	98		70-130

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-04 Date Collected: 09/02/21 13:50
Client ID: 21A-AE104R4-090221-1 Date Received: 09/03/21
Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/13/21 20:36
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	2.00	--	1
Isopentane	ND		ug/l	2.00	--	1
1-Pentene	ND		ug/l	2.00	--	1
2-Methyl-1-Butene	ND		ug/l	2.00	--	1
Pentane	ND		ug/l	2.00	--	1
trans-2-Pentene	ND		ug/l	2.00	--	1
Isoprene	ND		ug/l	2.00	--	1
cis-2-Pentene	ND		ug/l	2.00	--	1
Tertiary Butanol	ND		ug/l	25.0	--	1
2,2-Dimethylbutane	ND		ug/l	2.00	--	1
4-Methyl-1-pentene	ND		ug/l	2.00	--	1
Cyclopentane	ND		ug/l	2.00	--	1
2,3-Dimethylbutane	ND		ug/l	2.00	--	1
2-Methylpentane	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	2.00	--	1
3-Methylpentane	ND		ug/l	2.00	--	1
1-Hexene	ND		ug/l	2.00	--	1
n-Hexane	ND		ug/l	2.00	--	1
Isopropyl Ether	ND		ug/l	2.00	--	1
trans-2-Hexene	ND		ug/l	2.00	--	1
2-Methyl-2-pentene	ND		ug/l	2.00	--	1
cis-2-Hexene	ND		ug/l	2.00	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--	1
2,2-Dimethylpentane	ND		ug/l	2.00	--	1
Methylcyclopentane	ND		ug/l	2.00	--	1
2,4-Dimethylpentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylbutane	ND		ug/l	2.00	--	1
1,2-Dichloroethane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-04 Date Collected: 09/02/21 13:50

Client ID: 21A-AE104R4-090221-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	2.00	--	1
Cyclohexane	ND		ug/l	2.00	--	1
2-Methylhexane	ND		ug/l	2.00	--	1
Benzene	ND		ug/l	2.00	--	1
2,3-Dimethylpentane	ND		ug/l	2.00	--	1
Thiophene	ND		ug/l	2.00	--	1
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--	1
3-Methylhexane	ND		ug/l	2.00	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--	1
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--	1
3-Ethylpentane	ND		ug/l	2.00	--	1
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--	1
Isooctane	ND		ug/l	2.00	--	1
trans-3-Heptene	ND		ug/l	2.00	--	1
Heptane	ND		ug/l	2.00	--	1
trans-2-Heptene	ND		ug/l	2.00	--	1
cis-2-Heptene	ND		ug/l	2.00	--	1
2,2-Dimethylhexane	ND		ug/l	2.00	--	1
Methylcyclohexane	ND		ug/l	2.00	--	1
2,5-Dimethylhexane	ND		ug/l	2.00	--	1
2,4-Dimethylhexane	ND		ug/l	2.00	--	1
Ethylcyclopentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,4-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,3-Trimethylpentane	ND		ug/l	2.00	--	1
Xylene (Total)[1]	ND		ug/l	2.00	--	1
2,3-Dimethylhexane	ND		ug/l	2.00	--	1
2-Methylheptane	ND		ug/l	2.00	--	1
4-Methylheptane	ND		ug/l	2.00	--	1
3-Methylheptane	ND		ug/l	2.00	--	1
3-Ethylhexane	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
2-Methylthiophene	ND		ug/l	2.00	--	1
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
3-Methylthiophene	ND		ug/l	2.00	--	1
1-Octene	ND		ug/l	5.00	--	1
Octane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-04 Date Collected: 09/02/21 13:50

Client ID: 21A-AE104R4-090221-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
1,2-Dibromoethane	ND		ug/l	2.00	--	1
cis-2-Octene	ND		ug/l	2.00	--	1
Isopropylcyclopentane	ND		ug/l	2.00	--	1
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--	1
2,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,3-Dimethylheptane	ND		ug/l	2.00	--	1
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--	1
2,3-Dimethylheptane	ND		ug/l	2.00	--	1
3,4-Dimethylheptane	ND		ug/l	2.00	--	1
4-Methyloctane	ND		ug/l	2.00	--	1
2-Methyloctane	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
2-Ethylthiophene	ND		ug/l	2.00	--	1
3-Methyloctane	ND		ug/l	2.00	--	1
3,3-Diethylpentane	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	4.00	--	1
1-Nonene	ND		ug/l	5.00	--	1
trans-3-Nonene	ND		ug/l	2.00	--	1
cis-3-Nonene	ND		ug/l	2.00	--	1
Nonane (C9)	ND		ug/l	2.00	--	1
Styrene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
2-Nonene	ND		ug/l	5.00	--	1
Isopropylcyclohexane	ND		ug/l	2.00	--	1
Isopropylbenzene	ND		ug/l	2.00	--	1
3,3-Dimethyloctane	ND		ug/l	2.00	--	1
n-Propylbenzene	ND		ug/l	2.00	--	1
2-Methylnonane	ND		ug/l	2.00	--	1
3-Methylnonane	ND		ug/l	2.00	--	1
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Decene	ND		ug/l	2.00	--	1
Isobutylcyclohexane	ND		ug/l	2.00	--	1
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-04 Date Collected: 09/02/21 13:50

Client ID: 21A-AE104R4-090221-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	2.00	--	1
tert-Butylbenzene	ND		ug/l	2.00	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--	1
Isobutylbenzene	ND		ug/l	2.00	--	1
sec-Butylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--	1
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--	1
Indane	ND		ug/l	2.00	--	1
1,3-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--	1
Indene	ND		ug/l	2.00	--	1
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--	1
n-Butylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--	1
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
Undecane	ND		ug/l	2.00	--	1
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
N-Pentylbenzene	ND		ug/l	2.00	--	1
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--	1
Dodecane (C12)	ND		ug/l	5.00	--	1
1,3,5-Triethylbenzene	ND		ug/l	2.00	--	1
Naphthalene	ND		ug/l	2.00	--	1
Benzothiophene	ND		ug/l	2.00	--	1
1,2,4-Triethylbenzene	ND		ug/l	2.00	--	1
Hexylbenzene	ND		ug/l	2.00	--	1
MMT	ND		ug/l	5.00	--	1
Tridecane	ND		ug/l	5.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-04 Date Collected: 09/02/21 13:50

Client ID: 21A-AE104R4-090221-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	5.00	--	1
1-Methylnaphthalene	ND		ug/l	5.00	--	1
Tetradecane (C14)	ND		ug/l	5.00	--	1
Pentadecane	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	104		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	98		70-130

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2147615
Report Date: 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-05 D
Client ID: 21A-AE23R-090321-1
Sample Location: WILMINGTON, MA
Date Collected: 09/03/21 11:50
Date Received: 09/03/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/13/21 21:47
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	40.0	--	20
Isopentane	ND		ug/l	40.0	--	20
1-Pentene	ND		ug/l	40.0	--	20
2-Methyl-1-Butene	ND		ug/l	40.0	--	20
Pentane	ND		ug/l	40.0	--	20
trans-2-Pentene	ND		ug/l	40.0	--	20
Isoprene	ND		ug/l	40.0	--	20
cis-2-Pentene	ND		ug/l	40.0	--	20
Tertiary Butanol	ND		ug/l	500	--	20
2,2-Dimethylbutane	ND		ug/l	40.0	--	20
4-Methyl-1-pentene	ND		ug/l	40.0	--	20
Cyclopentane	ND		ug/l	40.0	--	20
2,3-Dimethylbutane	ND		ug/l	40.0	--	20
2-Methylpentane	ND		ug/l	40.0	--	20
Methyl tert butyl ether	ND		ug/l	40.0	--	20
3-Methylpentane	ND		ug/l	40.0	--	20
1-Hexene	ND		ug/l	40.0	--	20
n-Hexane	ND		ug/l	40.0	--	20
Isopropyl Ether	ND		ug/l	40.0	--	20
trans-2-Hexene	ND		ug/l	40.0	--	20
2-Methyl-2-pentene	ND		ug/l	40.0	--	20
cis-2-Hexene	ND		ug/l	40.0	--	20
Ethyl-Tert-Butyl-Ether	ND		ug/l	40.0	--	20
2,2-Dimethylpentane	ND		ug/l	40.0	--	20
Methylcyclopentane	ND		ug/l	40.0	--	20
2,4-Dimethylpentane	ND		ug/l	40.0	--	20
2,2,3-Trimethylbutane	ND		ug/l	40.0	--	20
1,2-Dichloroethane	ND		ug/l	40.0	--	20

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-05 D Date Collected: 09/03/21 11:50

Client ID: 21A-AE23R-090321-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	40.0	--	20
Cyclohexane	ND		ug/l	40.0	--	20
2-Methylhexane	ND		ug/l	40.0	--	20
Benzene	ND		ug/l	40.0	--	20
2,3-Dimethylpentane	ND		ug/l	40.0	--	20
Thiophene	ND		ug/l	40.0	--	20
1,1-Dimethylcyclopentane	ND		ug/l	40.0	--	20
3-Methylhexane	ND		ug/l	40.0	--	20
Tertiary-Amyl Methyl Ether	ND		ug/l	40.0	--	20
1,3-Dimethylcyclopentane (cis)	ND		ug/l	40.0	--	20
3-Ethylpentane	ND		ug/l	40.0	--	20
1-Heptene/1,2-DMCP (trans)	ND		ug/l	80.0	--	20
Isooctane	ND		ug/l	40.0	--	20
trans-3-Heptene	ND		ug/l	40.0	--	20
Heptane	ND		ug/l	40.0	--	20
trans-2-Heptene	ND		ug/l	40.0	--	20
cis-2-Heptene	ND		ug/l	40.0	--	20
2,2-Dimethylhexane	ND		ug/l	40.0	--	20
Methylcyclohexane	ND		ug/l	40.0	--	20
2,5-Dimethylhexane	ND		ug/l	40.0	--	20
2,4-Dimethylhexane	ND		ug/l	40.0	--	20
Ethylcyclopentane	ND		ug/l	40.0	--	20
2,2,3-Trimethylpentane	ND		ug/l	40.0	--	20
2,3,4-Trimethylpentane	ND		ug/l	40.0	--	20
2,3,3-Trimethylpentane	ND		ug/l	40.0	--	20
Xylene (Total)[1]	ND		ug/l	40.0	--	20
2,3-Dimethylhexane	ND		ug/l	40.0	--	20
2-Methylheptane	ND		ug/l	40.0	--	20
4-Methylheptane	ND		ug/l	40.0	--	20
3-Methylheptane	ND		ug/l	40.0	--	20
3-Ethylhexane	ND		ug/l	40.0	--	20
Toluene	3540		ug/l	40.0	--	20
2-Methylthiophene	ND		ug/l	40.0	--	20
1,4-Dimethylcyclohexane (trans)	ND		ug/l	40.0	--	20
3-Methylthiophene	ND		ug/l	40.0	--	20
1-Octene	ND		ug/l	100	--	20
Octane	ND		ug/l	40.0	--	20

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-05 D Date Collected: 09/03/21 11:50

Client ID: 21A-AE23R-090321-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	40.0	--	20
1,2-Dibromoethane	ND		ug/l	40.0	--	20
cis-2-Octene	ND		ug/l	40.0	--	20
Isopropylcyclopentane	ND		ug/l	40.0	--	20
1,2-Dimethylcyclohexane (cis)	ND		ug/l	40.0	--	20
2,5-Dimethylheptane	ND		ug/l	40.0	--	20
3,5-Dimethylheptane	ND		ug/l	40.0	--	20
3,3-Dimethylheptane	ND		ug/l	40.0	--	20
1,1,4-Trimethylcyclohexane	ND		ug/l	40.0	--	20
2,3-Dimethylheptane	ND		ug/l	40.0	--	20
3,4-Dimethylheptane	ND		ug/l	40.0	--	20
4-Methyloctane	ND		ug/l	40.0	--	20
2-Methyloctane	ND		ug/l	40.0	--	20
Ethylbenzene	ND		ug/l	40.0	--	20
2-Ethylthiophene	ND		ug/l	40.0	--	20
3-Methyloctane	ND		ug/l	40.0	--	20
3,3-Diethylpentane	ND		ug/l	40.0	--	20
p/m-Xylene	ND		ug/l	80.0	--	20
1-Nonene	ND		ug/l	100	--	20
trans-3-Nonene	ND		ug/l	40.0	--	20
cis-3-Nonene	ND		ug/l	40.0	--	20
Nonane (C9)	ND		ug/l	40.0	--	20
Styrene	ND		ug/l	40.0	--	20
o-Xylene	ND		ug/l	40.0	--	20
2-Nonene	ND		ug/l	100	--	20
Isopropylcyclohexane	ND		ug/l	40.0	--	20
Isopropylbenzene	ND		ug/l	40.0	--	20
3,3-Dimethyloctane	ND		ug/l	40.0	--	20
n-Propylbenzene	ND		ug/l	40.0	--	20
2-Methylnonane	ND		ug/l	40.0	--	20
3-Methylnonane	ND		ug/l	40.0	--	20
1-Methyl-3-Ethylbenzene	ND		ug/l	40.0	--	20
1-Methyl-4-Ethylbenzene	ND		ug/l	40.0	--	20
1,3,5-Trimethylbenzene	ND		ug/l	40.0	--	20
1-Decene	ND		ug/l	40.0	--	20
Isobutylcyclohexane	ND		ug/l	40.0	--	20
1-Methyl-2-Ethylbenzene	ND		ug/l	40.0	--	20

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-05 D Date Collected: 09/03/21 11:50

Client ID: 21A-AE23R-090321-1 Date Received: 09/03/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	40.0	--	20
tert-Butylbenzene	ND		ug/l	40.0	--	20
1,2,4-Trimethylbenzene	ND		ug/l	40.0	--	20
Isobutylbenzene	ND		ug/l	40.0	--	20
sec-Butylbenzene	ND		ug/l	40.0	--	20
1-Methyl-3-Isopropylbenzene	ND		ug/l	40.0	--	20
1-Methyl-4-Isopropylbenzene	ND		ug/l	40.0	--	20
1,2,3-Trimethylbenzene	ND		ug/l	40.0	--	20
1-Methyl-2-Isopropylbenzene	ND		ug/l	40.0	--	20
Indane	ND		ug/l	40.0	--	20
1,3-Diethylbenzene	ND		ug/l	40.0	--	20
1-Methyl-3-N-Propylbenzene	ND		ug/l	40.0	--	20
Indene	ND		ug/l	40.0	--	20
1-Methyl-4-N-Propylbenzene	ND		ug/l	40.0	--	20
n-Butylbenzene	ND		ug/l	40.0	--	20
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	40.0	--	20
1,2-Diethylbenzene	ND		ug/l	40.0	--	20
1-Methyl-2-N-Propylbenzene	ND		ug/l	40.0	--	20
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	40.0	--	20
Undecane	ND		ug/l	40.0	--	20
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	40.0	--	20
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	40.0	--	20
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	40.0	--	20
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	40.0	--	20
1,2,4,5-Tetramethylbenzene	ND		ug/l	40.0	--	20
1,2,3,5-Tetramethylbenzene	ND		ug/l	40.0	--	20
N-Pentylbenzene	ND		ug/l	40.0	--	20
1,2,3,4-Tetramethylbenzene	ND		ug/l	40.0	--	20
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	40.0	--	20
Dodecane (C12)	ND		ug/l	100	--	20
1,3,5-Triethylbenzene	ND		ug/l	40.0	--	20
Naphthalene	ND		ug/l	40.0	--	20
Benzothiophene	ND		ug/l	40.0	--	20
1,2,4-Triethylbenzene	ND		ug/l	40.0	--	20
Hexylbenzene	ND		ug/l	40.0	--	20
MMT	ND		ug/l	100	--	20
Tridecane	ND		ug/l	100	--	20

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

SAMPLE RESULTS

Lab ID: L2147615-05 D
Client ID: 21A-AE23R-090321-1
Sample Location: WILMINGTON, MA

Date Collected: 09/03/21 11:50
Date Received: 09/03/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	100	--	20
1-Methylnaphthalene	ND		ug/l	100	--	20
Tetradecane (C14)	ND		ug/l	100	--	20
Pentadecane	ND		ug/l	100	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	103		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	98		70-130

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2147615
Report Date: 09/17/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-05 Batch: WG1546086-5					
3-Methyl-1-butene	ND		ug/l	2.00	--
Isopentane	ND		ug/l	2.00	--
1-Pentene	ND		ug/l	2.00	--
2-Methyl-1-Butene	ND		ug/l	2.00	--
Pentane	ND		ug/l	2.00	--
trans-2-Pentene	ND		ug/l	2.00	--
Isoprene	ND		ug/l	2.00	--
cis-2-Pentene	ND		ug/l	2.00	--
Tertiary Butanol	ND		ug/l	25.0	--
2,2-Dimethylbutane	ND		ug/l	2.00	--
4-Methyl-1-pentene	ND		ug/l	2.00	--
Cyclopentane	ND		ug/l	2.00	--
2,3-Dimethylbutane	ND		ug/l	2.00	--
2-Methylpentane	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	2.00	--
3-Methylpentane	ND		ug/l	2.00	--
1-Hexene	ND		ug/l	2.00	--
n-Hexane	ND		ug/l	2.00	--
Isopropyl Ether	ND		ug/l	2.00	--
trans-2-Hexene	ND		ug/l	2.00	--
2-Methyl-2-pentene	ND		ug/l	2.00	--
cis-2-Hexene	ND		ug/l	2.00	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--
2,2-Dimethylpentane	ND		ug/l	2.00	--
Methylcyclopentane	ND		ug/l	2.00	--
2,4-Dimethylpentane	ND		ug/l	2.00	--
2,2,3-Trimethylbutane	ND		ug/l	2.00	--
1,2-Dichloroethane	ND		ug/l	2.00	--
3,3-Dimethylpentane	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-05 Batch: WG1546086-5					
Cyclohexane	ND		ug/l	2.00	--
2-Methylhexane	ND		ug/l	2.00	--
Benzene	ND		ug/l	2.00	--
2,3-Dimethylpentane	ND		ug/l	2.00	--
Thiophene	ND		ug/l	2.00	--
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--
3-Methylhexane	ND		ug/l	2.00	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--
3-Ethylpentane	ND		ug/l	2.00	--
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--
Isooctane	ND		ug/l	2.00	--
trans-3-Heptene	ND		ug/l	2.00	--
Heptane	ND		ug/l	2.00	--
trans-2-Heptene	ND		ug/l	2.00	--
cis-2-Heptene	ND		ug/l	2.00	--
2,2-Dimethylhexane	ND		ug/l	2.00	--
Methylcyclohexane	ND		ug/l	2.00	--
2,5-Dimethylhexane	ND		ug/l	2.00	--
2,4-Dimethylhexane	ND		ug/l	2.00	--
Ethylcyclopentane	ND		ug/l	2.00	--
2,2,3-Trimethylpentane	ND		ug/l	2.00	--
2,3,4-Trimethylpentane	ND		ug/l	2.00	--
2,3,3-Trimethylpentane	ND		ug/l	2.00	--
Xylene (Total)[1]	ND		ug/l	2.00	--
2,3-Dimethylhexane	ND		ug/l	2.00	--
2-Methylheptane	ND		ug/l	2.00	--
4-Methylheptane	ND		ug/l	2.00	--
3-Methylheptane	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2147615
Report Date: 09/17/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-05 Batch: WG1546086-5					
3-Ethylhexane	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
2-Methylthiophene	ND		ug/l	2.00	--
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--
3-Methylthiophene	ND		ug/l	2.00	--
1-Octene	ND		ug/l	5.00	--
Octane	ND		ug/l	2.00	--
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--
1,2-Dibromoethane	ND		ug/l	2.00	--
cis-2-Octene	ND		ug/l	2.00	--
Isopropylcyclopentane	ND		ug/l	2.00	--
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--
2,5-Dimethylheptane	ND		ug/l	2.00	--
3,5-Dimethylheptane	ND		ug/l	2.00	--
3,3-Dimethylheptane	ND		ug/l	2.00	--
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--
2,3-Dimethylheptane	ND		ug/l	2.00	--
3,4-Dimethylheptane	ND		ug/l	2.00	--
4-Methyloctane	ND		ug/l	2.00	--
2-Methyloctane	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
2-Ethylthiophene	ND		ug/l	2.00	--
3-Methyloctane	ND		ug/l	2.00	--
3,3-Diethylpentane	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	4.00	--
1-Nonene	ND		ug/l	5.00	--
trans-3-Nonene	ND		ug/l	2.00	--
cis-3-Nonene	ND		ug/l	2.00	--
Nonane (C9)	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN **Lab Number:** L2147615

Project Number: 60552044.25 **Report Date:** 09/17/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-05 Batch: WG1546086-5					
Styrene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
2-Nonene	ND		ug/l	5.00	--
Isopropylcyclohexane	ND		ug/l	2.00	--
Isopropylbenzene	ND		ug/l	2.00	--
3,3-Dimethyloctane	ND		ug/l	2.00	--
n-Propylbenzene	ND		ug/l	2.00	--
2-Methylnonane	ND		ug/l	2.00	--
3-Methylnonane	ND		ug/l	2.00	--
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--
1-Decene	ND		ug/l	2.00	--
Isobutylcyclohexane	ND		ug/l	2.00	--
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--
Decane (C10)	ND		ug/l	2.00	--
tert-Butylbenzene	ND		ug/l	2.00	--
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--
Isobutylbenzene	ND		ug/l	2.00	--
sec-Butylbenzene	ND		ug/l	2.00	--
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--
Indane	ND		ug/l	2.00	--
1,3-Diethylbenzene	ND		ug/l	2.00	--
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--
Indene	ND		ug/l	2.00	--
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2147615
Report Date: 09/17/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-05 Batch: WG1546086-5					
n-Butylbenzene	ND		ug/l	2.00	--
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,2-Diethylbenzene	ND		ug/l	2.00	--
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--
Undecane	ND		ug/l	2.00	--
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--
N-Pentylbenzene	ND		ug/l	2.00	--
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--
Dodecane (C12)	ND		ug/l	5.00	--
1,3,5-Triethylbenzene	ND		ug/l	2.00	--
Naphthalene	ND		ug/l	2.00	--
Benzothiophene	ND		ug/l	2.00	--
1,2,4-Triethylbenzene	ND		ug/l	2.00	--
Hexylbenzene	ND		ug/l	2.00	--
MMT	ND		ug/l	5.00	--
Tridecane	ND		ug/l	5.00	--
2-Methylnaphthalene	ND		ug/l	5.00	--
1-Methylnaphthalene	ND		ug/l	5.00	--
Tetradecane (C14)	ND		ug/l	5.00	--
Pentadecane	ND		ug/l	5.00	--

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2147615
Report Date: 09/17/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-05 Batch: WG1546086-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	103		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.25

Lab Number: L2147615

Report Date: 09/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-05 Batch: WG1546086-3 WG1546086-4								
1-Pentene	114		110		50-130	4		30
Pentane	101		96		50-130	5		30
Tertiary Butanol	104		93		50-130	11		30
Cyclopentane	98		112		50-130	13		30
2-Methylpentane	96		92		50-130	4		30
Methyl tert butyl ether	99		94		50-130	5		30
3-Methylpentane	100		93		50-130	7		30
1-Hexene	106		100		50-130	6		30
n-Hexane	96		92		50-130	4		30
Isopropyl Ether	99		94		50-130	5		30
Ethyl-Tert-Butyl-Ether	97		92		50-130	5		30
Methylcyclopentane	105		100		50-130	5		30
2,4-Dimethylpentane	100		96		50-130	4		30
Cyclohexane	109		107		50-130	2		30
2-Methylhexane	103		99		50-130	4		30
Benzene	102		100		50-130	2		30
2,3-Dimethylpentane	105		98		50-130	7		30
3-Methylhexane	92		88		50-130	4		30
Tertiary-Amyl Methyl Ether	92		89		50-130	3		30
Isooctane	103		99		50-130	4		30
Heptane	108		102		50-130	6		30
Methylcyclohexane	104		99		50-130	5		30
2-Methylheptane	103		99		50-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.25

Lab Number: L2147615

Report Date: 09/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-05 Batch: WG1546086-3 WG1546086-4								
3-Methylheptane	96		92		50-130	4		30
Toluene	99		98		50-130	1		30
Octane	110		105		50-130	5		30
Ethylbenzene	102		101		50-130	1		30
p/m-Xylene	107		106		50-130	1		30
Nonane (C9)	100		96		50-130	4		30
o-Xylene	104		103		50-130	1		30
Isopropylbenzene	105		104		50-130	1		30
n-Propylbenzene	104		104		50-130	0		30
1-Methyl-3-Ethylbenzene	105		104		50-130	1		30
1-Methyl-4-Ethylbenzene	108		108		50-130	0		30
1,3,5-Trimethylbenzene	104		106		50-130	2		30
1-Decene	82		86		50-130	5		30
1-Methyl-2-Ethylbenzene	101		102		50-130	1		30
Decane (C10)	104		106		50-130	2		30
1,2,4-Trimethylbenzene	100		102		50-130	2		30
sec-Butylbenzene	106		106		50-130	0		30
1-Methyl-4-N-Propylbenzene	90		94		50-130	4		30
n-Butylbenzene	97		100		50-130	3		30
1,2-Diethylbenzene	96		100		50-130	4		30
Undecane	100		101		50-130	1		30
N-Pentylbenzene	78		84		50-130	7		30
Dodecane (C12)	**157**	Q	**154**	Q	50-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.25

Lab Number: L2147615

Report Date: 09/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-05 Batch: WG1546086-3 WG1546086-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Dibromofluoromethane	99		99		70-130
Toluene-d8	100		97		70-130
4-Bromofluorobenzene	99		99		70-130

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25

Lab Number: L2147615
Report Date: 09/17/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2147615-01A	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-01B	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-01C	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-02A	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-02B	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-02C	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-03A	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-03B	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-03C	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-04A	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-04B	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-04C	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-05A	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-05B	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2147615-05C	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)

*Values in parentheses indicate holding time in days

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2147615
Project Number:	60552044.25	**Report Date:**	09/17/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2147615
Project Number:	60552044.25	**Report Date:**	09/17/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2147615
Project Number:	60552044.25	**Report Date:**	09/17/21

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 9/3/21

ALPHA Job #: L2147615

Client Information

Client: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824
Phone: 978-905-2100
Fax: 978-905-2101
Email: lori.herberich@aecom.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Lockheed Martin
Project Location: Wilmington MA
Project #: 60552044.25
Project Manager: scott.olson@aecom.com
ALPHA Quote #: 7/13/2021 K. Raymond Email

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #: 137518

Regulatory Requirements/Report Limits

State/Fed Program: MassDEP MCP CAM
Criteria: GW-1, -2, -3

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

AECOM Contacts:
Lori Herberich (Chemist) - lori.herberich@aecom.com; cell 978-302-0089
Scott Olson (PM) - scott.olson@aecom.com; cell 978-846-5238

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	P,1,N,O												TOTAL # BOTTLES
47615-01	21A-AE24R1-090121-1	9/1/21	1150	GW	BK	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
-02	21A-AE28R2-090121-1	9/1/21	1415	GW	FB	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
-03	21A-AE109RS-090221-1	9/2/21	1425	GW	FB	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
-04	21A-AE104R4-090221-1	9/2/21	1350	GW	SH	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
-05	21A-AE23R-090321-1	9/3/21	1150	GW	SH	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
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						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Container Type	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/3/21 14:30	[signature]	9/3/21 14:30
[signature]	9/3/21 17:47	[signature]	9/3 1747
[signature]	9/3/21 21	[signature]	9/3/21 2015
[signature]	9/3/21 2142	[signature]	9/3/21 2142

ANALYTICAL REPORT

Lab Number:	L2148922
Client:	AECOM 250 Apollo Drive Chelmsford, MA 01824
ATTN:	Scott Olson
Phone:	(978) 905-2351
Project Name:	LOCKHEED MARTIN
Project Number:	60552044.25
Report Date:	09/21/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25

Lab Number: L2148922
Report Date: 09/21/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2148922-01	21A-AE102RR6-090721-1	WATER	WILMINGTON, MA	09/07/21 13:20	09/10/21
L2148922-02	21A-EMW11R2-090821-1	WATER	WILMINGTON, MA	09/08/21 09:35	09/10/21
L2148922-03	21A-AE103R1-090921-1	WATER	WILMINGTON, MA	09/09/21 11:10	09/10/21
L2148922-04	21A-AE100R1-090921-1	WATER	WILMINGTON, MA	09/09/21 11:25	09/10/21

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2148922
Project Number:	60552044.25	**Report Date:**	09/21/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2148922
Project Number:	60552044.25	**Report Date:**	09/21/21

Case Narrative (continued)

MCP Related Narratives

Report Submission

All MCP required questions were answered with affirmative responses; therefore, there are no relevant protocol-specific QC and/or performance standard non-conformances to report.

Non-MCP Related Narratives

PIANO Volatile Organics

L2148922-01D and -02D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

The WG1546086-3/-4 LCS/LCSD recoveries, associated with L2148922-01D, -02D, -03, and -04, are above the individual acceptance criteria for dodecane (c12) (157%/154%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects for these compounds are considered to have a potentially high bias.

WG1546086-9, The continuing calibration standard associated with L2148922 and QC, had the response for Undecane (41%D), Dodecane (42.7%), Hexylbenzene (50.9%), 2-Methylnaphthalene (64.2%), and 1-Methylnaphthalene (55.9%) above the acceptance criteria for the method. The associated samples were non-detect; therefore, no further action was taken.

WG1546086-11:The continuing calibration standard, associated with L2148922 and QC, had the response for Undecane (50%D), Dodecane (45.4%), Hexylbenzene (52.9%), 2-Methylnaphthalene (64.2%), and 1-Methylnaphthalene (59.7%) above the acceptance criteria for the method. The associated samples were non-detect; therefore, no further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 09/21/21

QC OUTLIER SUMMARY REPORT

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25

Lab Number: L2148922
Report Date: 09/21/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
PIANO Volatile Organics by GC/MS - Mansfield Lab								
8260B	Batch QC	WG1546086-3	Dodecane (C12)	LCS	157	50-130	01-04	potential high bias
8260B	Batch QC	WG1546086-4	Dodecane (C12)	LCSD	154	50-130	01-04	potential high bias

ORGANICS

VOLATILES

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-01 D
Client ID: 21A-AE102RR6-090721-1
Sample Location: WILMINGTON, MA

Date Collected: 09/07/21 13:20
Date Received: 09/10/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/15/21 12:29
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	10.0	--	5
Isopentane	ND		ug/l	10.0	--	5
1-Pentene	ND		ug/l	10.0	--	5
2-Methyl-1-Butene	ND		ug/l	10.0	--	5
Pentane	ND		ug/l	10.0	--	5
trans-2-Pentene	ND		ug/l	10.0	--	5
Isoprene	ND		ug/l	10.0	--	5
cis-2-Pentene	ND		ug/l	10.0	--	5
Tertiary Butanol	ND		ug/l	125	--	5
2,2-Dimethylbutane	ND		ug/l	10.0	--	5
4-Methyl-1-pentene	ND		ug/l	10.0	--	5
Cyclopentane	ND		ug/l	10.0	--	5
2,3-Dimethylbutane	ND		ug/l	10.0	--	5
2-Methylpentane	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	10.0	--	5
3-Methylpentane	ND		ug/l	10.0	--	5
1-Hexene	ND		ug/l	10.0	--	5
n-Hexane	ND		ug/l	10.0	--	5
Isopropyl Ether	ND		ug/l	10.0	--	5
trans-2-Hexene	ND		ug/l	10.0	--	5
2-Methyl-2-pentene	ND		ug/l	10.0	--	5
cis-2-Hexene	ND		ug/l	10.0	--	5
Ethyl-Tert-Butyl-Ether	ND		ug/l	10.0	--	5
2,2-Dimethylpentane	ND		ug/l	10.0	--	5
Methylcyclopentane	ND		ug/l	10.0	--	5
2,4-Dimethylpentane	ND		ug/l	10.0	--	5
2,2,3-Trimethylbutane	ND		ug/l	10.0	--	5
1,2-Dichloroethane	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-01 D Date Collected: 09/07/21 13:20

Client ID: 21A-AE102RR6-090721-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	10.0	--	5
Cyclohexane	ND		ug/l	10.0	--	5
2-Methylhexane	ND		ug/l	10.0	--	5
Benzene	ND		ug/l	10.0	--	5
2,3-Dimethylpentane	ND		ug/l	10.0	--	5
Thiophene	ND		ug/l	10.0	--	5
1,1-Dimethylcyclopentane	ND		ug/l	10.0	--	5
3-Methylhexane	ND		ug/l	10.0	--	5
Tertiary-Amyl Methyl Ether	ND		ug/l	10.0	--	5
1,3-Dimethylcyclopentane (cis)	ND		ug/l	10.0	--	5
3-Ethylpentane	ND		ug/l	10.0	--	5
1-Heptene/1,2-DMCP (trans)	ND		ug/l	20.0	--	5
Isooctane	ND		ug/l	10.0	--	5
trans-3-Heptene	ND		ug/l	10.0	--	5
Heptane	ND		ug/l	10.0	--	5
trans-2-Heptene	ND		ug/l	10.0	--	5
cis-2-Heptene	ND		ug/l	10.0	--	5
2,2-Dimethylhexane	ND		ug/l	10.0	--	5
Methylcyclohexane	ND		ug/l	10.0	--	5
2,5-Dimethylhexane	ND		ug/l	10.0	--	5
2,4-Dimethylhexane	ND		ug/l	10.0	--	5
Ethylcyclopentane	ND		ug/l	10.0	--	5
2,2,3-Trimethylpentane	ND		ug/l	10.0	--	5
2,3,4-Trimethylpentane	ND		ug/l	10.0	--	5
2,3,3-Trimethylpentane	ND		ug/l	10.0	--	5
Xylene (Total)[1]	ND		ug/l	10.0	--	5
2,3-Dimethylhexane	ND		ug/l	10.0	--	5
2-Methylheptane	ND		ug/l	10.0	--	5
4-Methylheptane	ND		ug/l	10.0	--	5
3-Methylheptane	ND		ug/l	10.0	--	5
3-Ethylhexane	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
2-Methylthiophene	ND		ug/l	10.0	--	5
1,4-Dimethylcyclohexane (trans)	ND		ug/l	10.0	--	5
3-Methylthiophene	ND		ug/l	10.0	--	5
1-Octene	ND		ug/l	25.0	--	5
Octane	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-01 D Date Collected: 09/07/21 13:20

Client ID: 21A-AE102RR6-090721-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	10.0	--	5
1,2-Dibromoethane	ND		ug/l	10.0	--	5
cis-2-Octene	ND		ug/l	10.0	--	5
Isopropylcyclopentane	ND		ug/l	10.0	--	5
1,2-Dimethylcyclohexane (cis)	ND		ug/l	10.0	--	5
2,5-Dimethylheptane	ND		ug/l	10.0	--	5
3,5-Dimethylheptane	ND		ug/l	10.0	--	5
3,3-Dimethylheptane	ND		ug/l	10.0	--	5
1,1,4-Trimethylcyclohexane	ND		ug/l	10.0	--	5
2,3-Dimethylheptane	ND		ug/l	10.0	--	5
3,4-Dimethylheptane	ND		ug/l	10.0	--	5
4-Methyloctane	ND		ug/l	10.0	--	5
2-Methyloctane	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
2-Ethylthiophene	ND		ug/l	10.0	--	5
3-Methyloctane	ND		ug/l	10.0	--	5
3,3-Diethylpentane	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	20.0	--	5
1-Nonene	ND		ug/l	25.0	--	5
trans-3-Nonene	ND		ug/l	10.0	--	5
cis-3-Nonene	ND		ug/l	10.0	--	5
Nonane (C9)	ND		ug/l	10.0	--	5
Styrene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
2-Nonene	ND		ug/l	25.0	--	5
Isopropylcyclohexane	ND		ug/l	10.0	--	5
Isopropylbenzene	ND		ug/l	10.0	--	5
3,3-Dimethyloctane	ND		ug/l	10.0	--	5
n-Propylbenzene	ND		ug/l	10.0	--	5
2-Methylnonane	ND		ug/l	10.0	--	5
3-Methylnonane	ND		ug/l	10.0	--	5
1-Methyl-3-Ethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,3,5-Trimethylbenzene	ND		ug/l	10.0	--	5
1-Decene	ND		ug/l	10.0	--	5
Isobutylcyclohexane	ND		ug/l	10.0	--	5
1-Methyl-2-Ethylbenzene	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-01 D Date Collected: 09/07/21 13:20

Client ID: 21A-AE102RR6-090721-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	10.0	--	5
tert-Butylbenzene	ND		ug/l	10.0	--	5
1,2,4-Trimethylbenzene	ND		ug/l	10.0	--	5
Isobutylbenzene	ND		ug/l	10.0	--	5
sec-Butylbenzene	ND		ug/l	10.0	--	5
1-Methyl-3-Isopropylbenzene	ND		ug/l	10.0	--	5
1-Methyl-4-Isopropylbenzene	ND		ug/l	10.0	--	5
1,2,3-Trimethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-2-Isopropylbenzene	ND		ug/l	10.0	--	5
Indane	ND		ug/l	10.0	--	5
1,3-Diethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-3-N-Propylbenzene	ND		ug/l	10.0	--	5
Indene	ND		ug/l	10.0	--	5
1-Methyl-4-N-Propylbenzene	ND		ug/l	10.0	--	5
n-Butylbenzene	ND		ug/l	10.0	--	5
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,2-Diethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-2-N-Propylbenzene	ND		ug/l	10.0	--	5
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	10.0	--	5
Undecane	ND		ug/l	10.0	--	5
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	10.0	--	5
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	10.0	--	5
1,2,4,5-Tetramethylbenzene	ND		ug/l	10.0	--	5
1,2,3,5-Tetramethylbenzene	ND		ug/l	10.0	--	5
N-Pentylbenzene	ND		ug/l	10.0	--	5
1,2,3,4-Tetramethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	10.0	--	5
Dodecane (C12)	ND		ug/l	25.0	--	5
1,3,5-Triethylbenzene	ND		ug/l	10.0	--	5
Naphthalene	ND		ug/l	10.0	--	5
Benzothiophene	ND		ug/l	10.0	--	5
1,2,4-Triethylbenzene	ND		ug/l	10.0	--	5
Hexylbenzene	ND		ug/l	10.0	--	5
MMT	ND		ug/l	25.0	--	5
Tridecane	ND		ug/l	25.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-01 D
Client ID: 21A-AE102RR6-090721-1
Sample Location: WILMINGTON, MA

Date Collected: 09/07/21 13:20
Date Received: 09/10/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	25.0	--	5
1-Methylnaphthalene	ND		ug/l	25.0	--	5
Tetradecane (C14)	ND		ug/l	25.0	--	5
Pentadecane	ND		ug/l	25.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	100		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	97		70-130

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-02 D
Client ID: 21A-EMW11R2-090821-1
Sample Location: WILMINGTON, MA

Date Collected: 09/08/21 09:35
Date Received: 09/10/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/15/21 13:45
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	10.0	--	5
Isopentane	ND		ug/l	10.0	--	5
1-Pentene	ND		ug/l	10.0	--	5
2-Methyl-1-Butene	ND		ug/l	10.0	--	5
Pentane	ND		ug/l	10.0	--	5
trans-2-Pentene	ND		ug/l	10.0	--	5
Isoprene	ND		ug/l	10.0	--	5
cis-2-Pentene	ND		ug/l	10.0	--	5
Tertiary Butanol	ND		ug/l	125	--	5
2,2-Dimethylbutane	ND		ug/l	10.0	--	5
4-Methyl-1-pentene	ND		ug/l	10.0	--	5
Cyclopentane	ND		ug/l	10.0	--	5
2,3-Dimethylbutane	ND		ug/l	10.0	--	5
2-Methylpentane	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	10.0	--	5
3-Methylpentane	ND		ug/l	10.0	--	5
1-Hexene	ND		ug/l	10.0	--	5
n-Hexane	ND		ug/l	10.0	--	5
Isopropyl Ether	ND		ug/l	10.0	--	5
trans-2-Hexene	ND		ug/l	10.0	--	5
2-Methyl-2-pentene	ND		ug/l	10.0	--	5
cis-2-Hexene	ND		ug/l	10.0	--	5
Ethyl-Tert-Butyl-Ether	ND		ug/l	10.0	--	5
2,2-Dimethylpentane	ND		ug/l	10.0	--	5
Methylcyclopentane	ND		ug/l	10.0	--	5
2,4-Dimethylpentane	ND		ug/l	10.0	--	5
2,2,3-Trimethylbutane	ND		ug/l	10.0	--	5
1,2-Dichloroethane	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-02 D
Client ID: 21A-EMW11R2-090821-1
Sample Location: WILMINGTON, MA

Date Collected: 09/08/21 09:35
Date Received: 09/10/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	10.0	--	5
Cyclohexane	ND		ug/l	10.0	--	5
2-Methylhexane	ND		ug/l	10.0	--	5
Benzene	ND		ug/l	10.0	--	5
2,3-Dimethylpentane	ND		ug/l	10.0	--	5
Thiophene	ND		ug/l	10.0	--	5
1,1-Dimethylcyclopentane	ND		ug/l	10.0	--	5
3-Methylhexane	ND		ug/l	10.0	--	5
Tertiary-Amyl Methyl Ether	ND		ug/l	10.0	--	5
1,3-Dimethylcyclopentane (cis)	ND		ug/l	10.0	--	5
3-Ethylpentane	ND		ug/l	10.0	--	5
1-Heptene/1,2-DMCP (trans)	ND		ug/l	20.0	--	5
Isooctane	ND		ug/l	10.0	--	5
trans-3-Heptene	ND		ug/l	10.0	--	5
Heptane	ND		ug/l	10.0	--	5
trans-2-Heptene	ND		ug/l	10.0	--	5
cis-2-Heptene	ND		ug/l	10.0	--	5
2,2-Dimethylhexane	ND		ug/l	10.0	--	5
Methylcyclohexane	ND		ug/l	10.0	--	5
2,5-Dimethylhexane	ND		ug/l	10.0	--	5
2,4-Dimethylhexane	ND		ug/l	10.0	--	5
Ethylcyclopentane	ND		ug/l	10.0	--	5
2,2,3-Trimethylpentane	ND		ug/l	10.0	--	5
2,3,4-Trimethylpentane	ND		ug/l	10.0	--	5
2,3,3-Trimethylpentane	ND		ug/l	10.0	--	5
Xylene (Total)[1]	ND		ug/l	10.0	--	5
2,3-Dimethylhexane	ND		ug/l	10.0	--	5
2-Methylheptane	ND		ug/l	10.0	--	5
4-Methylheptane	ND		ug/l	10.0	--	5
3-Methylheptane	ND		ug/l	10.0	--	5
3-Ethylhexane	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
2-Methylthiophene	ND		ug/l	10.0	--	5
1,4-Dimethylcyclohexane (trans)	ND		ug/l	10.0	--	5
3-Methylthiophene	ND		ug/l	10.0	--	5
1-Octene	ND		ug/l	25.0	--	5
Octane	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-02 D
Client ID: 21A-EMW11R2-090821-1
Sample Location: WILMINGTON, MA

Date Collected: 09/08/21 09:35
Date Received: 09/10/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	10.0	--	5
1,2-Dibromoethane	ND		ug/l	10.0	--	5
cis-2-Octene	ND		ug/l	10.0	--	5
Isopropylcyclopentane	ND		ug/l	10.0	--	5
1,2-Dimethylcyclohexane (cis)	ND		ug/l	10.0	--	5
2,5-Dimethylheptane	ND		ug/l	10.0	--	5
3,5-Dimethylheptane	ND		ug/l	10.0	--	5
3,3-Dimethylheptane	ND		ug/l	10.0	--	5
1,1,4-Trimethylcyclohexane	ND		ug/l	10.0	--	5
2,3-Dimethylheptane	ND		ug/l	10.0	--	5
3,4-Dimethylheptane	ND		ug/l	10.0	--	5
4-Methyloctane	ND		ug/l	10.0	--	5
2-Methyloctane	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
2-Ethylthiophene	ND		ug/l	10.0	--	5
3-Methyloctane	ND		ug/l	10.0	--	5
3,3-Diethylpentane	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	20.0	--	5
1-Nonene	ND		ug/l	25.0	--	5
trans-3-Nonene	ND		ug/l	10.0	--	5
cis-3-Nonene	ND		ug/l	10.0	--	5
Nonane (C9)	ND		ug/l	10.0	--	5
Styrene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
2-Nonene	ND		ug/l	25.0	--	5
Isopropylcyclohexane	ND		ug/l	10.0	--	5
Isopropylbenzene	ND		ug/l	10.0	--	5
3,3-Dimethyloctane	ND		ug/l	10.0	--	5
n-Propylbenzene	ND		ug/l	10.0	--	5
2-Methylnonane	ND		ug/l	10.0	--	5
3-Methylnonane	ND		ug/l	10.0	--	5
1-Methyl-3-Ethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,3,5-Trimethylbenzene	ND		ug/l	10.0	--	5
1-Decene	ND		ug/l	10.0	--	5
Isobutylcyclohexane	ND		ug/l	10.0	--	5
1-Methyl-2-Ethylbenzene	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-02 D
Client ID: 21A-EMW11R2-090821-1
Sample Location: WILMINGTON, MA

Date Collected: 09/08/21 09:35
Date Received: 09/10/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	10.0	--	5
tert-Butylbenzene	ND		ug/l	10.0	--	5
1,2,4-Trimethylbenzene	ND		ug/l	10.0	--	5
Isobutylbenzene	ND		ug/l	10.0	--	5
sec-Butylbenzene	ND		ug/l	10.0	--	5
1-Methyl-3-Isopropylbenzene	ND		ug/l	10.0	--	5
1-Methyl-4-Isopropylbenzene	ND		ug/l	10.0	--	5
1,2,3-Trimethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-2-Isopropylbenzene	ND		ug/l	10.0	--	5
Indane	ND		ug/l	10.0	--	5
1,3-Diethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-3-N-Propylbenzene	ND		ug/l	10.0	--	5
Indene	ND		ug/l	10.0	--	5
1-Methyl-4-N-Propylbenzene	ND		ug/l	10.0	--	5
n-Butylbenzene	ND		ug/l	10.0	--	5
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,2-Diethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-2-N-Propylbenzene	ND		ug/l	10.0	--	5
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	10.0	--	5
Undecane	ND		ug/l	10.0	--	5
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	10.0	--	5
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	10.0	--	5
1,2,4,5-Tetramethylbenzene	ND		ug/l	10.0	--	5
1,2,3,5-Tetramethylbenzene	ND		ug/l	10.0	--	5
N-Pentylbenzene	ND		ug/l	10.0	--	5
1,2,3,4-Tetramethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	10.0	--	5
Dodecane (C12)	ND		ug/l	25.0	--	5
1,3,5-Triethylbenzene	ND		ug/l	10.0	--	5
Naphthalene	ND		ug/l	10.0	--	5
Benzothiophene	ND		ug/l	10.0	--	5
1,2,4-Triethylbenzene	ND		ug/l	10.0	--	5
Hexylbenzene	ND		ug/l	10.0	--	5
MMT	ND		ug/l	25.0	--	5
Tridecane	ND		ug/l	25.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-02 D
Client ID: 21A-EMW11R2-090821-1
Sample Location: WILMINGTON, MA

Date Collected: 09/08/21 09:35
Date Received: 09/10/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	25.0	--	5
1-Methylnaphthalene	ND		ug/l	25.0	--	5
Tetradecane (C14)	ND		ug/l	25.0	--	5
Pentadecane	ND		ug/l	25.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	99		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	100		70-130

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-03 Date Collected: 09/09/21 11:10
Client ID: 21A-AE103R1-090921-1 Date Received: 09/10/21
Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/15/21 15:02
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	2.00	--	1
Isopentane	ND		ug/l	2.00	--	1
1-Pentene	ND		ug/l	2.00	--	1
2-Methyl-1-Butene	ND		ug/l	2.00	--	1
Pentane	ND		ug/l	2.00	--	1
trans-2-Pentene	ND		ug/l	2.00	--	1
Isoprene	ND		ug/l	2.00	--	1
cis-2-Pentene	ND		ug/l	2.00	--	1
Tertiary Butanol	ND		ug/l	25.0	--	1
2,2-Dimethylbutane	ND		ug/l	2.00	--	1
4-Methyl-1-pentene	ND		ug/l	2.00	--	1
Cyclopentane	ND		ug/l	2.00	--	1
2,3-Dimethylbutane	ND		ug/l	2.00	--	1
2-Methylpentane	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	2.00	--	1
3-Methylpentane	ND		ug/l	2.00	--	1
1-Hexene	ND		ug/l	2.00	--	1
n-Hexane	ND		ug/l	2.00	--	1
Isopropyl Ether	ND		ug/l	2.00	--	1
trans-2-Hexene	ND		ug/l	2.00	--	1
2-Methyl-2-pentene	ND		ug/l	2.00	--	1
cis-2-Hexene	ND		ug/l	2.00	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--	1
2,2-Dimethylpentane	ND		ug/l	2.00	--	1
Methylcyclopentane	ND		ug/l	2.00	--	1
2,4-Dimethylpentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylbutane	ND		ug/l	2.00	--	1
1,2-Dichloroethane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-03 Date Collected: 09/09/21 11:10

Client ID: 21A-AE103R1-090921-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	2.00	--	1
Cyclohexane	ND		ug/l	2.00	--	1
2-Methylhexane	ND		ug/l	2.00	--	1
Benzene	ND		ug/l	2.00	--	1
2,3-Dimethylpentane	ND		ug/l	2.00	--	1
Thiophene	ND		ug/l	2.00	--	1
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--	1
3-Methylhexane	ND		ug/l	2.00	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--	1
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--	1
3-Ethylpentane	ND		ug/l	2.00	--	1
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--	1
Isooctane	ND		ug/l	2.00	--	1
trans-3-Heptene	ND		ug/l	2.00	--	1
Heptane	ND		ug/l	2.00	--	1
trans-2-Heptene	ND		ug/l	2.00	--	1
cis-2-Heptene	ND		ug/l	2.00	--	1
2,2-Dimethylhexane	ND		ug/l	2.00	--	1
Methylcyclohexane	ND		ug/l	2.00	--	1
2,5-Dimethylhexane	ND		ug/l	2.00	--	1
2,4-Dimethylhexane	ND		ug/l	2.00	--	1
Ethylcyclopentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,4-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,3-Trimethylpentane	ND		ug/l	2.00	--	1
Xylene (Total)[1]	ND		ug/l	2.00	--	1
2,3-Dimethylhexane	ND		ug/l	2.00	--	1
2-Methylheptane	ND		ug/l	2.00	--	1
4-Methylheptane	ND		ug/l	2.00	--	1
3-Methylheptane	ND		ug/l	2.00	--	1
3-Ethylhexane	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
2-Methylthiophene	ND		ug/l	2.00	--	1
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
3-Methylthiophene	ND		ug/l	2.00	--	1
1-Octene	ND		ug/l	5.00	--	1
Octane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-03 Date Collected: 09/09/21 11:10

Client ID: 21A-AE103R1-090921-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
1,2-Dibromoethane	ND		ug/l	2.00	--	1
cis-2-Octene	ND		ug/l	2.00	--	1
Isopropylcyclopentane	ND		ug/l	2.00	--	1
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--	1
2,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,3-Dimethylheptane	ND		ug/l	2.00	--	1
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--	1
2,3-Dimethylheptane	ND		ug/l	2.00	--	1
3,4-Dimethylheptane	ND		ug/l	2.00	--	1
4-Methyloctane	ND		ug/l	2.00	--	1
2-Methyloctane	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
2-Ethylthiophene	ND		ug/l	2.00	--	1
3-Methyloctane	ND		ug/l	2.00	--	1
3,3-Diethylpentane	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	4.00	--	1
1-Nonene	ND		ug/l	5.00	--	1
trans-3-Nonene	ND		ug/l	2.00	--	1
cis-3-Nonene	ND		ug/l	2.00	--	1
Nonane (C9)	ND		ug/l	2.00	--	1
Styrene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
2-Nonene	ND		ug/l	5.00	--	1
Isopropylcyclohexane	ND		ug/l	2.00	--	1
Isopropylbenzene	ND		ug/l	2.00	--	1
3,3-Dimethyloctane	ND		ug/l	2.00	--	1
n-Propylbenzene	ND		ug/l	2.00	--	1
2-Methylnonane	ND		ug/l	2.00	--	1
3-Methylnonane	ND		ug/l	2.00	--	1
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Decene	ND		ug/l	2.00	--	1
Isobutylcyclohexane	ND		ug/l	2.00	--	1
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-03 Date Collected: 09/09/21 11:10

Client ID: 21A-AE103R1-090921-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	2.00	--	1
tert-Butylbenzene	ND		ug/l	2.00	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--	1
Isobutylbenzene	ND		ug/l	2.00	--	1
sec-Butylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--	1
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--	1
Indane	ND		ug/l	2.00	--	1
1,3-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--	1
Indene	ND		ug/l	2.00	--	1
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--	1
n-Butylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--	1
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
Undecane	ND		ug/l	2.00	--	1
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
N-Pentylbenzene	ND		ug/l	2.00	--	1
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--	1
Dodecane (C12)	ND		ug/l	5.00	--	1
1,3,5-Triethylbenzene	ND		ug/l	2.00	--	1
Naphthalene	ND		ug/l	2.00	--	1
Benzothiophene	ND		ug/l	2.00	--	1
1,2,4-Triethylbenzene	ND		ug/l	2.00	--	1
Hexylbenzene	ND		ug/l	2.00	--	1
MMT	ND		ug/l	5.00	--	1
Tridecane	ND		ug/l	5.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-03 Date Collected: 09/09/21 11:10

Client ID: 21A-AE103R1-090921-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	5.00	--	1
1-Methylnaphthalene	ND		ug/l	5.00	--	1
Tetradecane (C14)	ND		ug/l	5.00	--	1
Pentadecane	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	102		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	97		70-130

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2148922
Report Date: 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-04
Client ID: 21A-AE100R1-090921-1
Sample Location: WILMINGTON, MA
Date Collected: 09/09/21 11:25
Date Received: 09/10/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/15/21 16:20
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	2.00	--	1
Isopentane	ND		ug/l	2.00	--	1
1-Pentene	ND		ug/l	2.00	--	1
2-Methyl-1-Butene	ND		ug/l	2.00	--	1
Pentane	ND		ug/l	2.00	--	1
trans-2-Pentene	ND		ug/l	2.00	--	1
Isoprene	ND		ug/l	2.00	--	1
cis-2-Pentene	ND		ug/l	2.00	--	1
Tertiary Butanol	ND		ug/l	25.0	--	1
2,2-Dimethylbutane	ND		ug/l	2.00	--	1
4-Methyl-1-pentene	ND		ug/l	2.00	--	1
Cyclopentane	ND		ug/l	2.00	--	1
2,3-Dimethylbutane	ND		ug/l	2.00	--	1
2-Methylpentane	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	2.00	--	1
3-Methylpentane	ND		ug/l	2.00	--	1
1-Hexene	ND		ug/l	2.00	--	1
n-Hexane	ND		ug/l	2.00	--	1
Isopropyl Ether	ND		ug/l	2.00	--	1
trans-2-Hexene	ND		ug/l	2.00	--	1
2-Methyl-2-pentene	ND		ug/l	2.00	--	1
cis-2-Hexene	ND		ug/l	2.00	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--	1
2,2-Dimethylpentane	ND		ug/l	2.00	--	1
Methylcyclopentane	ND		ug/l	2.00	--	1
2,4-Dimethylpentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylbutane	ND		ug/l	2.00	--	1
1,2-Dichloroethane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-04 Date Collected: 09/09/21 11:25

Client ID: 21A-AE100R1-090921-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	2.00	--	1
Cyclohexane	2.11		ug/l	2.00	--	1
2-Methylhexane	ND		ug/l	2.00	--	1
Benzene	ND		ug/l	2.00	--	1
2,3-Dimethylpentane	ND		ug/l	2.00	--	1
Thiophene	ND		ug/l	2.00	--	1
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--	1
3-Methylhexane	ND		ug/l	2.00	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--	1
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--	1
3-Ethylpentane	ND		ug/l	2.00	--	1
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--	1
Isooctane	ND		ug/l	2.00	--	1
trans-3-Heptene	ND		ug/l	2.00	--	1
Heptane	ND		ug/l	2.00	--	1
trans-2-Heptene	ND		ug/l	2.00	--	1
cis-2-Heptene	ND		ug/l	2.00	--	1
2,2-Dimethylhexane	ND		ug/l	2.00	--	1
Methylcyclohexane	ND		ug/l	2.00	--	1
2,5-Dimethylhexane	ND		ug/l	2.00	--	1
2,4-Dimethylhexane	ND		ug/l	2.00	--	1
Ethylcyclopentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,4-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,3-Trimethylpentane	ND		ug/l	2.00	--	1
Xylene (Total)[1]	ND		ug/l	2.00	--	1
2,3-Dimethylhexane	ND		ug/l	2.00	--	1
2-Methylheptane	ND		ug/l	2.00	--	1
4-Methylheptane	ND		ug/l	2.00	--	1
3-Methylheptane	ND		ug/l	2.00	--	1
3-Ethylhexane	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
2-Methylthiophene	ND		ug/l	2.00	--	1
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
3-Methylthiophene	ND		ug/l	2.00	--	1
1-Octene	ND		ug/l	5.00	--	1
Octane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-04 Date Collected: 09/09/21 11:25

Client ID: 21A-AE100R1-090921-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
1,2-Dibromoethane	ND		ug/l	2.00	--	1
cis-2-Octene	ND		ug/l	2.00	--	1
Isopropylcyclopentane	ND		ug/l	2.00	--	1
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--	1
2,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,3-Dimethylheptane	ND		ug/l	2.00	--	1
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--	1
2,3-Dimethylheptane	ND		ug/l	2.00	--	1
3,4-Dimethylheptane	ND		ug/l	2.00	--	1
4-Methyloctane	ND		ug/l	2.00	--	1
2-Methyloctane	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
2-Ethylthiophene	ND		ug/l	2.00	--	1
3-Methyloctane	ND		ug/l	2.00	--	1
3,3-Diethylpentane	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	4.00	--	1
1-Nonene	ND		ug/l	5.00	--	1
trans-3-Nonene	ND		ug/l	2.00	--	1
cis-3-Nonene	ND		ug/l	2.00	--	1
Nonane (C9)	ND		ug/l	2.00	--	1
Styrene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
2-Nonene	ND		ug/l	5.00	--	1
Isopropylcyclohexane	ND		ug/l	2.00	--	1
Isopropylbenzene	ND		ug/l	2.00	--	1
3,3-Dimethyloctane	ND		ug/l	2.00	--	1
n-Propylbenzene	ND		ug/l	2.00	--	1
2-Methylnonane	ND		ug/l	2.00	--	1
3-Methylnonane	ND		ug/l	2.00	--	1
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Decene	ND		ug/l	2.00	--	1
Isobutylcyclohexane	ND		ug/l	2.00	--	1
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-04 Date Collected: 09/09/21 11:25

Client ID: 21A-AE100R1-090921-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	2.00	--	1
tert-Butylbenzene	4.67		ug/l	2.00	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--	1
Isobutylbenzene	ND		ug/l	2.00	--	1
sec-Butylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--	1
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--	1
Indane	5.86		ug/l	2.00	--	1
1,3-Diethylbenzene	5.47		ug/l	2.00	--	1
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--	1
Indene	ND		ug/l	2.00	--	1
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--	1
n-Butylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Diethylbenzene	2.58		ug/l	2.00	--	1
1-Methyl-2-N-Propylbenzene	2.47		ug/l	2.00	--	1
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
Undecane	ND		ug/l	2.00	--	1
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
N-Pentylbenzene	ND		ug/l	2.00	--	1
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--	1
Dodecane (C12)	ND		ug/l	5.00	--	1
1,3,5-Triethylbenzene	ND		ug/l	2.00	--	1
Naphthalene	ND		ug/l	2.00	--	1
Benzothiophene	ND		ug/l	2.00	--	1
1,2,4-Triethylbenzene	ND		ug/l	2.00	--	1
Hexylbenzene	ND		ug/l	2.00	--	1
MMT	ND		ug/l	5.00	--	1
Tridecane	ND		ug/l	5.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

SAMPLE RESULTS

Lab ID: L2148922-04 Date Collected: 09/09/21 11:25

Client ID: 21A-AE100R1-090921-1 Date Received: 09/10/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	5.00	--	1
1-Methylnaphthalene	ND		ug/l	5.00	--	1
Tetradecane (C14)	ND		ug/l	5.00	--	1
Pentadecane	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	100		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	96		70-130

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2148922
Report Date: 09/21/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1546086-5					
3-Methyl-1-butene	ND		ug/l	2.00	--
Isopentane	ND		ug/l	2.00	--
1-Pentene	ND		ug/l	2.00	--
2-Methyl-1-Butene	ND		ug/l	2.00	--
Pentane	ND		ug/l	2.00	--
trans-2-Pentene	ND		ug/l	2.00	--
Isoprene	ND		ug/l	2.00	--
cis-2-Pentene	ND		ug/l	2.00	--
Tertiary Butanol	ND		ug/l	25.0	--
2,2-Dimethylbutane	ND		ug/l	2.00	--
4-Methyl-1-pentene	ND		ug/l	2.00	--
Cyclopentane	ND		ug/l	2.00	--
2,3-Dimethylbutane	ND		ug/l	2.00	--
2-Methylpentane	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	2.00	--
3-Methylpentane	ND		ug/l	2.00	--
1-Hexene	ND		ug/l	2.00	--
n-Hexane	ND		ug/l	2.00	--
Isopropyl Ether	ND		ug/l	2.00	--
trans-2-Hexene	ND		ug/l	2.00	--
2-Methyl-2-pentene	ND		ug/l	2.00	--
cis-2-Hexene	ND		ug/l	2.00	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--
2,2-Dimethylpentane	ND		ug/l	2.00	--
Methylcyclopentane	ND		ug/l	2.00	--
2,4-Dimethylpentane	ND		ug/l	2.00	--
2,2,3-Trimethylbutane	ND		ug/l	2.00	--
1,2-Dichloroethane	ND		ug/l	2.00	--
3,3-Dimethylpentane	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2148922
Report Date: 09/21/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1546086-5					
Cyclohexane	ND		ug/l	2.00	--
2-Methylhexane	ND		ug/l	2.00	--
Benzene	ND		ug/l	2.00	--
2,3-Dimethylpentane	ND		ug/l	2.00	--
Thiophene	ND		ug/l	2.00	--
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--
3-Methylhexane	ND		ug/l	2.00	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--
3-Ethylpentane	ND		ug/l	2.00	--
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--
Isooctane	ND		ug/l	2.00	--
trans-3-Heptene	ND		ug/l	2.00	--
Heptane	ND		ug/l	2.00	--
trans-2-Heptene	ND		ug/l	2.00	--
cis-2-Heptene	ND		ug/l	2.00	--
2,2-Dimethylhexane	ND		ug/l	2.00	--
Methylcyclohexane	ND		ug/l	2.00	--
2,5-Dimethylhexane	ND		ug/l	2.00	--
2,4-Dimethylhexane	ND		ug/l	2.00	--
Ethylcyclopentane	ND		ug/l	2.00	--
2,2,3-Trimethylpentane	ND		ug/l	2.00	--
2,3,4-Trimethylpentane	ND		ug/l	2.00	--
2,3,3-Trimethylpentane	ND		ug/l	2.00	--
Xylene (Total)[1]	ND		ug/l	2.00	--
2,3-Dimethylhexane	ND		ug/l	2.00	--
2-Methylheptane	ND		ug/l	2.00	--
4-Methylheptane	ND		ug/l	2.00	--
3-Methylheptane	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2148922
Report Date: 09/21/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1546086-5					
3-Ethylhexane	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
2-Methylthiophene	ND		ug/l	2.00	--
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--
3-Methylthiophene	ND		ug/l	2.00	--
1-Octene	ND		ug/l	5.00	--
Octane	ND		ug/l	2.00	--
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--
1,2-Dibromoethane	ND		ug/l	2.00	--
cis-2-Octene	ND		ug/l	2.00	--
Isopropylcyclopentane	ND		ug/l	2.00	--
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--
2,5-Dimethylheptane	ND		ug/l	2.00	--
3,5-Dimethylheptane	ND		ug/l	2.00	--
3,3-Dimethylheptane	ND		ug/l	2.00	--
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--
2,3-Dimethylheptane	ND		ug/l	2.00	--
3,4-Dimethylheptane	ND		ug/l	2.00	--
4-Methyloctane	ND		ug/l	2.00	--
2-Methyloctane	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
2-Ethylthiophene	ND		ug/l	2.00	--
3-Methyloctane	ND		ug/l	2.00	--
3,3-Diethylpentane	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	4.00	--
1-Nonene	ND		ug/l	5.00	--
trans-3-Nonene	ND		ug/l	2.00	--
cis-3-Nonene	ND		ug/l	2.00	--
Nonane (C9)	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1546086-5					
Styrene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
2-Nonene	ND		ug/l	5.00	--
Isopropylcyclohexane	ND		ug/l	2.00	--
Isopropylbenzene	ND		ug/l	2.00	--
3,3-Dimethyloctane	ND		ug/l	2.00	--
n-Propylbenzene	ND		ug/l	2.00	--
2-Methylnonane	ND		ug/l	2.00	--
3-Methylnonane	ND		ug/l	2.00	--
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--
1-Decene	ND		ug/l	2.00	--
Isobutylcyclohexane	ND		ug/l	2.00	--
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--
Decane (C10)	ND		ug/l	2.00	--
tert-Butylbenzene	ND		ug/l	2.00	--
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--
Isobutylbenzene	ND		ug/l	2.00	--
sec-Butylbenzene	ND		ug/l	2.00	--
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--
Indane	ND		ug/l	2.00	--
1,3-Diethylbenzene	ND		ug/l	2.00	--
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--
Indene	ND		ug/l	2.00	--
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN **Lab Number:** L2148922

Project Number: 60552044.25 **Report Date:** 09/21/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1546086-5					
n-Butylbenzene	ND		ug/l	2.00	--
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,2-Diethylbenzene	ND		ug/l	2.00	--
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--
Undecane	ND		ug/l	2.00	--
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--
N-Pentylbenzene	ND		ug/l	2.00	--
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--
Dodecane (C12)	ND		ug/l	5.00	--
1,3,5-Triethylbenzene	ND		ug/l	2.00	--
Naphthalene	ND		ug/l	2.00	--
Benzothiophene	ND		ug/l	2.00	--
1,2,4-Triethylbenzene	ND		ug/l	2.00	--
Hexylbenzene	ND		ug/l	2.00	--
MMT	ND		ug/l	5.00	--
Tridecane	ND		ug/l	5.00	--
2-Methylnaphthalene	ND		ug/l	5.00	--
1-Methylnaphthalene	ND		ug/l	5.00	--
Tetradecane (C14)	ND		ug/l	5.00	--
Pentadecane	ND		ug/l	5.00	--

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2148922
Report Date: 09/21/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/13/21 15:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1546086-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	103		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	98		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25

Lab Number: L2148922
Report Date: 09/21/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-04 Batch: WG1546086-3 WG1546086-4								
1-Pentene	114		110		50-130	4		30
Pentane	101		96		50-130	5		30
Tertiary Butanol	104		93		50-130	11		30
Cyclopentane	98		112		50-130	13		30
2-Methylpentane	96		92		50-130	4		30
Methyl tert butyl ether	99		94		50-130	5		30
3-Methylpentane	100		93		50-130	7		30
1-Hexene	106		100		50-130	6		30
n-Hexane	96		92		50-130	4		30
Isopropyl Ether	99		94		50-130	5		30
Ethyl-Tert-Butyl-Ether	97		92		50-130	5		30
Methylcyclopentane	105		100		50-130	5		30
2,4-Dimethylpentane	100		96		50-130	4		30
Cyclohexane	109		107		50-130	2		30
2-Methylhexane	103		99		50-130	4		30
Benzene	102		100		50-130	2		30
2,3-Dimethylpentane	105		98		50-130	7		30
3-Methylhexane	92		88		50-130	4		30
Tertiary-Amyl Methyl Ether	92		89		50-130	3		30
Isooctane	103		99		50-130	4		30
Heptane	108		102		50-130	6		30
Methylcyclohexane	104		99		50-130	5		30
2-Methylheptane	103		99		50-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.25

Lab Number: L2148922

Report Date: 09/21/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-04 Batch: WG1546086-3 WG1546086-4								
3-Methylheptane	96		92		50-130	4		30
Toluene	99		98		50-130	1		30
Octane	110		105		50-130	5		30
Ethylbenzene	102		101		50-130	1		30
p/m-Xylene	107		106		50-130	1		30
Nonane (C9)	100		96		50-130	4		30
o-Xylene	104		103		50-130	1		30
Isopropylbenzene	105		104		50-130	1		30
n-Propylbenzene	104		104		50-130	0		30
1-Methyl-3-Ethylbenzene	105		104		50-130	1		30
1-Methyl-4-Ethylbenzene	108		108		50-130	0		30
1,3,5-Trimethylbenzene	104		106		50-130	2		30
1-Decene	82		86		50-130	5		30
1-Methyl-2-Ethylbenzene	101		102		50-130	1		30
Decane (C10)	104		106		50-130	2		30
1,2,4-Trimethylbenzene	100		102		50-130	2		30
sec-Butylbenzene	106		106		50-130	0		30
1-Methyl-4-N-Propylbenzene	90		94		50-130	4		30
n-Butylbenzene	97		100		50-130	3		30
1,2-Diethylbenzene	96		100		50-130	4		30
Undecane	100		101		50-130	1		30
N-Pentylbenzene	78		84		50-130	7		30
Dodecane (C12)	**157**	Q	**154**	Q	50-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.25

Lab Number: L2148922

Report Date: 09/21/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-04 Batch: WG1546086-3 WG1546086-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Dibromofluoromethane	99		99		70-130
Toluene-d8	100		97		70-130
4-Bromofluorobenzene	99		99		70-130

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25

Lab Number: L2148922
Report Date: 09/21/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2148922-01A	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-01B	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-01C	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-02A	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-02B	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-02C	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-03A	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-03B	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-03C	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-04A	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-04B	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)
L2148922-04C	Vial HCl preserved	A	NA		2.1	Y	Absent		A2-PIANO8260(14)

*Values in parentheses indicate holding time in days

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2148922
Project Number:	60552044.25	**Report Date:**	09/21/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2148922
Project Number:	60552044.25	**Report Date:**	09/21/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2148922
Project Number:	60552044.25	**Report Date:**	09/21/21

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AECOM

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 9/10/21

ALPHA Job #: L2148922

Project Information

Project Name: Lockheed Martin

Project Location: Wilmington MA

Project #: 60659044.25

Project Manager: scott.olson@aecom.com

ALPHA Quote #: 7/13/2021 K. Raymond Email

Client Information

Client: AECOM

Address: 250 Apollo Drive

Chelmsford, MA 01824

Phone: 978-905-2100

Fax: 978-905-2101

Email: lori.herberich@aecom.com;

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #: 137518

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
MassDEP MCP CAM	GW-1, -2, -3

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

AECOM Contacts
Lori Herberich (Chemist) - lori.herberich@aecom.com; cell 978-302-0089
Scott Olson (PM) - scott.olson@aecom.com; cell 978-846-5238

ANALYSIS

P.I.A.N.O.

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials													
48922-01	21A-AE102RR6-090721-1	9/9/21	1320	GW	BK	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
-02	21A-EMW11R2-090821-1	9/8/21	0935	GW	SH	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
-03	21A-AE103R1-090921-1	9/9/21	1110	GW	SH	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
-04	21A-AE102R1-090921-1	9/9/21	1125	GW	BK	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

Container Type														
Preservative														

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/10 1450	Rob Macomber AECOM	9/10/21 1450
[signature]	9/10/21 1710	[signature]	9/10/21 1710
Joseph C. Reynolds	9/10/21 2205	Joseph C. Reynolds	9/10/21 2205
Joseph C. Reynolds	9/10/21 2201	[signature]	9/10/21 2201

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

ANALYTICAL REPORT

Lab Number:	L2150367
Client:	AECOM 250 Apollo Drive Chelmsford, MA 01824
ATTN:	Scott Olson
Phone:	(978) 905-2351
Project Name:	LOCKHEED MARTIN
Project Number:	60552044.25
Report Date:	09/24/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25

Lab Number: L2150367
Report Date: 09/24/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2150367-01	21A-AE29R6-091421-1	WATER	WILMINGTON, MA	09/14/21 11:40	09/17/21
L2150367-02	21A-GZA105R-091421-1	WATER	WILMINGTON, MA	09/14/21 11:40	09/17/21
L2150367-03	21A-GZA105D-091521-1	WATER	WILMINGTON, MA	09/14/21 10:05	09/17/21
L2150367-04	21A-GZA105S-091521-1	WATER	WILMINGTON, MA	09/14/21 13:40	09/17/21

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2150367
Project Number:	60552044.25	**Report Date:**	09/24/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2150367
Project Number:	60552044.25	**Report Date:**	09/24/21

Case Narrative (continued)

MCP Related Narratives

Report Submission

All MCP required questions were answered with affirmative responses; therefore, there are no relevant protocol-specific QC and/or performance standard non-conformances to report.

Non-MCP Related Narratives

PIANO Volatile Organics

L2150367-02D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

The WG1548764-3/-4 LCS/LCSD recoveries, associated with L2150367-01, -02D, -03, and -04, are above the acceptance criteria for dodecane (c12) (161%/156%); however, the associated samples are non-detect to the RL for these target analytes. The results of the original analysis are reported.

WG1548764: The continuing calibration standard, associated with L2150367 and QC, had the response for 1-Methylnaphthalene (36%D) above the acceptance criteria for the method. The associated samples were non-detect; therefore, no further action was taken.

WG1548764: The continuing calibration standard, associated with L2150367 and QC, had the response for Undecane (50.5%), Dodecane (39.3%), Hexylbenzene (59.8%), 2-Methylnaphthalene (79.6%), and 1-Methylnaphthalene (74.1%D) above the acceptance criteria for the method. The associated samples were non-detect; therefore, no further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 09/24/21

QC OUTLIER SUMMARY REPORT

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25

Lab Number: L2150367
Report Date: 09/24/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
PIANO Volatile Organics by GC/MS - Mansfield Lab								
8260B	Batch QC	WG1548764-3	Dodecane (C12)	LCS	161	50-130	01-04	potential high bias
8260B	Batch QC	WG1548764-4	Dodecane (C12)	LCSD	156	50-130	01-04	potential high bias

ORGANICS

VOLATILES

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2150367
Report Date: 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-01
Client ID: 21A-AE29R6-091421-1
Sample Location: WILMINGTON, MA
Date Collected: 09/14/21 11:40
Date Received: 09/17/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/21/21 08:46
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	2.00	--	1
Isopentane	ND		ug/l	2.00	--	1
1-Pentene	ND		ug/l	2.00	--	1
2-Methyl-1-Butene	ND		ug/l	2.00	--	1
Pentane	ND		ug/l	2.00	--	1
trans-2-Pentene	ND		ug/l	2.00	--	1
Isoprene	ND		ug/l	2.00	--	1
cis-2-Pentene	ND		ug/l	2.00	--	1
Tertiary Butanol	ND		ug/l	25.0	--	1
2,2-Dimethylbutane	ND		ug/l	2.00	--	1
4-Methyl-1-pentene	ND		ug/l	2.00	--	1
Cyclopentane	ND		ug/l	2.00	--	1
2,3-Dimethylbutane	ND		ug/l	2.00	--	1
2-Methylpentane	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	2.00	--	1
3-Methylpentane	ND		ug/l	2.00	--	1
1-Hexene	ND		ug/l	2.00	--	1
n-Hexane	ND		ug/l	2.00	--	1
Isopropyl Ether	ND		ug/l	2.00	--	1
trans-2-Hexene	ND		ug/l	2.00	--	1
2-Methyl-2-pentene	ND		ug/l	2.00	--	1
cis-2-Hexene	ND		ug/l	2.00	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--	1
2,2-Dimethylpentane	ND		ug/l	2.00	--	1
Methylcyclopentane	ND		ug/l	2.00	--	1
2,4-Dimethylpentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylbutane	ND		ug/l	2.00	--	1
1,2-Dichloroethane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-01 Date Collected: 09/14/21 11:40

Client ID: 21A-AE29R6-091421-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	2.00	--	1
Cyclohexane	ND		ug/l	2.00	--	1
2-Methylhexane	ND		ug/l	2.00	--	1
Benzene	ND		ug/l	2.00	--	1
2,3-Dimethylpentane	ND		ug/l	2.00	--	1
Thiophene	ND		ug/l	2.00	--	1
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--	1
3-Methylhexane	ND		ug/l	2.00	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--	1
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--	1
3-Ethylpentane	ND		ug/l	2.00	--	1
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--	1
Isooctane	ND		ug/l	2.00	--	1
trans-3-Heptene	ND		ug/l	2.00	--	1
Heptane	ND		ug/l	2.00	--	1
trans-2-Heptene	ND		ug/l	2.00	--	1
cis-2-Heptene	ND		ug/l	2.00	--	1
2,2-Dimethylhexane	ND		ug/l	2.00	--	1
Methylcyclohexane	ND		ug/l	2.00	--	1
2,5-Dimethylhexane	ND		ug/l	2.00	--	1
2,4-Dimethylhexane	ND		ug/l	2.00	--	1
Ethylcyclopentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,4-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,3-Trimethylpentane	ND		ug/l	2.00	--	1
Xylene (Total)[1]	ND		ug/l	2.00	--	1
2,3-Dimethylhexane	ND		ug/l	2.00	--	1
2-Methylheptane	ND		ug/l	2.00	--	1
4-Methylheptane	ND		ug/l	2.00	--	1
3-Methylheptane	ND		ug/l	2.00	--	1
3-Ethylhexane	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
2-Methylthiophene	ND		ug/l	2.00	--	1
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
3-Methylthiophene	ND		ug/l	2.00	--	1
1-Octene	ND		ug/l	5.00	--	1
Octane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-01 Date Collected: 09/14/21 11:40

Client ID: 21A-AE29R6-091421-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
1,2-Dibromoethane	ND		ug/l	2.00	--	1
cis-2-Octene	ND		ug/l	2.00	--	1
Isopropylcyclopentane	ND		ug/l	2.00	--	1
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--	1
2,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,3-Dimethylheptane	ND		ug/l	2.00	--	1
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--	1
2,3-Dimethylheptane	ND		ug/l	2.00	--	1
3,4-Dimethylheptane	ND		ug/l	2.00	--	1
4-Methyloctane	ND		ug/l	2.00	--	1
2-Methyloctane	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
2-Ethylthiophene	ND		ug/l	2.00	--	1
3-Methyloctane	ND		ug/l	2.00	--	1
3,3-Diethylpentane	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	4.00	--	1
1-Nonene	ND		ug/l	5.00	--	1
trans-3-Nonene	ND		ug/l	2.00	--	1
cis-3-Nonene	ND		ug/l	2.00	--	1
Nonane (C9)	ND		ug/l	2.00	--	1
Styrene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
2-Nonene	ND		ug/l	5.00	--	1
Isopropylcyclohexane	ND		ug/l	2.00	--	1
Isopropylbenzene	ND		ug/l	2.00	--	1
3,3-Dimethyloctane	ND		ug/l	2.00	--	1
n-Propylbenzene	ND		ug/l	2.00	--	1
2-Methylnonane	ND		ug/l	2.00	--	1
3-Methylnonane	ND		ug/l	2.00	--	1
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Decene	ND		ug/l	2.00	--	1
Isobutylcyclohexane	ND		ug/l	2.00	--	1
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-01 Date Collected: 09/14/21 11:40

Client ID: 21A-AE29R6-091421-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	2.00	--	1
tert-Butylbenzene	ND		ug/l	2.00	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--	1
Isobutylbenzene	ND		ug/l	2.00	--	1
sec-Butylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--	1
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--	1
Indane	ND		ug/l	2.00	--	1
1,3-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--	1
Indene	ND		ug/l	2.00	--	1
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--	1
n-Butylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--	1
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
Undecane	ND		ug/l	2.00	--	1
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
N-Pentylbenzene	ND		ug/l	2.00	--	1
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--	1
Dodecane (C12)	ND		ug/l	5.00	--	1
1,3,5-Triethylbenzene	ND		ug/l	2.00	--	1
Naphthalene	ND		ug/l	2.00	--	1
Benzothiophene	ND		ug/l	2.00	--	1
1,2,4-Triethylbenzene	ND		ug/l	2.00	--	1
Hexylbenzene	ND		ug/l	2.00	--	1
MMT	ND		ug/l	5.00	--	1
Tridecane	ND		ug/l	5.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-01 Date Collected: 09/14/21 11:40

Client ID: 21A-AE29R6-091421-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	5.00	--	1
1-Methylnaphthalene	ND		ug/l	5.00	--	1
Tetradecane (C14)	ND		ug/l	5.00	--	1
Pentadecane	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	101		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	99		70-130

Project Name: LOCKHEED MARTIN
Lab Number: L2150367
Project Number: 60552044.25
Report Date: 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-02 D
Client ID: 21A-GZA105R-091421-1
Sample Location: WILMINGTON, MA

Date Collected: 09/14/21 11:40
Date Received: 09/17/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/21/21 10:05
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	10.0	--	5
Isopentane	ND		ug/l	10.0	--	5
1-Pentene	ND		ug/l	10.0	--	5
2-Methyl-1-Butene	ND		ug/l	10.0	--	5
Pentane	ND		ug/l	10.0	--	5
trans-2-Pentene	ND		ug/l	10.0	--	5
Isoprene	ND		ug/l	10.0	--	5
cis-2-Pentene	ND		ug/l	10.0	--	5
Tertiary Butanol	ND		ug/l	125	--	5
2,2-Dimethylbutane	ND		ug/l	10.0	--	5
4-Methyl-1-pentene	ND		ug/l	10.0	--	5
Cyclopentane	ND		ug/l	10.0	--	5
2,3-Dimethylbutane	ND		ug/l	10.0	--	5
2-Methylpentane	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	10.0	--	5
3-Methylpentane	ND		ug/l	10.0	--	5
1-Hexene	ND		ug/l	10.0	--	5
n-Hexane	ND		ug/l	10.0	--	5
Isopropyl Ether	ND		ug/l	10.0	--	5
trans-2-Hexene	ND		ug/l	10.0	--	5
2-Methyl-2-pentene	ND		ug/l	10.0	--	5
cis-2-Hexene	ND		ug/l	10.0	--	5
Ethyl-Tert-Butyl-Ether	ND		ug/l	10.0	--	5
2,2-Dimethylpentane	ND		ug/l	10.0	--	5
Methylcyclopentane	ND		ug/l	10.0	--	5
2,4-Dimethylpentane	ND		ug/l	10.0	--	5
2,2,3-Trimethylbutane	ND		ug/l	10.0	--	5
1,2-Dichloroethane	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-02 D
Client ID: 21A-GZA105R-091421-1
Sample Location: WILMINGTON, MA

Date Collected: 09/14/21 11:40
Date Received: 09/17/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	10.0	--	5
Cyclohexane	ND		ug/l	10.0	--	5
2-Methylhexane	ND		ug/l	10.0	--	5
Benzene	ND		ug/l	10.0	--	5
2,3-Dimethylpentane	ND		ug/l	10.0	--	5
Thiophene	ND		ug/l	10.0	--	5
1,1-Dimethylcyclopentane	ND		ug/l	10.0	--	5
3-Methylhexane	ND		ug/l	10.0	--	5
Tertiary-Amyl Methyl Ether	ND		ug/l	10.0	--	5
1,3-Dimethylcyclopentane (cis)	ND		ug/l	10.0	--	5
3-Ethylpentane	ND		ug/l	10.0	--	5
1-Heptene/1,2-DMCP (trans)	ND		ug/l	20.0	--	5
Isooctane	ND		ug/l	10.0	--	5
trans-3-Heptene	ND		ug/l	10.0	--	5
Heptane	ND		ug/l	10.0	--	5
trans-2-Heptene	ND		ug/l	10.0	--	5
cis-2-Heptene	ND		ug/l	10.0	--	5
2,2-Dimethylhexane	ND		ug/l	10.0	--	5
Methylcyclohexane	ND		ug/l	10.0	--	5
2,5-Dimethylhexane	ND		ug/l	10.0	--	5
2,4-Dimethylhexane	ND		ug/l	10.0	--	5
Ethylcyclopentane	ND		ug/l	10.0	--	5
2,2,3-Trimethylpentane	ND		ug/l	10.0	--	5
2,3,4-Trimethylpentane	ND		ug/l	10.0	--	5
2,3,3-Trimethylpentane	ND		ug/l	10.0	--	5
Xylene (Total)[1]	ND		ug/l	10.0	--	5
2,3-Dimethylhexane	ND		ug/l	10.0	--	5
2-Methylheptane	ND		ug/l	10.0	--	5
4-Methylheptane	ND		ug/l	10.0	--	5
3-Methylheptane	ND		ug/l	10.0	--	5
3-Ethylhexane	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
2-Methylthiophene	ND		ug/l	10.0	--	5
1,4-Dimethylcyclohexane (trans)	ND		ug/l	10.0	--	5
3-Methylthiophene	ND		ug/l	10.0	--	5
1-Octene	ND		ug/l	25.0	--	5
Octane	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-02 D
Client ID: 21A-GZA105R-091421-1
Sample Location: WILMINGTON, MA

Date Collected: 09/14/21 11:40
Date Received: 09/17/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	10.0	--	5
1,2-Dibromoethane	ND		ug/l	10.0	--	5
cis-2-Octene	ND		ug/l	10.0	--	5
Isopropylcyclopentane	ND		ug/l	10.0	--	5
1,2-Dimethylcyclohexane (cis)	ND		ug/l	10.0	--	5
2,5-Dimethylheptane	ND		ug/l	10.0	--	5
3,5-Dimethylheptane	ND		ug/l	10.0	--	5
3,3-Dimethylheptane	ND		ug/l	10.0	--	5
1,1,4-Trimethylcyclohexane	ND		ug/l	10.0	--	5
2,3-Dimethylheptane	ND		ug/l	10.0	--	5
3,4-Dimethylheptane	ND		ug/l	10.0	--	5
4-Methyloctane	ND		ug/l	10.0	--	5
2-Methyloctane	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
2-Ethylthiophene	ND		ug/l	10.0	--	5
3-Methyloctane	ND		ug/l	10.0	--	5
3,3-Diethylpentane	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	20.0	--	5
1-Nonene	ND		ug/l	25.0	--	5
trans-3-Nonene	ND		ug/l	10.0	--	5
cis-3-Nonene	ND		ug/l	10.0	--	5
Nonane (C9)	ND		ug/l	10.0	--	5
Styrene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
2-Nonene	ND		ug/l	25.0	--	5
Isopropylcyclohexane	ND		ug/l	10.0	--	5
Isopropylbenzene	ND		ug/l	10.0	--	5
3,3-Dimethyloctane	ND		ug/l	10.0	--	5
n-Propylbenzene	ND		ug/l	10.0	--	5
2-Methylnonane	ND		ug/l	10.0	--	5
3-Methylnonane	ND		ug/l	10.0	--	5
1-Methyl-3-Ethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,3,5-Trimethylbenzene	ND		ug/l	10.0	--	5
1-Decene	ND		ug/l	10.0	--	5
Isobutylcyclohexane	ND		ug/l	10.0	--	5
1-Methyl-2-Ethylbenzene	ND		ug/l	10.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-02 D
Client ID: 21A-GZA105R-091421-1
Sample Location: WILMINGTON, MA

Date Collected: 09/14/21 11:40
Date Received: 09/17/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	10.0	--	5
tert-Butylbenzene	ND		ug/l	10.0	--	5
1,2,4-Trimethylbenzene	ND		ug/l	10.0	--	5
Isobutylbenzene	ND		ug/l	10.0	--	5
sec-Butylbenzene	ND		ug/l	10.0	--	5
1-Methyl-3-Isopropylbenzene	ND		ug/l	10.0	--	5
1-Methyl-4-Isopropylbenzene	ND		ug/l	10.0	--	5
1,2,3-Trimethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-2-Isopropylbenzene	ND		ug/l	10.0	--	5
Indane	ND		ug/l	10.0	--	5
1,3-Diethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-3-N-Propylbenzene	ND		ug/l	10.0	--	5
Indene	ND		ug/l	10.0	--	5
1-Methyl-4-N-Propylbenzene	ND		ug/l	10.0	--	5
n-Butylbenzene	ND		ug/l	10.0	--	5
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,2-Diethylbenzene	ND		ug/l	10.0	--	5
1-Methyl-2-N-Propylbenzene	ND		ug/l	10.0	--	5
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	10.0	--	5
Undecane	ND		ug/l	10.0	--	5
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	10.0	--	5
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	10.0	--	5
1,2,4,5-Tetramethylbenzene	ND		ug/l	10.0	--	5
1,2,3,5-Tetramethylbenzene	ND		ug/l	10.0	--	5
N-Pentylbenzene	ND		ug/l	10.0	--	5
1,2,3,4-Tetramethylbenzene	ND		ug/l	10.0	--	5
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	10.0	--	5
Dodecane (C12)	ND		ug/l	25.0	--	5
1,3,5-Triethylbenzene	ND		ug/l	10.0	--	5
Naphthalene	ND		ug/l	10.0	--	5
Benzothiophene	ND		ug/l	10.0	--	5
1,2,4-Triethylbenzene	ND		ug/l	10.0	--	5
Hexylbenzene	ND		ug/l	10.0	--	5
MMT	ND		ug/l	25.0	--	5
Tridecane	ND		ug/l	25.0	--	5

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-02 D
Client ID: 21A-GZA105R-091421-1
Sample Location: WILMINGTON, MA

Date Collected: 09/14/21 11:40
Date Received: 09/17/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	25.0	--	5
1-Methylnaphthalene	ND		ug/l	25.0	--	5
Tetradecane (C14)	ND		ug/l	25.0	--	5
Pentadecane	ND		ug/l	25.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	97		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	100		70-130

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-03 Date Collected: 09/14/21 10:05
Client ID: 21A-GZA105D-091521-1 Date Received: 09/17/21
Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/21/21 11:24
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	2.00	--	1
Isopentane	ND		ug/l	2.00	--	1
1-Pentene	ND		ug/l	2.00	--	1
2-Methyl-1-Butene	ND		ug/l	2.00	--	1
Pentane	ND		ug/l	2.00	--	1
trans-2-Pentene	ND		ug/l	2.00	--	1
Isoprene	ND		ug/l	2.00	--	1
cis-2-Pentene	ND		ug/l	2.00	--	1
Tertiary Butanol	ND		ug/l	25.0	--	1
2,2-Dimethylbutane	ND		ug/l	2.00	--	1
4-Methyl-1-pentene	ND		ug/l	2.00	--	1
Cyclopentane	ND		ug/l	2.00	--	1
2,3-Dimethylbutane	ND		ug/l	2.00	--	1
2-Methylpentane	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	2.00	--	1
3-Methylpentane	ND		ug/l	2.00	--	1
1-Hexene	ND		ug/l	2.00	--	1
n-Hexane	ND		ug/l	2.00	--	1
Isopropyl Ether	ND		ug/l	2.00	--	1
trans-2-Hexene	ND		ug/l	2.00	--	1
2-Methyl-2-pentene	ND		ug/l	2.00	--	1
cis-2-Hexene	ND		ug/l	2.00	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--	1
2,2-Dimethylpentane	ND		ug/l	2.00	--	1
Methylcyclopentane	ND		ug/l	2.00	--	1
2,4-Dimethylpentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylbutane	ND		ug/l	2.00	--	1
1,2-Dichloroethane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-03 Date Collected: 09/14/21 10:05

Client ID: 21A-GZA105D-091521-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	2.00	--	1
Cyclohexane	ND		ug/l	2.00	--	1
2-Methylhexane	ND		ug/l	2.00	--	1
Benzene	ND		ug/l	2.00	--	1
2,3-Dimethylpentane	ND		ug/l	2.00	--	1
Thiophene	ND		ug/l	2.00	--	1
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--	1
3-Methylhexane	ND		ug/l	2.00	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--	1
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--	1
3-Ethylpentane	ND		ug/l	2.00	--	1
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--	1
Isooctane	ND		ug/l	2.00	--	1
trans-3-Heptene	ND		ug/l	2.00	--	1
Heptane	ND		ug/l	2.00	--	1
trans-2-Heptene	ND		ug/l	2.00	--	1
cis-2-Heptene	ND		ug/l	2.00	--	1
2,2-Dimethylhexane	ND		ug/l	2.00	--	1
Methylcyclohexane	ND		ug/l	2.00	--	1
2,5-Dimethylhexane	ND		ug/l	2.00	--	1
2,4-Dimethylhexane	ND		ug/l	2.00	--	1
Ethylcyclopentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,4-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,3-Trimethylpentane	ND		ug/l	2.00	--	1
Xylene (Total)[1]	ND		ug/l	2.00	--	1
2,3-Dimethylhexane	ND		ug/l	2.00	--	1
2-Methylheptane	ND		ug/l	2.00	--	1
4-Methylheptane	ND		ug/l	2.00	--	1
3-Methylheptane	ND		ug/l	2.00	--	1
3-Ethylhexane	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
2-Methylthiophene	ND		ug/l	2.00	--	1
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
3-Methylthiophene	ND		ug/l	2.00	--	1
1-Octene	ND		ug/l	5.00	--	1
Octane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-03 Date Collected: 09/14/21 10:05

Client ID: 21A-GZA105D-091521-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
1,2-Dibromoethane	ND		ug/l	2.00	--	1
cis-2-Octene	ND		ug/l	2.00	--	1
Isopropylcyclopentane	ND		ug/l	2.00	--	1
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--	1
2,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,3-Dimethylheptane	ND		ug/l	2.00	--	1
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--	1
2,3-Dimethylheptane	ND		ug/l	2.00	--	1
3,4-Dimethylheptane	ND		ug/l	2.00	--	1
4-Methyloctane	ND		ug/l	2.00	--	1
2-Methyloctane	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
2-Ethylthiophene	ND		ug/l	2.00	--	1
3-Methyloctane	ND		ug/l	2.00	--	1
3,3-Diethylpentane	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	4.00	--	1
1-Nonene	ND		ug/l	5.00	--	1
trans-3-Nonene	ND		ug/l	2.00	--	1
cis-3-Nonene	ND		ug/l	2.00	--	1
Nonane (C9)	ND		ug/l	2.00	--	1
Styrene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
2-Nonene	ND		ug/l	5.00	--	1
Isopropylcyclohexane	ND		ug/l	2.00	--	1
Isopropylbenzene	ND		ug/l	2.00	--	1
3,3-Dimethyloctane	ND		ug/l	2.00	--	1
n-Propylbenzene	ND		ug/l	2.00	--	1
2-Methylnonane	ND		ug/l	2.00	--	1
3-Methylnonane	ND		ug/l	2.00	--	1
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Decene	ND		ug/l	2.00	--	1
Isobutylcyclohexane	ND		ug/l	2.00	--	1
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-03 Date Collected: 09/14/21 10:05

Client ID: 21A-GZA105D-091521-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	2.00	--	1
tert-Butylbenzene	ND		ug/l	2.00	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--	1
Isobutylbenzene	ND		ug/l	2.00	--	1
sec-Butylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--	1
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--	1
Indane	ND		ug/l	2.00	--	1
1,3-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--	1
Indene	ND		ug/l	2.00	--	1
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--	1
n-Butylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--	1
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
Undecane	ND		ug/l	2.00	--	1
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
N-Pentylbenzene	ND		ug/l	2.00	--	1
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--	1
Dodecane (C12)	ND		ug/l	5.00	--	1
1,3,5-Triethylbenzene	ND		ug/l	2.00	--	1
Naphthalene	ND		ug/l	2.00	--	1
Benzothiophene	ND		ug/l	2.00	--	1
1,2,4-Triethylbenzene	ND		ug/l	2.00	--	1
Hexylbenzene	ND		ug/l	2.00	--	1
MMT	ND		ug/l	5.00	--	1
Tridecane	ND		ug/l	5.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-03 Date Collected: 09/14/21 10:05

Client ID: 21A-GZA105D-091521-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	5.00	--	1
1-Methylnaphthalene	ND		ug/l	5.00	--	1
Tetradecane (C14)	ND		ug/l	5.00	--	1
Pentadecane	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	100		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	99		70-130

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2150367
Report Date: 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-04
Client ID: 21A-GZA105S-091521-1
Sample Location: WILMINGTON, MA
Date Collected: 09/14/21 13:40
Date Received: 09/17/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 09/21/21 12:36
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	2.00	--	1
Isopentane	ND		ug/l	2.00	--	1
1-Pentene	ND		ug/l	2.00	--	1
2-Methyl-1-Butene	ND		ug/l	2.00	--	1
Pentane	ND		ug/l	2.00	--	1
trans-2-Pentene	ND		ug/l	2.00	--	1
Isoprene	ND		ug/l	2.00	--	1
cis-2-Pentene	ND		ug/l	2.00	--	1
Tertiary Butanol	ND		ug/l	25.0	--	1
2,2-Dimethylbutane	ND		ug/l	2.00	--	1
4-Methyl-1-pentene	ND		ug/l	2.00	--	1
Cyclopentane	ND		ug/l	2.00	--	1
2,3-Dimethylbutane	ND		ug/l	2.00	--	1
2-Methylpentane	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	2.00	--	1
3-Methylpentane	ND		ug/l	2.00	--	1
1-Hexene	ND		ug/l	2.00	--	1
n-Hexane	ND		ug/l	2.00	--	1
Isopropyl Ether	ND		ug/l	2.00	--	1
trans-2-Hexene	ND		ug/l	2.00	--	1
2-Methyl-2-pentene	ND		ug/l	2.00	--	1
cis-2-Hexene	ND		ug/l	2.00	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--	1
2,2-Dimethylpentane	ND		ug/l	2.00	--	1
Methylcyclopentane	ND		ug/l	2.00	--	1
2,4-Dimethylpentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylbutane	ND		ug/l	2.00	--	1
1,2-Dichloroethane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-04 Date Collected: 09/14/21 13:40

Client ID: 21A-GZA105S-091521-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	2.00	--	1
Cyclohexane	ND		ug/l	2.00	--	1
2-Methylhexane	ND		ug/l	2.00	--	1
Benzene	ND		ug/l	2.00	--	1
2,3-Dimethylpentane	ND		ug/l	2.00	--	1
Thiophene	ND		ug/l	2.00	--	1
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--	1
3-Methylhexane	ND		ug/l	2.00	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--	1
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--	1
3-Ethylpentane	ND		ug/l	2.00	--	1
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--	1
Isooctane	ND		ug/l	2.00	--	1
trans-3-Heptene	ND		ug/l	2.00	--	1
Heptane	ND		ug/l	2.00	--	1
trans-2-Heptene	ND		ug/l	2.00	--	1
cis-2-Heptene	ND		ug/l	2.00	--	1
2,2-Dimethylhexane	ND		ug/l	2.00	--	1
Methylcyclohexane	ND		ug/l	2.00	--	1
2,5-Dimethylhexane	ND		ug/l	2.00	--	1
2,4-Dimethylhexane	ND		ug/l	2.00	--	1
Ethylcyclopentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,4-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,3-Trimethylpentane	ND		ug/l	2.00	--	1
Xylene (Total)[1]	ND		ug/l	2.00	--	1
2,3-Dimethylhexane	ND		ug/l	2.00	--	1
2-Methylheptane	ND		ug/l	2.00	--	1
4-Methylheptane	ND		ug/l	2.00	--	1
3-Methylheptane	ND		ug/l	2.00	--	1
3-Ethylhexane	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
2-Methylthiophene	ND		ug/l	2.00	--	1
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
3-Methylthiophene	ND		ug/l	2.00	--	1
1-Octene	ND		ug/l	5.00	--	1
Octane	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-04 Date Collected: 09/14/21 13:40

Client ID: 21A-GZA105S-091521-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
1,2-Dibromoethane	ND		ug/l	2.00	--	1
cis-2-Octene	ND		ug/l	2.00	--	1
Isopropylcyclopentane	ND		ug/l	2.00	--	1
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--	1
2,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,3-Dimethylheptane	ND		ug/l	2.00	--	1
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--	1
2,3-Dimethylheptane	ND		ug/l	2.00	--	1
3,4-Dimethylheptane	ND		ug/l	2.00	--	1
4-Methyloctane	ND		ug/l	2.00	--	1
2-Methyloctane	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
2-Ethylthiophene	ND		ug/l	2.00	--	1
3-Methyloctane	ND		ug/l	2.00	--	1
3,3-Diethylpentane	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	4.00	--	1
1-Nonene	ND		ug/l	5.00	--	1
trans-3-Nonene	ND		ug/l	2.00	--	1
cis-3-Nonene	ND		ug/l	2.00	--	1
Nonane (C9)	ND		ug/l	2.00	--	1
Styrene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
2-Nonene	ND		ug/l	5.00	--	1
Isopropylcyclohexane	ND		ug/l	2.00	--	1
Isopropylbenzene	ND		ug/l	2.00	--	1
3,3-Dimethyloctane	ND		ug/l	2.00	--	1
n-Propylbenzene	ND		ug/l	2.00	--	1
2-Methylnonane	ND		ug/l	2.00	--	1
3-Methylnonane	ND		ug/l	2.00	--	1
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Decene	ND		ug/l	2.00	--	1
Isobutylcyclohexane	ND		ug/l	2.00	--	1
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-04 Date Collected: 09/14/21 13:40

Client ID: 21A-GZA105S-091521-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	2.00	--	1
tert-Butylbenzene	ND		ug/l	2.00	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--	1
Isobutylbenzene	ND		ug/l	2.00	--	1
sec-Butylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--	1
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--	1
Indane	2.50		ug/l	2.00	--	1
1,3-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--	1
Indene	ND		ug/l	2.00	--	1
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--	1
n-Butylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--	1
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
Undecane	ND		ug/l	2.00	--	1
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
N-Pentylbenzene	ND		ug/l	2.00	--	1
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--	1
Dodecane (C12)	ND		ug/l	5.00	--	1
1,3,5-Triethylbenzene	ND		ug/l	2.00	--	1
Naphthalene	ND		ug/l	2.00	--	1
Benzothiophene	ND		ug/l	2.00	--	1
1,2,4-Triethylbenzene	ND		ug/l	2.00	--	1
Hexylbenzene	ND		ug/l	2.00	--	1
MMT	ND		ug/l	5.00	--	1
Tridecane	ND		ug/l	5.00	--	1

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

SAMPLE RESULTS

Lab ID: L2150367-04 Date Collected: 09/14/21 13:40

Client ID: 21A-GZA105S-091521-1 Date Received: 09/17/21

Sample Location: WILMINGTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	5.00	--	1
1-Methylnaphthalene	ND		ug/l	5.00	--	1
Tetradecane (C14)	ND		ug/l	5.00	--	1
Pentadecane	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	100		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	98		70-130

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/20/21 21:24
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1548764-5					
3-Methyl-1-butene	ND		ug/l	2.00	--
Isopentane	ND		ug/l	2.00	--
1-Pentene	ND		ug/l	2.00	--
2-Methyl-1-Butene	ND		ug/l	2.00	--
Pentane	ND		ug/l	2.00	--
trans-2-Pentene	ND		ug/l	2.00	--
Isoprene	ND		ug/l	2.00	--
cis-2-Pentene	ND		ug/l	2.00	--
Tertiary Butanol	ND		ug/l	25.0	--
2,2-Dimethylbutane	ND		ug/l	2.00	--
4-Methyl-1-pentene	ND		ug/l	2.00	--
Cyclopentane	ND		ug/l	2.00	--
2,3-Dimethylbutane	ND		ug/l	2.00	--
2-Methylpentane	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	2.00	--
3-Methylpentane	ND		ug/l	2.00	--
1-Hexene	ND		ug/l	2.00	--
n-Hexane	ND		ug/l	2.00	--
Isopropyl Ether	ND		ug/l	2.00	--
trans-2-Hexene	ND		ug/l	2.00	--
2-Methyl-2-pentene	ND		ug/l	2.00	--
cis-2-Hexene	ND		ug/l	2.00	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--
2,2-Dimethylpentane	ND		ug/l	2.00	--
Methylcyclopentane	ND		ug/l	2.00	--
2,4-Dimethylpentane	ND		ug/l	2.00	--
2,2,3-Trimethylbutane	ND		ug/l	2.00	--
1,2-Dichloroethane	ND		ug/l	2.00	--
3,3-Dimethylpentane	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/20/21 21:24
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1548764-5					
Cyclohexane	ND		ug/l	2.00	--
2-Methylhexane	ND		ug/l	2.00	--
Benzene	ND		ug/l	2.00	--
2,3-Dimethylpentane	ND		ug/l	2.00	--
Thiophene	ND		ug/l	2.00	--
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--
3-Methylhexane	ND		ug/l	2.00	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--
3-Ethylpentane	ND		ug/l	2.00	--
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--
Isooctane	ND		ug/l	2.00	--
trans-3-Heptene	ND		ug/l	2.00	--
Heptane	ND		ug/l	2.00	--
trans-2-Heptene	ND		ug/l	2.00	--
cis-2-Heptene	ND		ug/l	2.00	--
2,2-Dimethylhexane	ND		ug/l	2.00	--
Methylcyclohexane	ND		ug/l	2.00	--
2,5-Dimethylhexane	ND		ug/l	2.00	--
2,4-Dimethylhexane	ND		ug/l	2.00	--
Ethylcyclopentane	ND		ug/l	2.00	--
2,2,3-Trimethylpentane	ND		ug/l	2.00	--
2,3,4-Trimethylpentane	ND		ug/l	2.00	--
2,3,3-Trimethylpentane	ND		ug/l	2.00	--
Xylene (Total)[1]	ND		ug/l	2.00	--
2,3-Dimethylhexane	ND		ug/l	2.00	--
2-Methylheptane	ND		ug/l	2.00	--
4-Methylheptane	ND		ug/l	2.00	--
3-Methylheptane	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/20/21 21:24
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1548764-5					
3-Ethylhexane	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
2-Methylthiophene	ND		ug/l	2.00	--
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--
3-Methylthiophene	ND		ug/l	2.00	--
1-Octene	ND		ug/l	5.00	--
Octane	ND		ug/l	2.00	--
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--
1,2-Dibromoethane	ND		ug/l	2.00	--
cis-2-Octene	ND		ug/l	2.00	--
Isopropylcyclopentane	ND		ug/l	2.00	--
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--
2,5-Dimethylheptane	ND		ug/l	2.00	--
3,5-Dimethylheptane	ND		ug/l	2.00	--
3,3-Dimethylheptane	ND		ug/l	2.00	--
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--
2,3-Dimethylheptane	ND		ug/l	2.00	--
3,4-Dimethylheptane	ND		ug/l	2.00	--
4-Methyloctane	ND		ug/l	2.00	--
2-Methyloctane	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
2-Ethylthiophene	ND		ug/l	2.00	--
3-Methyloctane	ND		ug/l	2.00	--
3,3-Diethylpentane	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	4.00	--
1-Nonene	ND		ug/l	5.00	--
trans-3-Nonene	ND		ug/l	2.00	--
cis-3-Nonene	ND		ug/l	2.00	--
Nonane (C9)	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/20/21 21:24
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1548764-5					
Styrene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
2-Nonene	ND		ug/l	5.00	--
Isopropylcyclohexane	ND		ug/l	2.00	--
Isopropylbenzene	ND		ug/l	2.00	--
3,3-Dimethyloctane	ND		ug/l	2.00	--
n-Propylbenzene	ND		ug/l	2.00	--
2-Methylnonane	ND		ug/l	2.00	--
3-Methylnonane	ND		ug/l	2.00	--
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--
1-Decene	ND		ug/l	2.00	--
Isobutylcyclohexane	ND		ug/l	2.00	--
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--
Decane (C10)	ND		ug/l	2.00	--
tert-Butylbenzene	ND		ug/l	2.00	--
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--
Isobutylbenzene	ND		ug/l	2.00	--
sec-Butylbenzene	ND		ug/l	2.00	--
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--
Indane	ND		ug/l	2.00	--
1,3-Diethylbenzene	ND		ug/l	2.00	--
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--
Indene	ND		ug/l	2.00	--
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--

Project Name: LOCKHEED MARTIN **Lab Number:** L2150367

Project Number: 60552044.25 **Report Date:** 09/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/20/21 21:24
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1548764-5					
n-Butylbenzene	ND		ug/l	2.00	--
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,2-Diethylbenzene	ND		ug/l	2.00	--
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--
Undecane	ND		ug/l	2.00	--
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--
N-Pentylbenzene	ND		ug/l	2.00	--
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--
Dodecane (C12)	ND		ug/l	5.00	--
1,3,5-Triethylbenzene	ND		ug/l	2.00	--
Naphthalene	ND		ug/l	2.00	--
Benzothiophene	ND		ug/l	2.00	--
1,2,4-Triethylbenzene	ND		ug/l	2.00	--
Hexylbenzene	ND		ug/l	2.00	--
MMT	ND		ug/l	5.00	--
Tridecane	ND		ug/l	5.00	--
2-Methylnaphthalene	ND		ug/l	5.00	--
1-Methylnaphthalene	ND		ug/l	5.00	--
Tetradecane (C14)	ND		ug/l	5.00	--
Pentadecane	ND		ug/l	5.00	--

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25
Lab Number: L2150367
Report Date: 09/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 09/20/21 21:24
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1548764-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	101		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	99		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.25

Lab Number: L2150367

Report Date: 09/24/21

PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-04 Batch: WG1548764-3 WG1548764-4

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1-Pentene	116		108		50-130	7		30
Pentane	99		94		50-130	5		30
Tertiary Butanol	104		102		50-130	2		30
Cyclopentane	106		102		50-130	4		30
2-Methylpentane	94		92		50-130	2		30
Methyl tert butyl ether	98		96		50-130	2		30
3-Methylpentane	102		96		50-130	6		30
1-Hexene	106		100		50-130	6		30
n-Hexane	100		93		50-130	7		30
Isopropyl Ether	100		98		50-130	2		30
Ethyl-Tert-Butyl-Ether	99		95		50-130	4		30
Methylcyclopentane	106		102		50-130	4		30
2,4-Dimethylpentane	102		97		50-130	5		30
Cyclohexane	110		108		50-130	2		30
2-Methylhexane	105		101		50-130	4		30
Benzene	104		104		50-130	0		30
2,3-Dimethylpentane	105		104		50-130	1		30
3-Methylhexane	90		88		50-130	2		30
Tertiary-Amyl Methyl Ether	94		94		50-130	0		30
Isooctane	105		102		50-130	3		30
Heptane	107		106		50-130	1		30
Methylcyclohexane	104		104		50-130	0		30
2-Methylheptane	105		100		50-130	5		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.25

Lab Number: L2150367

Report Date: 09/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-04 Batch: WG1548764-3 WG1548764-4								
3-Methylheptane	98		95		50-130	3		30
Toluene	102		100		50-130	2		30
Octane	108		105		50-130	3		30
Ethylbenzene	106		102		50-130	4		30
p/m-Xylene	110		106		50-130	4		30
Nonane (C9)	99		94		50-130	5		30
o-Xylene	107		104		50-130	3		30
Isopropylbenzene	108		104		50-130	4		30
n-Propylbenzene	108		105		50-130	3		30
1-Methyl-3-Ethylbenzene	108		106		50-130	2		30
1-Methyl-4-Ethylbenzene	111		109		50-130	2		30
1,3,5-Trimethylbenzene	108		106		50-130	2		30
1-Decene	82		86		50-130	5		30
1-Methyl-2-Ethylbenzene	106		102		50-130	4		30
Decane (C10)	102		110		50-130	8		30
1,2,4-Trimethylbenzene	102		103		50-130	1		30
sec-Butylbenzene	110		107		50-130	3		30
1-Methyl-4-N-Propylbenzene	92		97		50-130	5		30
n-Butylbenzene	100		101		50-130	1		30
1,2-Diethylbenzene	102		100		50-130	2		30
Undecane	100		105		50-130	5		30
N-Pentylbenzene	80		92		50-130	14		30
Dodecane (C12)	**161**	Q	**156**	Q	50-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.25

Lab Number: L2150367

Report Date: 09/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-04 Batch: WG1548764-3 WG1548764-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Dibromofluoromethane	92		92		70-130
Toluene-d8	97		99		70-130
4-Bromofluorobenzene	98		99		70-130

Project Name: LOCKHEED MARTIN
Project Number: 60552044.25

Lab Number: L2150367
Report Date: 09/24/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2150367-01A	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-01B	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-01C	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-02A	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-02B	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-02C	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-03A	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-03B	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-03C	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-04A	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-04B	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)
L2150367-04C	Vial HCl preserved	A	NA		2.6	Y	Absent		A2-PIANO8260(14)

*Values in parentheses indicate holding time in days

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2150367
Project Number:	60552044.25	**Report Date:**	09/24/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2150367
Project Number:	60552044.25	**Report Date:**	09/24/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2150367
Project Number:	60552044.25	**Report Date:**	09/24/21

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2150367
Project Number:	60552044.25	**Report Date:**	09/24/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

C2150367

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FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 9/17/21

ALPHA Job #: ~~C214~~ AK

Project Information

Project Name: Lockheed Martin

Project Location: Wilmington MA

Project #: 60552044.25

Project Manager: scott.olson@aecom.com

ALPHA Quote #: 7/13/2021 K. Raymond Email

Client Information

Client: AECOM

Address: 250 Apollo Drive

Chelmsford, MA 01824

Phone: 978-905-2100

Fax: 978-905-2101

Email: lori.herberich@aecom.com;

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #: 137518

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
MassDEP: MCP CAM	GW - 1, -2, -3

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

AECOM Contacts
Lori Herberich (Chemist) - lori.herberich@aecom.com; cell 978-302-0089
Scott Olson (PM) - scott.olson@aecom.com; cell 978-846-5238

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	P.I.A.N.O.	Sample Specific Comments	TOTAL # BOTTLES
50367-01	21A-AE29R6-091421-1	9/14/21	~~AG~~ 1140	GW	AG	☒		3
-02	21A-GZA105R-091421-1	9/14/21	1140	GW	DP	☒		3
-03	21A-GZA105D-091521-1	9/15/21	1005	GW	SH	☒		3
-04	21A-GZA105S-091521-1	9/15/21	1340	GW	SH	☒		3
DP	~~21A~~			~~GW~~		~~☒~~		

PLEASE ANSWER QUESTIONS ABOVE!

Container Type	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-

IS YOUR PROJECT MA MCP *or* CT RCP?

FORM NO. 01-01(i)
(rev. 9-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]		[signature]	9/17/21 1140
[signature]	9/17/21 1716	[signature]	9/17/21 1716
[signature]	9/17 2000	[signature]	9/17/21 2000
[signature]	9/17/21 2058	[signature] -AAC	9/17/21 2058

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ17882		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 25, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 1, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ17882.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
21A-AE26R2-090121-1
21A-AE28R1-090121-1
21A-AE28R3-090121-1
21A-AE26R1-090121-1
21A-TB01-090121-1 (trip blank)
21A-AE28R4-090121-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity

*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
NA	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batches 591383, 590973, 591863, 591823	Tetrachloroethene	0.191	≥ 0.200	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2,4-Trimethylbenzene	21	≤ 20	J/UJ
	Isopropylbenzene	21	≤ 20	J/UJ
	Naphthalene	29	≤ 20	J/UJ
	p-Isopropyltoluene (cymene)	23	≤ 20	J/UJ
	sec-Butylbenzene (2-phenylbutane)	21	≤ 20	J/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
	Styrene	22	≤ 20	J/UJ
	tert-Butylbenzene	21	≤ 20	J/UJ
Associated samples: All samples				
CCAL for batch 591383	Tetrachloroethene	0.183	≥ 0.200	J+/UJ
Associated samples: 21A-AE26R2-090121-1, 21A-AE28R3-090121-1 (20x), 21A-AE26R1-090121-1 (2x), 21A-AE28R4-090121-1 (20x)				
CCAL for batch 591823	Tetrachloroethene	0.193	≥ 0.200	J+/UJ
Associated samples: 21A-AE28R1-090121-1 (100x)				
CCAL for batch 591863	Acetone	0.099	≥ 0.100	J+/UJ
Associated samples: 21A-AE28R1-090121-1 (10x)				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ19155		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 25, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 1 and 2, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ19155.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
21A-AE109R2-090221-1
21A-AE109R3-090221-1
21A-AE109R4-090221-1
21A-AE109R5-090221-1
21A-AE109R6-090221-1
21A-AE109R7-090221-1
21A-AE109R2-090221-2 (field duplicate of 21A-AE109R2-090221-1)
21A-AE109R8-090221-1
21A-AE110R1-090221-1
21A-AE110R2-090221-1
21A-AE110R3-090221-1
21A-AE110R4-090221-1
21A-AE26R3-090121-1

Sample ID
21A-AE26R4-090121-1
21A-AE26R5-090121-1
21A-AE28R2-090121-1
21A-TB02-090121-1 (trip blank)
21A-AE104R1-090221-1
21A-AE104R2-090221-1
21A-AE104R3-090221-1
21A-AE104R4-090221-1
21A-AE104R5-090221-1
21A-AE104R6-090221-1
21A-AE109R1-090221-1
21A-AE110R5-090221-1
21A-AE110R6-090221-1
21A-AE110R7-090221-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
*	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An

"NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batches 591188, 590973, 591823, 591965, 591863, 591670	Tetrachloroethene	0.191	≥ 0.200	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2,4-Trimethylbenzene	21	≤ 20	J/UJ
	Isopropylbenzene	21	≤ 20	J/UJ
	Naphthalene	29	≤ 20	J/UJ
	p-Isopropyltoluene	23	≤ 20	J/UJ
	sec-Butylbenzene	21	≤ 20	J/UJ
	Styrene	22	≤ 20	J/UJ
	tert-Butylbenzene	21	≤ 20	J/UJ
Associated samples: All samples				
CCAL for batch 591188	Tetrachloroethene	0.180	≥ 0.200	J+/UJ
Associated samples: 21A-AE104R1-090221-1 (20x), 21A-AE104R4-090221-1 (20x), 21A-AE109R1-090221-1, 21A-AE110R2-090221-1, 21A-AE110R4-090221-1, 21A-AE26R4-090121-1 (20x), 21A-AE26R5-090121-1 (20x), 21A-AE109R7-090221-1, 21A-TB02-090121-1, 21A-AE109R7-090221-2, 21A-AE109R8-090221-1				
CCAL for batch 591823	Tetrachloroethene	0.193	≥ 0.200	J+/UJ
	Acetone	0.095	≥ 0.200	J+/UJ
Associated samples: 21A-AE110R1-090221-1				
CCAL for batch 591965	Tetrachloroethene	0.184	≥ 0.200	J+/UJ
Associated samples: 21A-AE110R5-090221-1, 21A-AE110R6-090221-1				
CCAL for batch 591863	Acetone	0.099	≥ 0.100	J+/UJ
Associated samples: 21A-AE104R1-090221-1 (5x), 21A-AE110R3-090221-1, 21A-AE26R3-090121-1, 21A-AE26R4-090121-1 (2x), 21A-AE26R5-090121-1 (10x), 21A-AE109R5-090221-1, 21A-AE109R6-090221-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 591670	Tetrachloroethene	0.180	≥ 0.200	J+/UJ
Calibration	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects**
CCAL for batch 591670	1,2,3-Trichlorobenzene	22 (low bias indicated)	<20	J-/UJ
Associated samples: 21A-AE104R2-090221-1 (10x), 21A-AE104R3-090221-1 (1x, 10x, 50x), 21A-AE104R5-090221-1 (200x), 21A-AE104R6-090221-1 (10x, 100x), 21A-AE110R7-090221-1				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

PAHs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	Data Validation Actions (Detects/Nondetects)
Batch 590599	Acenaphthylene	35	ok	40	140	J-/UJ
Associated samples: All samples						

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ20182		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 25, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 3, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ20182.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), and/or select metals for the following samples was assessed:

Sample ID
21A-AE25S-090321-1
21A-AE25D-090321-1
21A-AE25R-090321-1
21A-AE27R-090321-1
21A-AE23S-090321-1
21A-AE23R-090321-1
21A-AE24-090321-1
21A-AE26S-090321-1
21A-AE26D-090321-1
21A-TB-01-090321-1 (trip blank)

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
NA	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batches 591965, 591670,592004, 591692	Tetrachloroethene	0.191	≥ 0.200	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2,4-Trimethylbenzene	21	≤ 20	J/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
	Isopropylbenzene	21	≤ 20	J/UJ
	Naphthalene	29	≤ 20	J/UJ
	p-Isopropyltoluene	23	≤ 20	J/UJ
	sec-Butylbenzene	21	≤ 20	J/UJ
	Styrene	22	≤ 20	J/UJ
	tert-Butylbenzene	21	≤ 20	J/UJ
Associated samples: All samples				
CCAL for batch 592004	Tetrachloroethene	0.193	≥ 0.200	J+/UJ
Associated samples: 21A-AE26D-090321-1				
CCAL for batch 591692	Tetrachloroethene	0.190	≥ 0.200	J+/UJ
Associated samples: 21A-AE23R-090321-1 (1000x), 21A-AE23S-090321-1 (20x), 21A-AE24-090321-1 (20x), 21A-AE26S-090321-1, 21A-TB-01-090321-1				
CCAL for batch 591965	Tetrachloroethene	0.184	≥ 0.200	J+/UJ
Associated samples: 21A-AE27R-090321-1 (2x)				
CCAL for batch 591670	Tetrachloroethene	0.180	≥ 0.200	J+/UJ
Calibration	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects**
CCAL for batch 591670	1,2,3-Trichlorobenzene	22 (low bias indicated)	<20	J-/UJ
Associated samples: 21A-AE25D-090321-1, 21A-AE25R-090321-1, 21A-AE25S-090321-1				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

PAHs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	Data Validation Actions (Detects/Nondetects)
Batch 590817	Acenaphthylene	30	24	40	140	J-/UJ
Associated samples: 21A-AE23R-090321-1						

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 592004	Hexachlorobutadiene	ok	69	70	130	ok	<20	J-/UJ
	Trichlorotrifluoroethane	ok	69	70	130	ok	<20	J-/UJ
Associated samples: 21A-AE26D-090321-1								

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
Arsenic, manganese, and/or iron – 6010D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ21023		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 25, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 7, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ21023.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), and/or select metals for the following samples was assessed:

Sample ID
21A-TB01-090721-1 (trip blank)
21A-AE101S-090721-1
21A-AE101D-090721-1
21A-AE109D-090721-1
21A-AE102RR1-090721-1
21A-AE102RR2-090721-1
21A-AE102RR3-090721-1
21A-AE102RR4-090721-1
21A-AE102RR5-090721-1
21A-AE102RR6-090721-1
21A-AE111R1-090721-1
21A-AE111R2-090721-1
21A-AE111R3-090721-1
21A-AE111R4-090721-1

Sample ID
21A-AE111R5-090721-1
21A-AE111R6-090721-1
21A-AE111R7-090721-1
21A-AE111R1-090721-2 (field duplicate of 21A-AE111R1-090721-1)
21A-TRC102-090721-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
*	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batches 591965, 591670,592004, 591692	Tetrachloroethene	0.191	≥ 0.200	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2,4-Trimethylbenzene	21	≤ 20	J/UJ
	Isopropylbenzene	21	≤ 20	J/UJ
	Naphthalene	29	≤ 20	J/UJ
	p-Isopropyltoluene	23	≤ 20	J/UJ
	sec-Butylbenzene	21	≤ 20	J/UJ
	Styrene	22	≤ 20	J/UJ
	tert-Butylbenzene	21	≤ 20	J/UJ
Associated samples: All samples				
CCAL for batch 592004	Tetrachloroethene	0.193	≥ 0.200	J+/UJ
Associated samples: 21A-AE111R4-090721-1, 21A-AE111R7-090721-1				
CCAL for batch 591692	Tetrachloroethene	0.190	≥ 0.200	J+/UJ
Associated samples: 21A-AE101D-090721-1, 21A-AE101S-090721-1, 21A-TB01-090721-1, 21A-AE102RR5-090721-1 (100x), 21A-AE102RR6-090721-1 (100x), 21A-AE109D-090721-1, 21A-AE111R1-090721-1, 21A-AE111R3-090721-1				
CCAL for batch 591965	Tetrachloroethene	0.184	≥ 0.200	J+/UJ
Associated samples: 21A-AE102RR2-090721-1, 21A-AE102RR3-090721-1				
CCAL for batch 591823	Tetrachloroethene	0.180	≥ 0.200	J+/UJ
	Acetone	0.095	≥ 0.100	J+/UJ
Associated samples: 21A-AE102RR1-090721-1, 21A-TRC102-090721-1, 21A-AE102RR4-090721-1 (50x), 21A-AE111R1-090721-2, 21A-AE111R2-090721-1, 21A-AE111R5-090721-1, 21A-AE111R6-090721-1				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

PAHs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	Data Validation Actions (Detects/Nondetects)
Batch 590817	Acenaphthylene	30	24	40	140	J-/UJ
Associated samples: 21A-AE102RR6-090721-1, 21A-TRC102-090721-1						

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 592004	Hexachlorobutadiene	ok	69	70	130	ok	<20	J-/UJ
	Trichlorotrifluoroethane	ok	69	70	130	ok	<20	J-/UJ
Associated samples: 21A-AE111R4-090721-1, 21A-AE111R7-090721-1								

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
Arsenic, manganese, and/or iron – 6010D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ22041		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 25, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 7 and 8, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ22041.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
21A-TB02-090721-1 (trip blank)
21A-TRC103-090721-1
21A-EMW10R-090821-1
21A-EMW10D-090821-1
21A-EMW11R1-090821-1
21A-EMW11R2-090821-1
21A-STM8D-090821-1
21A-STM8S-090821-1
21A-STM8M-090821-1
21A-EMW11R3-090821-1
21A-STM8R-090821-1
21A-EMW11D-090821-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
NA	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batches 591965, 591670,592004, 591692	Tetrachloroethene	0.191	≥ 0.200	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2,4-Trimethylbenzene	21	≤ 20	J/UJ
	Isopropylbenzene	21	≤ 20	J/UJ
	Naphthalene	29	≤ 20	J/UJ
	p-Isopropyltoluene	23	≤ 20	J/UJ
	sec-Butylbenzene	21	≤ 20	J/UJ
	Styrene	22	≤ 20	J/UJ
	tert-Butylbenzene	21	≤ 20	J/UJ
Associated samples: All samples except 21A-STM8R-090821-1 and 21A-EMW11D-090821-1				
CCAL for batch 592004	Tetrachloroethene	0.193	≥ 0.200	J+/UJ
Associated samples: 21A-EMW11R2-090821-1, 21A-EMW11R3-090821-1				
CCAL for batch 591823	Tetrachloroethene	0.180	≥ 0.200	J+/UJ
	Acetone	0.095	≥ 0.100	J+/UJ
Associated samples: 21A-EMW10R-090821-1, 21A-STM8D-090821-1, 21A-TB02-090721-1, 21A-TRC103-090721-1				
CCAL for batch 592877	Tetrachloroethene	0.185	≥ 0.200	J+/UJ
Calibration	**Compound**	**%D**	**QC limit**	**Actions (Detects/Nondetects**
CCAL for batch 592877	Hexachlorobutadiene	22 (low bias indicated)	<20	J-/UJ
Associated samples: 21A-EMW11R3-090821-1, 21A-STM8M-090821-1, 21A-STM8S-090821-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 592876	Tetrachloroethene	0.194	≥ 0.200	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	Bromomethane	33	≤ 20	J/UJ
	Carbon Disulfide	27	≤ 20	J/UJ
	Isopropylbenzene	21	≤ 20	J/UJ
	Naphthalene	31	≤ 20	J/UJ
	p-Isopropyltoluene	22	≤ 20	J/UJ
Associated samples: 21A-STM8R-090821-1 and 21A-EMW11D-090821-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 592876	Tetrachloroethene	0.182	≥ 0.200	J+/UJ
Calibration	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects**
CCAL for batch 592876	2,2-Dichloropropane	26 (low bias indicated)	<20	J-/UJ
Associated samples: 21A-STM8R-090821-1 and 21A-EMW11D-090821-1				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

PAHs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 591048	Benzo(ghi)perylene	ok	ok	40	140	38.7	<20	J/Accept
	Chrysene	ok	ok	40	140	24.0	<20	J/Accept
	Indeno(1,2,3-cd)pyrene	ok	ok	40	140	56.6	<20	J/Accept
	Pyrene	ok	ok	40	140	28.2	<20	J/Accept
Associated samples: 21A-TRC103-090721-1, 21A-EMW11R2-090821-1								

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 592004	Hexachlorobutadiene	ok	69	70	130	ok	<20	J-/UJ
	Trichlorotrifluoroethane	ok	69	70	130	ok	<20	J-/UJ
Associated samples: 21A-EMW10D-090821-1, 21A-EMW11R1-090821-1, 21A-EMW11R2-090821-1								
LCS ID	**Compound**	**LCS % Recovery**	**LCSD % Recovery**	**Lower Limit % Recovery**	**Upper Limit % Recovery**	**RPD**	**RPD Limit**	**Data Validation Actions (Detects/Nondetects)**
Batch 592876	Trichlorotrifluoroethane	68	ok	70	130	ok	<20	J-/UJ
Associated samples: 21A-STM8R-090821-1 and 21A-EMW11D-090821-1								

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ25187		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 26, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 9, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ25187.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
21A-GZA10-090821-1
21A-GZA6-090821-1
21A-AE100R1-090921-1
21A-AE100R2-090921-1
21A-AE100R3-090921-1
21A-AE100R4-090921-1
21A-AE100R5-090921-1
21A-AE100R6-090921-1
21A-AE108R1-090921-1
21A-AE108R2-090921-1
21A-AE108R3-090921-1
21A-AE108R4-090921-1
21A-AE108R5-090921-1

Sample ID
21A-TB01-090921-1 (trip blank)
21A-AE103R1-090921-1
21A-AE103R2-090921-1
21A-AE103R3-090921-1
21A-AE103R4-090921-1
21A-AE103R5-090921-1
21A-AE103R6-090921-1
21A-AE103R7-090921-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
NA	Field duplicate results
*	Internal standard (IS) performance#
	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 592876	Tetrachloroethene	0.194	≥ 0.200	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	Bromomethane	33	≤ 20	J/UJ
	Carbon Disulfide	27	≤ 20	J/UJ
	Isopropylbenzene	21	≤ 20	J/UJ
	Naphthalene	31	≤ 20	J/UJ
	p-Isopropyltoluene	22	≤ 20	J/UJ
Associated samples: 21A-AE100R1-090921-1, 21A-AE100R2-090921-1 (20x), 21A-AE100R3-090921-1 (50x), 21A-AE100R4-090921-1 (20x), 21A-AE108R5-090921-1, 21A-AE108R1-090921-1, 21A-AE108R3-090921-1, 21A-AE100R5-090921-1, 21A-AE100R6-090921-1				
CCAL for batch 592876	Tetrachloroethene	0.182	≥ 0.200	J+/UJ
Calibration	**Compound**	**%D**	**QC limit**	**Actions (Detects/Nondetects**
CCAL for batch 592876	2,2-Dichloropropane	26 (low bias indicated)	<20	J-/UJ
Associated samples: 21A-AE100R1-090921-1, 21A-AE100R2-090921-1 (20x), 21A-AE100R3-090921-1 (50x), 21A-AE100R4-090921-1 (20x), 21A-AE108R5-090921-1, 21A-AE108R1-090921-1, 21A-AE108R3-090921-1, 21A-AE100R5-090921-1, 21A-AE100R6-090921-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 593031	Tetrachloroethene	0.161	≥ 0.200	J+/UJ
	Acetone	0.072	≥ 0.100	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	21	≤ 20	J/UJ
Associated samples: 21A-AE100R5-090921-1 (5x), 21A-AE100R6-090921-1 (5x), 21A-AE103R1-090921-1 (10x), 21A-AE103R4-090921-1 (40x), 21A-AE103R5-090921-1 (40x), 21A-AE103R2-090921-1 (200x), 21A-AE103R3-090921-1 (200x), 21A-AE103R6-090921-1(200x), 21A-AE103R7-090921-1 (200x)				
CCAL for batch 593031	Tetrachloroethene	0.156	≥ 0.200	J+/UJ
	Acetone	0.066	≥ 0.100	J+/UJ
Associated samples: 21A-AE100R5-090921-1 (5x), 21A-AE100R6-090921-1 (5x), 21A-AE103R1-090921-1 (10x), 21A-AE103R4-090921-1 (40x), 21A-AE103R5-090921-1 (40x), 21A-AE103R2-090921-1 (200x), 21A-AE103R3-090921-1 (200x), 21A-AE103R6-090921-1(200x), 21A-AE103R7-090921-1 (200x)				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 592875	Tetrachloroethene	0.149	≥ 0.200	J+/UJ
	Acetone	0.067	≥ 0.100	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,1-Dichloroethene	21	≤ 20	J/UJ
	Dichlorodifluoromethane	27	≤ 20	J/UJ
	Trichlorofluoromethane	22	≤ 20	J/UJ
Associated samples: 21A-AE103R2-090921-1 (20x), 21A-AE103R3-090921-1 (20x), 21A-AE108R4-090921-1, 21A-TB01-090921-1, 21A-AE103R6-090921-1 (20x), 21A-AE103R7-090921-1 (20x), 21A-AE108R2-090921-1, 21A-AE100R3-090921-1 (200x), 21A-AE100R4-090921-1 (100x), 21A-AE103R1-090921-1 (20x), 21A-AE103R4-090921-1 (100x), 21A-AE103R5-090921-1 (100x)				
CCAL for batch 592875	Tetrachloroethene	0.161	≥ 0.200	J+/UJ
	Acetone	0.067	≥ 0.100	J+/UJ
Associated samples: 21A-AE103R2-090921-1 (20x), 21A-AE103R3-090921-1 (20x), 21A-AE108R4-090921-1, 21A-TB01-090921-1, 21A-AE103R6-090921-1 (20x), 21A-AE103R7-090921-1 (20x), 21A-AE108R2-090921-1, 21A-AE100R3-090921-1 (200x), 21A-AE100R4-090921-1 (100x), 21A-AE103R1-090921-1 (20x), 21A-AE103R4-090921-1 (100x), 21A-AE103R5-090921-1 (100x)				

EPH

Calibration	Compound	%D	QC limit	Actions (Detects/Nondetects
CCAL for batch 591278	Indeno(1,2,3-cd)pyrene	34 (high bias indicated)	<20	J+/Accept
Associated samples: 21A-AE100R1-090921-1, 21A-AE103R1-090921-1				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 592876	Trichlorotrifluoroethane	68	ok	70	130	ok	<20	J-/UJ
Associated samples: 21A-AE100R1-090921-1, 21A-AE100R2-090921-1, 21A-AE100R3-090921-1, 21A-AE100R4-090921-1, 21A-AE108R3-090921-1, 21A-AE108R5-090921-1, 21A-AE108R1-090921-1								

General Reporting Issues

The results for dissolved iron and manganese exceeded the results for total iron and manganese in sample 21A-AE100R5-090921-1 by a significant amount. The results for total and dissolved results for iron and manganese in sample 21A-AE100R5-090921-1 are qualified as estimated (J). The concentrations were confirmed by the laboratory.

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for "Presumptive Certainty" status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ26085		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 26, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 10, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ26085.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, and select metals for the following samples was assessed:

Sample ID
21A-AE29R1-091021-1
21A-AE29R2-091021-1
21A-AE29R3-091021-1
21A-AE29R4-091021-1
21A-AE29R5-091021-1
21A-TRC201R-091021-1
21A-AE101R1-091021-1
21A-AE101R2-091021-1
21A-AE101R3-091021-1
21A-TB01-091021-1 (trip blank)
21A-AE2R-091021-1
21A-AE101R4-091021-1
21A-AE2I-091021-1
21A-AE112D-091021-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
NA	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batches 593031, 593226	Tetrachloroethene	0.161	≥ 0.200	J+/UJ
	Acetone	0.072	≥ 0.100	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	21	≤ 20	J/UJ
Associated samples: 21A-AE101R1-091021-1 (1x, 5x), 21A-AE101R2-091021-1, 21A-AE101R3-091021-1, 21A-AE101R4-091021-1, 21A-AE112D-091021-1, 21A-AE29R4-091021-1, 21A-AE29R5-091021-1, 21A-AE2I-091021-1, 21A-AE2R-091021-1, 21A-TB01-091021-1, 21A-TRC201R-091021-1				
CCAL for batch 593031	Tetrachloroethene	0.156	≥ 0.200	J+/UJ
	Acetone	0.066	≥ 0.100	J+/UJ
Associated samples: 21A-AE101R1-091021-1 (5x), 21A-AE101R2-091021-1, 21A-AE101R3-091021-1, 21A-AE29R4-091021-1, 21A-AE29R5-091021-1, 21A-AE2R-091021-1, 21A-TB01-091021-1, 21A-TRC201R-091021-1				
Calibration	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593226	Tetrachloroethene	0.178	≥ 0.200	J+/UJ
	Acetone	0.067	≥ 0.100	J+/UJ
Calibration	**Compound**	**%D**	**QC limit**	**Actions (Detects/Nondetects**
CCAL for batch 593226	Carbon tetrachloride	26 (high bias indicated)	<20	J+/Accept
Associated samples: 21A-AE101R1-091021-1, 21A-AE101R4-091021-1, 21A-AE112D-091021-1 21A-AE2I-091021-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 592875	Tetrachloroethene	0.149	≥ 0.200	J+/UJ
	Acetone	0.067	≥ 0.100	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,1-Dichloroethene	21	≤ 20	J/UJ
	Dichlorodifluoromethane	27	≤ 20	J/UJ
	Trichlorofluoromethane	22	≤ 20	J/UJ
CCAL for batch 592875	Tetrachloroethene	0.161	≥ 0.200	J+/UJ
	Acetone	0.067	≥ 0.100	J+/UJ
Associated samples: 21A-AE29R1-091021-1, 21A-AE29R2-091021-1, 21A-AE29R3-091021-1				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 592875	Dichlorodifluoromethane	135	138	70	130	ok	<20	J-/UJ
Associated samples: 21A-AE29R1-091021-1, 21A-AE29R2-091021-1, 21A-AE29R3-091021-1								

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
Arsenic, manganese, and/or iron – 6010D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ27035		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 26, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 13, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ27035.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
21A-TB01-091321-1 (trip blank)
21A-TRC301R3-091321-1
21A-AE106D-091321-1
21A-TRC301R1-091321-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation
* GC/MS tuning#

  Initial calibration/initial calibration and continuing calibration verifications#

*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batches 593226, 593271	Tetrachloroethene	0.161	≥ 0.200	J+/UJ
	Acetone	0.072	≥ 0.100	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	21	≤ 20	J/UJ
Associated samples: All samples				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 593226	Tetrachloroethene	0.178	≥ 0.200	J+/UJ
	Acetone	0.067	≥ 0.100	J+/UJ
Calibration	**Compound**	**%D**	**QC limit**	**Actions (Detects/Nondetects**
CCAL for batch 593226	Carbon tetrachloride	26 (high bias indicated)	<20	J+/Accept
Associated samples: 21A-TB01-091321-1, 21A-AE106D-091321-1				
Calibration	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593271	Tetrachloroethene	0.177	≥ 0.200	J+/UJ
	Acetone	0.083	≥ 0.100	J+/UJ
Calibration	**Compound**	**%D**	**QC limit**	**Actions (Detects/Nondetects**
CCAL for batch 593271	2,2-Dichloropropane	21 (low bias indicated)	<20	J-/UJ
	Di-isopropyl ether	21 (low bias indicated)	<20	J-/UJ
	Trichlorofluoromethane	26 (high bias indicated)	<20	J+/Accept
	Trichlorotrifluoroethane	21 (high bias indicated)	<20	J+/Accept
Associated samples: 21A-TRC301R3-091321-1, 21A-TRC301R1-091321-1				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
TOC – SM5310-B
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ27912		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 26, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 13 and 14, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ27912.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
21A-TB02-091321-1 (trip blank)
21A-AE106S-091321-1
21A-AE106M-091321-1
21A-AE106R1-091321-1
21A-AE106R2-091321-1
21A-AE106R3-091321-1
21A-AE106R4-091321-1
21A-AE106R5-091321-1
21A-AE105R1-091321-1
21A-AE105R2-091321-1
21A-AE105R3-091321-1
21A-AE105R4-091321-1
21A-AE105R5-091321-1

Sample ID
21A-TRC301R2-091321-1
21A-TRC301R4-091321-1
21A-AE29R6-091421-1
21A-AE103D-091421-1
21A-GZA105R-091421-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
NA	Field duplicate results
*	Internal standard (IS) performance#
	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 593226, 593271	Tetrachloroethene	0.161	≥ 0.200	J+/UJ
	Acetone	0.072	≥ 0.100	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	21	≤ 20	J/UJ
Associated samples: 21A-TB02-091321-1, 21A-AE106S-091321-1, 21A-AE106R1-091321-1, 21A-AE106R3-091321-1, 21A-GZA105R-091421-1 (100x)				
CCAL for batch 593226	Tetrachloroethene	0.178	≥ 0.200	J+/UJ
	Acetone	0.067	≥ 0.100	J+/UJ
	Calibration	**Compound**	**%D**	**QC limit**
	Carbon tetrachloride	26 (high bias indicated)	<20	J+/Accept
Associated samples: 21A-AE106R3-091321-1, 21A-GZA105R-091421-1(100x), 21A-AE106R3-091321-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593271	Tetrachloroethene	0.177	≥ 0.200	J+/UJ
	Acetone	0.083	≥ 0.100	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects**
	2,2-Dichloropropane	26 (low bias indicated)	<20	J-/UJ
	Di-isopropyl ether	21 (low bias indicated)	<20	J-/UJ
	Trichlorofluoromethane	26 (high bias indicated)	<20	J+/Accept
	Trichlorotrifluoroethane	21 (high bias indicated)	<20	J+/Accept
Associated samples: 21A-TB02-091321-1, 21A-AE106S-091321-1, 21A-AE106R1-091321-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 593684, 593727,	Tetrachloroethene	0.158	≥ 0.200	J+/UJ
	Acetone	0.082	≥ 0.100	J+/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
593828, 593833	**Compound**	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Chloroethane	21	≤ 20	J/UJ
Associated samples: 21A-AE105R1-091321-1, 21A-TRC301R4-091321-1, 21A-AE106M-091321-1, 21A-AE106R2-091321-1, 21A-AE106R4-091321-1, 21A-AE103D-091421-1, 21A-AE106R5-091321-1, 21A-AE105R2-091321-1, 21A-AE105R3-091321-1, 21A-AE105R4-091321-1, 21A-GZA105R-091421-1 (40x), 21A-TRC301R2-091321-1, 21A-AE105R5-091321-1, 21A-AE29R6-091421-1 (2x)				
CCAL for batch 593684	Tetrachloroethene	0.154	≥ 0.200	J+/UJ
	Acetone	0.084	≥ 0.100	J+/UJ
Associated samples: 21A-AE105R1-091321-1, 21A-TRC301R4-091321-1, 21A-AE106M-091321-1, 21A-AE106R2-091321-1, 21A-AE106R4-091321-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593727	Tetrachloroethene	0.166	≥ 0.200	J+/UJ
	Acetone	0.088	≥ 0.100	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Carbon tetrachloride	23 (high bias indicated)	≤ 20	J+/Accept
	Diisopropyl ether	24 (low bias indicated)	≤ 20	J-/UJ
Associated samples: 21A-AE103D-091421-1, 21A-AE106R5-091321-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593828	Tetrachloroethene	0.158	≥ 0.200	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone*	22 (high bias indicated)	≤ 20	J+/Accept
	Chloroethane*	21 (high bias indicated)	≤ 20	J+/Accept
Associated samples: 21A-AE105R2-091321-1, 21A-AE105R3-091321-1, 21A-AE105R4-091321-1, 21A-GZA105R-091421-1 (40x), 21A-TRC301R2-091321-1, 21A-AE105R5-091321-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593833	Tetrachloroethene	0.172	≥ 0.200	J+/UJ
	Acetone	0.075	≥ 0.100	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Carbon tetrachloride	29 (high bias indicated)	≤ 20	J+/Accept
	Dichlorodifluoromethane	35 (high bias indicated)	≤ 20	J+/Accept
Associated samples: 21A-AE29R6-091421-1 (2x)				

*Nondetect results qualified as estimated (UJ) due to ICAL nonconformance.

General Reporting Issues

The results for dissolved iron and manganese exceed the results for total iron and manganese in sample 21A-AE105R1-091321-1 by a significant amount. The result for dissolved iron exceeds the result for total iron in sample 21A-GZA105R-091421-1. The total and dissolved results for iron and/or manganese in these samples are qualified as estimated (J). The concentrations were confirmed by the laboratory.

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for "Presumptive Certainty" status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ29227		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 26, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 14 and 15, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ29227.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
21A-TRC101-091421-1
21A-GZA12-091421-1
21A-GZA101R-091421-1
21A-TB01-091421-1 (trip blank)
21A-GZA105D-091521-1
21A-GZA105D-091521-2 (field duplicate of 21A-GZA105D-091521-1)
21A-AE3-091521-1
21A-AE102M-091521-1
21A-AE102D-091521-1
21A-GZA105S-091521-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
*	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 593684, 593727,	Tetrachloroethene	0.158	≥ 0.200	J+/UJ
	Acetone	0.082	≥ 0.100	J+/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
593728, 593833	**Compound**	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Chloroethane	21	≤ 20	J/UJ
Associated samples: All samples				
CCAL for batch 593684	Tetrachloroethene	0.154	≥ 0.200	J+/UJ
	Acetone	0.084	≥ 0.100	J+/UJ
Associated samples: 21A-GZA101R-091421-1, 21A-TB01-091421-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593727, 593728	Tetrachloroethene	0.166	≥ 0.200	J+/UJ
	Acetone	0.088	≥ 0.100	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Carbon tetrachloride	23 (high bias indicated)	≤ 20	J+/Accept
	Diisopropyl ether	24 (low bias indicated)	≤ 20	J-/UJ
Associated samples: 21A-TRC101-091421-1, 21A-GZA12-091421-1, 21A-GZA105D-091521-1, 21A-GZA105S-091521-121A-AE102M-091521-1, 21A-AE102D-091521-1, 21A-AE3-091521-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593833	Tetrachloroethene	0.172	≥ 0.200	J+/UJ
	Acetone	0.075	≥ 0.100	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Carbon tetrachloride	29 (high bias indicated)	≤ 20	J+/Accept
	Dichlorodifluoromethane	35 (high bias indicated)	≤ 20	J+/Accept
Associated samples: 21A-GZA101R-091421-1 (10x), 21A-GZA105D-091521-2				

MD/MS/MSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

Parent Sample	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
21A-AE3-091521-1	2,2-Dichloropropane	ok	64	70	130	ok	≤ 20	J-/UJ
All samples in this data set are qualified.								

EPH

Parent Sample	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
21A-AE3-091521-1	Benzo(g,h,i)perylene	ok	38	40	140	ok	≤ 20	J-/UJ
All samples in this data set are qualified.								

Nitrate

Parent Sample	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
21A-AE3-091521-1	Nitrate	85.5	NA	90	110	NA	NA	J-/UJ
All samples in this data set are qualified.								

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

EPH

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 592277	Acenaphthylene	16	ok	40	140	ok	<20	J-/R
Associated samples: All samples								

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ30888		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 26, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 15 and 16, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ30888.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), and/or select metals for the following samples was assessed:

Sample ID
21A-TB01-091521-1 (trip blank)
21A-AE04-091521-1
21A-AE102S-091521-1
21A-EB02-091621-1 (equipment blank)
21A-AE101R5-091621-1
21A-AE101R6-091621-1
21A-GZA102S-091621-1
21A-AE103S-091621-1
21A-AE103M-091621-1
21A-TRC401R-091621-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
NA	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Holding Times and Sample Preservation

The 14-day VOC analysis holding time was exceeded by one day for the 50x dilution analysis of sample 21A-TRC401R-091621-1. Trichloroethene was the only compound reported from this analysis. The positive trichloroethene result was qualified as estimated (J).

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 593847, 593833, 593886	Tetrachloroethene	0.158	≥ 0.200	J+/UJ
	Acetone	0.082	≥ 0.100	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Chloroethane	21	≤ 20	J/UJ
Associated samples: All samples				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593886	Tetrachloroethene	0.163	≥ 0.200	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	24 (high bias indicated)	≤ 20	J+/Accept
	Carbon Disulfide	22 (high bias indicated)	≤ 20	J+/Accept
	Chloroethane*	26 (high bias indicated)	≤ 20	J+/Accept
	Trichlorofluoromethane	36 (high bias indicated)	≤ 20	J+/Accept
	Trichlorotrifluoroethane	25 (high bias indicated)	≤ 20	J+/Accept
Associated samples: 21A-AE04-091521-1, 21A-AE102S-091521-1, 21A-AE101R6-091621-1, 21A-AE103M-091621-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593833, 593847	Tetrachloroethene	0.172	≥ 0.200	J+/UJ
	Acetone	0.075	≥ 0.100	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Carbon tetrachloride	29 (high bias indicated)	≤ 20	J+/Accept
	Dichlorodifluoromethane	35 (high bias indicated)	≤ 20	J+/Accept
Associated samples: 21A-TB01-091521-1, 21A-EB02-091621-1, 21A-AE101R5-091621-1 (20x), 21A-AE101R6-091621-1 (20x), 21A-GZA102S-091621-1, 21A-AE103S-091621-1, 21A-TRC401R-091621-1 (20x)				

MD/MS/MSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

Parent Sample	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
21A-TRC401R-091621-1	Vinyl chloride	140	144	70	130	ok	≤ 20	J+/Accept
	1,1-Dichloroethene	ok	133	70	130	ok	≤ 20	J+/Accept
All samples in this data set are qualified.								

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 593886	Vinyl chloride	137	ok	70	130	ok	<20	J+/Accept
Associated samples: 21A-AE04-091521-1, 21A-AE102S-091521-1, 21A-AE101R6-091621-1, 21A-AE103M-091621-1								

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
Arsenic– 6010D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ31565		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 26, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 16 and 17, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ31565.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
21A-TB01-091621-1 (trip blank)
21A-AE112R1-091621-1
21A-AE112R2-091621-1
21A-AE112R3-091621-1
21A-AE112R4-091621-1
21A-AE112R5-091621-1
21A-AE112R5-091621-2 (field duplicate of 21A-AE112R5-091621-1)
21A-AE112R6-091621-1
21A-STM8R1-091621-1
21A-STM8R1-091621-2 (field duplicate of 21A-STM8R1-091621-1)
21A-EB01-091621-1 (equipment blank)
21A-AE112R7-091621-1
21A-AE105S-091721-1

Sample ID
21A-AE105M-091721-1
21A-AE105D-091721-1
21A-PS2S-091721-1
21A-PS2M-091721-1
21A-PS2D-091721-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 593828, 593833, 593886	Tetrachloroethene	0.158	≥ 0.200	J+/UJ
	Acetone	0.082	≥ 0.100	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Chloroethane	21	≤ 20	J/UJ
Associated samples: 21A-AE105D-091721-1, 21A-AE105S-091721-1, 21A-AE112R1-091621-1, 21A-AE112R2-091621-1, 21A-AE112R3-091621-1, 21A-AE112R4-091621-1, 21A-STM8R1-091621-1, 21A-STM8R1-091621-2, 21A-TB01-091621-1, 21A-AE112R5-091621-1, 21A-AE112R5-091621-2, 21A-AE112R6-091621-1, 21A-AE112R7-091621-1, 21A-EB01-091621-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593886	Tetrachloroethene	0.163	≥ 0.200	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	24 (high bias indicated)	≤ 20	J+/Accept
	Carbon Disulfide	22 (high bias indicated)	≤ 20	J+/Accept
	Chloroethane*	26 (high bias indicated)	≤ 20	J+/Accept
	Trichlorofluoromethane	36 (high bias indicated)	≤ 20	J+/Accept
	Trichlorotrifluoroethane	25 (high bias indicated)	≤ 20	J+/Accept
Associated samples: 21A-AE105D-091721-1, 21A-AE105S-091721-1, 21A-AE112R3-091621-1, 21A-AE112R4-091621-1, 21A-STM8R1-091621-2, 21A-AE112R5-091621-2, 21A-AE112R7-091621-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593828	Tetrachloroethene	0.158	≥ 0.200	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	22 (high bias indicated)	≤ 20	J+/Accept
	Chloroethane*	21 (high bias indicated)	≤ 20	J+/Accept
Associated samples: 21A-STM8R1-091621-1, 21A-AE112R5-091621-1, 21A-AE112R6-091621-1 21A-EB01-091621-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 593833	Tetrachloroethene	0.172	≥ 0.200	J+/UJ
	Acetone	0.075	≥ 0.100	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Carbon tetrachloride	29 (high bias indicated)	≤ 20	J+/Accept
	Dichlorodifluoromethane	35 (high bias indicated)	≤ 20	J+/Accept
Associated samples: 21A-AE112R1-091621-1, 21A-AE112R2-091621-1, 21A-TB01-091621-1				

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 594621	Acetone	28	≤ 20	J/UJ
	Chloroethane	34	≤ 20	J/UJ
Associated samples: 21A-AE105M-091721-1, 21A-PS2D-091721-1, 21A-PS2M-091721-1, 21A-PS2S-091721-1				

*Nondetect results qualified as estimated (UJ) due to ICAL nonconformance.

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 593886	Vinyl chloride	137	ok	70	130	ok	<20	J+/Accept
Associated samples: 21A-AE105D-091721-1, 21A-AE105S-091721-1, 21A-AE112R3-091621-1, 21A-AE112R4-091621-1, 21A-STM8R1-091621-2, 21A-AE112R5-091621-2, 21A-AE112R7-091621-1								

EPH (target compounds)

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 593120	Acenaphthylene	ok	17	70	130	117	<20	J/UJ
	Benzo(a)pyrene	ok	34	70	130	87	<20	J/UJ
Associated samples: 21A-AE112R6-091621-1, 21A-STM8R1-091621-1, 21A-STM8R1-091621-2, 21A-EB01-091621-1								

Field Duplicate Results

The relative percent difference (58) exceeded the QC limit of <30 for total iron in the field duplicate pair 21A-STM8R1-091621-1/21A-STM8R1-091621-2. The total iron results in all samples in this SDG except 21A-EB01-091621-1 are qualified as estimated (J).

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ32390		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 26, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 17 and 20, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ32390.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, and/or select metals for the following samples was assessed:

Sample ID
21A-TB01-091721-1 (trip blank)
21A-PS1S-091721-1
21A-PS1M-091721-1
21A-PS1D-091721-1
21A-MW4A-092021-1
21A-MW4-092021-1
21A-PS3-092021-1
21A-PS4-092021-1
21A-PS5S-092021-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 593886	Tetrachloroethene	0.158	≥ 0.200	J+/UJ
	Acetone	0.082	≥ 0.100	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Chloroethane	21	≤ 20	J/UJ
Associated samples: 21A-TB01-091721-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 593886	Tetrachloroethene	0.163	≥ 0.200	J+/UJ
	Compound	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	24 (high bias indicated)	≤ 20	J+/Accept
	Carbon Disulfide	22 (high bias indicated)	≤ 20	J+/Accept
	Chloroethane	26 (high bias indicated)	≤ 20	J+/Accept
	Trichlorofluoromethane	36 (high bias indicated)	≤ 20	J+/Accept
	Trichlorotrifluoroethane	25 (high bias indicated)	≤ 20	J+/Accept
Associated samples: 21A-TB01-091721-1				
Calibration	**Compound**	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 594641, 594650	Chloroethane	23	≤ 20	J/UJ
Associated samples: 21A-MW4A-092021-1, 21A-MW4-092021-1, 21A-PS3-092021-1, 21A-PS4-092021-1, 21A-PS5S-092021-1				
Calibration	**Compound**	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 594621	Chloroethane	34	≤ 20	J/UJ
	Acetone	28	≤ 20	J/UJ
Associated samples: 21A-PS1S-091721-1, 21A-PS1M-091721-1 (2x), 21A-PS1D-091721-1				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
Arsenic– 6010D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ33721		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 26, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 21, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ33721.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), and/or select metals for the following samples was assessed:

Sample ID
21A-TB01-092121-1 (trip blank)
21A-PS5D-092121-1
21A-MW5-092121-1
21A-GZA14A-092121-1
21A-GZA14A-092121-2 (field duplicate of 21A-GZA14A-092121-1)
21A-PS8S-092121-1
21A-PS8M-092121-1
21A-PS8D-092121-1
21A-PZ2S-092121-1
21A-GZA14-092121-1
21A-IP1R2-092121-1
21A-IP1R2-092121-2 (field duplicate of 21A-IP1R2-092121-1)
21A-MW7-092121-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
*	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 594650, 594862, 594857	Chloroethane	23	≤ 20	J/UJ
Associated samples: All samples				
Calibration	**Compound**	**%D**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 594862	Carbon tetrachloride	23 (high bias indicated)	≤ 20	J/UJ
Associated samples: 21A-GZA14-092121-1, 21A-GZA14A-092121-1, 21A-GZA14A-092121-2, 21A-PS8D-092121-1, 21A-PS8M-092121-1, 21A-PS8S-092121-1, 21A-PZ2S-092121-1				
Calibration	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 594857	Tetrachloroethene	0.186	≥ 0.200	J+/UJ
Associated samples: 21A-MW7-092121-1				

MD/MS/MSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

Parent Sample	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
21A-MW7-092121-1	Vinyl chloride	134	ok	70	130	ok	≤ 20	J+/Accept
All samples in this data set are qualified.								

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

EPH (Targets)

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit % Recovery	Upper Limit % Recovery	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 593332	Benzo(b)fluoranthene	ok	ok	40	140	22.7	<20	J/Accept
	Dibenzo(a,h)anthracene	ok	ok	40	140	21.8	<20	J/Accept
Associated sample: 21A-PZ2S-092121-1								

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
VPH – MADEP VPH 2/2018
EPH - MADEP EPH 12/2019
1,4-Dioxane - 8270D
Arsenic– 6010D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCJ34744		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	October 26, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 22, 2021 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCJ34744.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs) and/or 1,4-dioxane for the following samples was assessed:

Sample ID
21A-TB01-092221-1 (trip blank)
21A-AE104S-092221-1
21A-AE104M-092221-1
21A-AE104D-092221-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation
* GC/MS tuning#

Initial calibration/initial calibration and continuing calibration verifications#

*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Chain-of-Custody (COC)/Sample Integrity

1,4-Dioxane analysis was not requested on the COC for sample 21A-AE104D-092221-1. The laboratory received sample containers for 1,4-dioxane analysis and subsequently analyzed the sample per AECOM's request.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	**Compound**	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 594857, 595031	Chloroethane	23	$\leq$ 20	J/UJ
Associated samples: All samples				
Calibration	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 594857	Tetrachloroethene	0.186	$\geq$ 0.200	J+/UJ
Associated samples: 21A-TB01-092221-1, 21A-AE104S-092221-1, 21A-AE104D-092221-1				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Pace Analytical Gulf Coast Reports 221090918, 221091509, 221092013, 221092102, 221092428		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.25
Date	November 9, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 1, 8, 9, 13, 18, 20, 22, 2021 and tabulated below. Pace Analytical Gulf Coast in Baton Rouge, LA analyzed the samples and reported the data in report numbers 221090918, 221091509, 221092013, 221092102, and 221092428.

The data review was performed with reference to method Dissolved Gases – Laboratory SOP AM20GAX based on RSK 175, current Region 1 - EPA New England validation guidelines, and the project-specific work plan.

Sample ID	Sample ID
221090918	
21A-AE26R2-090121-1	21A-AE28R2-090121-1
221091509	
21A-EMW11R2-090821-1	21A-STM8D-090821-1
21A-EMW10R-090821-1	21A-AE100R1-090921-1
21A-AE100R5-090921-1	21A-AE103R1-090921-1
21A-AE103R5-090921-1	21A-AE108R1-090921-1
21A-TRC301R3-091321-1	21A-AE106D-091321-1
21A-AE105R1-091321-1	21A-AE106R3-091321-1
221092013	
2IA-AE29R6-091421-1	--
221092102*	
21A-GZA105R-091421-1	21A-AE103D-091421-1
21A-GZA12-091421-1	21A-TRC101-091421-1
21A-AE03-091521-1	21A-AE102M-091521-1
21A-GZA105D-091521-1	21A-AE112R6-091621-1

Sample ID	Sample ID
21A-AE29R6-091421-1	21A-GZA101R-091421-1
21A-STM8R1-091621-1	--
221092428**	
21A-GZA105D-092221-1	21A-GZA105D-092221-2 (field duplicate of 21A-GZA105D-092221-1)
21A-GZA105R-092221-1	21A-TRC101-092221-1
21A-EB01-092221-1	21A-AE03-092221-1
21A-AE102M-092221-1	21A-STM8RI-092221-1
21A-STM8RI-092221-2 (field duplicate of 21A-STM8RI-092221-1)	21A-AE103D-092221-1
21A-GZA12-092221-1	21A-GZA101R-092221-1
21A-AE112R6-092221-1	--

*Hydrogen analysis only **Dissolved gases analysis only

The following method was used to analyze the samples for dissolved gases and/or hydrogen:

Dissolved Gases– Laboratory SOP AM20GAX based on RSK 175 [Hydrogen, Methane, Ethane, Ethene, Acetylene and Propane]

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation
* Laboratory blanks
* Trip blank/Equipment blank
  Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
* Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
* Field duplicate results
* General reporting issues

The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An “NA” indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

MD/MS/MSD Results

MS/MSD analyses were performed on samples 21A-AE03-092221-1 and 21A-AE103D-092221-1 for dissolved gases. The QC acceptance criteria were met for sample 21A-AE03-092221-1. Dissolved gases were not recovered in the MS/MSD analyses of sample 21A-AE103D-092221-1. The analyses were repeated and yielded similar results. The nondetects reported for dissolved gases in sample 21A-AE103D-092221-1 are rejected and are considered unusable for project decisions.

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation Summary Lockheed Martin-Wilmington, MA Site Microbial Insights Compound-Specific Isotope Analysis (CSIA) Center Report: 020SI-66582114		
From	Paula DiMattei		
Reviewed by	Lori Herberich		60552044.25
Date	November 9, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 1, 8, 9, 13, 14, 15, 16, and 22, 2021 and tabulated below. Microbial Insights in Knoxville, TN analyzed the samples and reported the data in laboratory report 020SI-66582114.

The data was reviewed for compliance with Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 1, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007. In the absence of an applicable MADEP Compendium of Analytical Methods performance standard, the laboratory's CSIA method summary was referenced. Current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Sample IDs	Analysis
21A-AE100R1-090921-1	Carbon-Specific Isotope Analysis (CSIA)
21A-AE100R5-090921-1	
21A-AE102M-091521-1	
21A-AE103R5-090921-1	
21A-AE105R1-091321-1	
21A-AE106D-091321-1	
21A-AE106R3-091321-1	
21A-AE108R1-090921-1	
21A-AE112R6-092221-1	
21A-AE26R2-090121-1	
21A-AE28R2-090121-1	
21A-AE29R6-091421-1	
21A-EMW10R-090821-1	
21A-EMW11R2-090821-1	
21A-GZA105D-091521-1	

Sample IDs	Analysis
21A-GZA105R-091421-1	
21A-STM8D-090821-1	
21A-TRC301R3-091321-1	
21A-STM8RI-092221-1	
21A-AE112R6-092221-1	

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Laboratory blanks
*	Laboratory control sample (LCS) results
NA	Field duplicate results
*	General reporting issues

The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An “NA” (Not applicable) indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The CSIA data appear valid as reported and may be used for decision making purposes.

General Reporting Issues

For the CSIA results, the “U” qualifier associated with the delta results in the project database is used to signify that either there was no peak corresponding to the target analyte or that the peak did not produce a reliable CSIA result. Reporting limits are not applicable to this analysis.

An ”NA” (Not Analyzed) in the project database signifies that the compound results were either not detected in the volatile organic compound (VOC) results analyzed by SW-846 Method 8260 and therefore not analyzed for CSIA, or that the VOC compound was expected to be below CSIA limit of detection (LOD) after the required dilutions were performed and therefore, not analyzed for CSIA.

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250 Apollo Drive
Chelmsford, Massachusetts 01824

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Memorandum

To	Scott Olson	Page	1
Subject	Data Validation Summary Lockheed Martin-Wilmington, MA Site Alpha Analytical Laboratory: L2147615, L2148922 and L2150367		
From	Paula DiMattei		
Reviewed by	Lori Herberich		60552044.25
Date	November 10, 2021		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 1-3, 7-9 and 14-15, 2021 and tabulated below. Alpha Analytical Laboratory (ALPHA) in Mansfield, MA analyzed the samples and reported the data in laboratory reports L2147615, L2148922 and L2150367.

The data were reviewed for compliance with Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 1, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007.

In the absence of an applicable MADEP Compendium of Analytical Methods performance standard, the laboratory's PIANO (Parafinic, Isoparafinic, Aromatic, Naphthenic, Olefinic) method was referenced. Current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Laboratory Report	Sample IDs
L2147615	21A-AE104R4-090221-1
	21A-AE109R5-090221-1
	21A-AE23R-090321-1
	21A-AE26R1-090121-1
	21A-AE28R2-090121-1
L2148922	21A-AE100R1-090921-1
	21A-AE102RR6-090721-1
	21A-AE103R1-090921-1
	21A-EMW11R2-090821-1
L2150367	21A-AE29R6-091421-1
	21A-GZA105D-091521-1
	21A-GZA105R-091421-1
	21A-GZA105S-091521-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
*	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks
*	Surrogate recoveries (%Rs)
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
NA	Field duplicate results
*	Internal standard performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

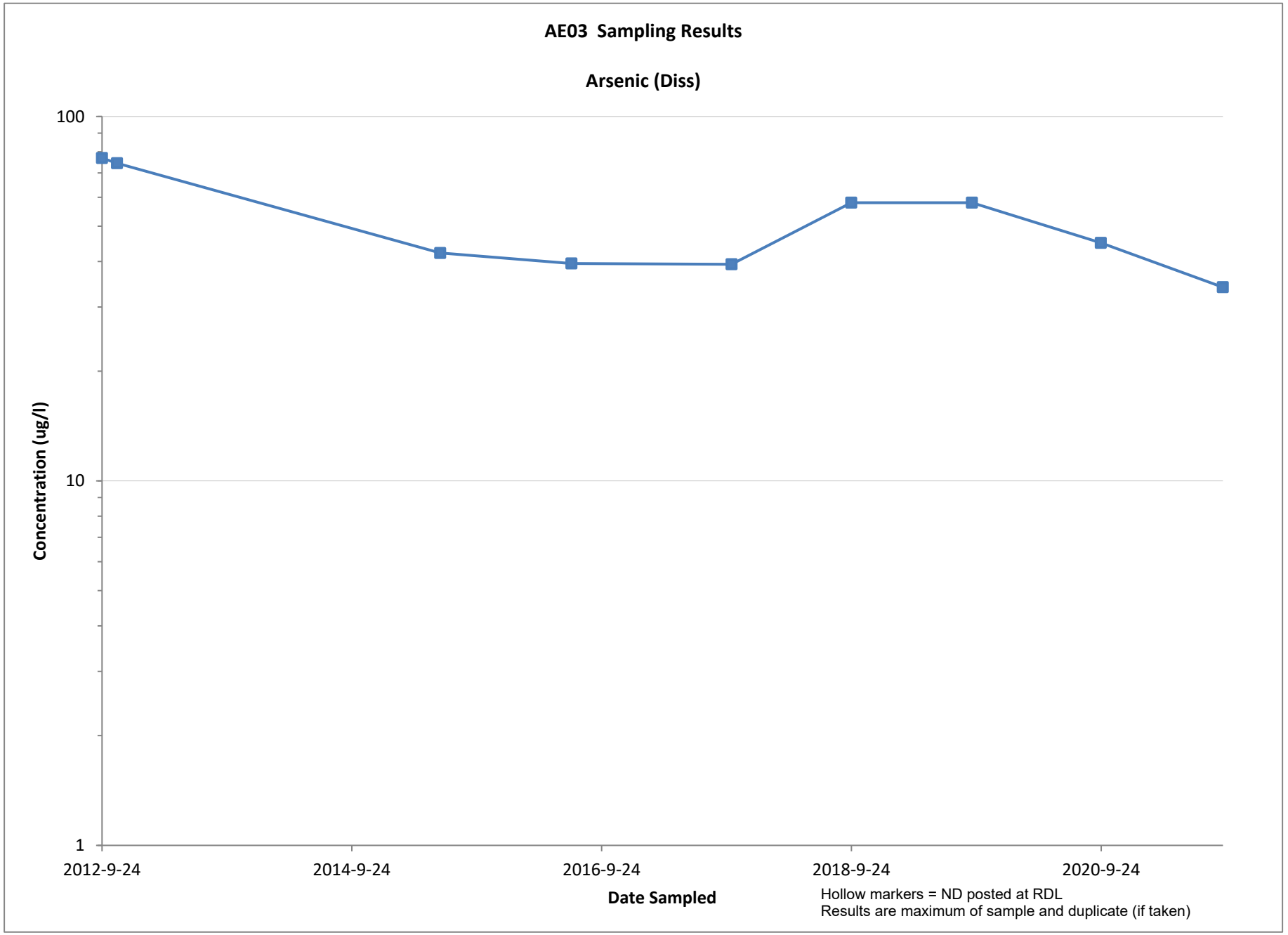
General Reporting Issues

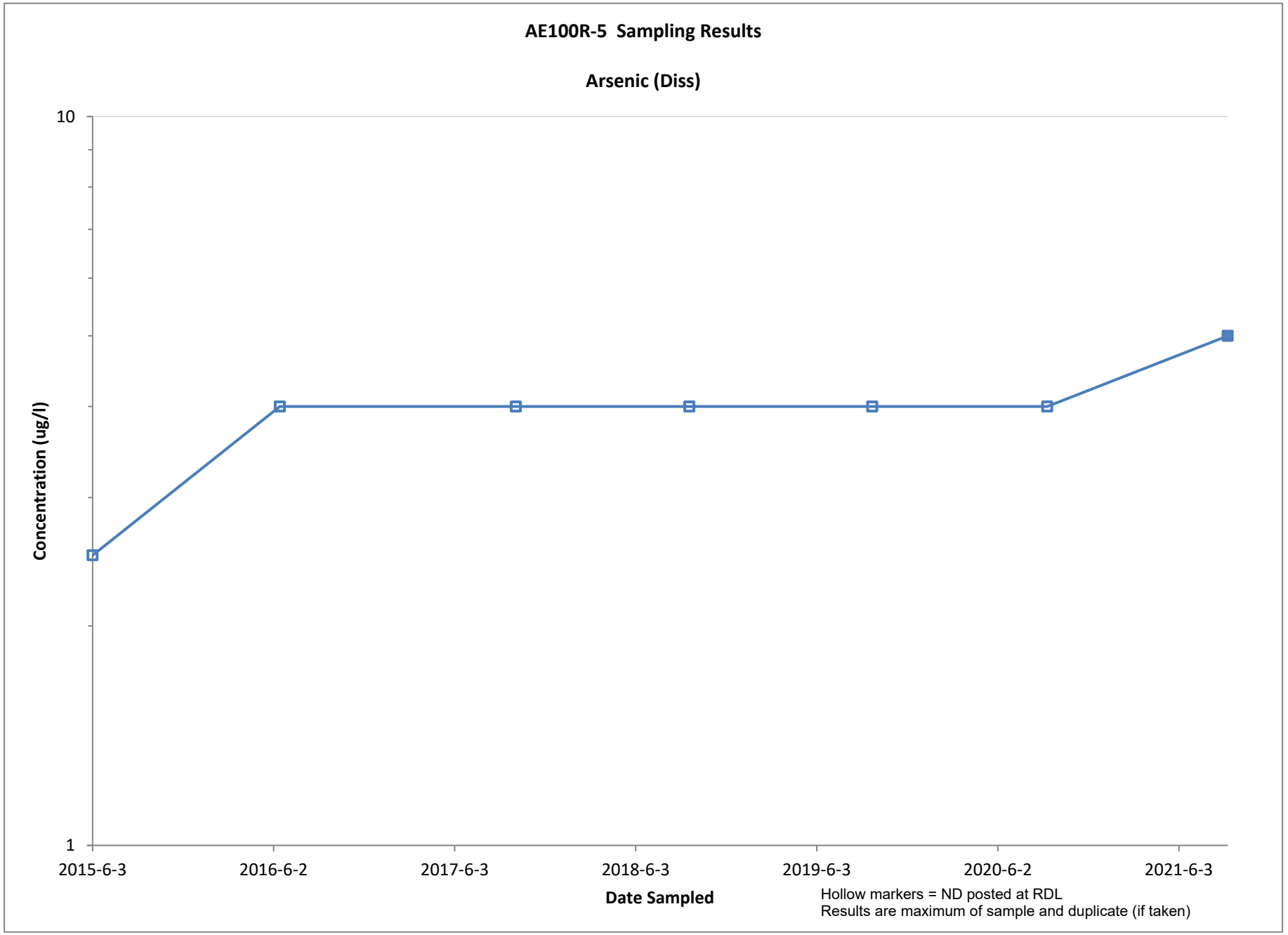
When applicable, all sample results detected at concentrations less than the lowest calibration standard but greater than the MDL are qualified by the laboratory as estimated (J). This "J" qualifier is retained during data validation.

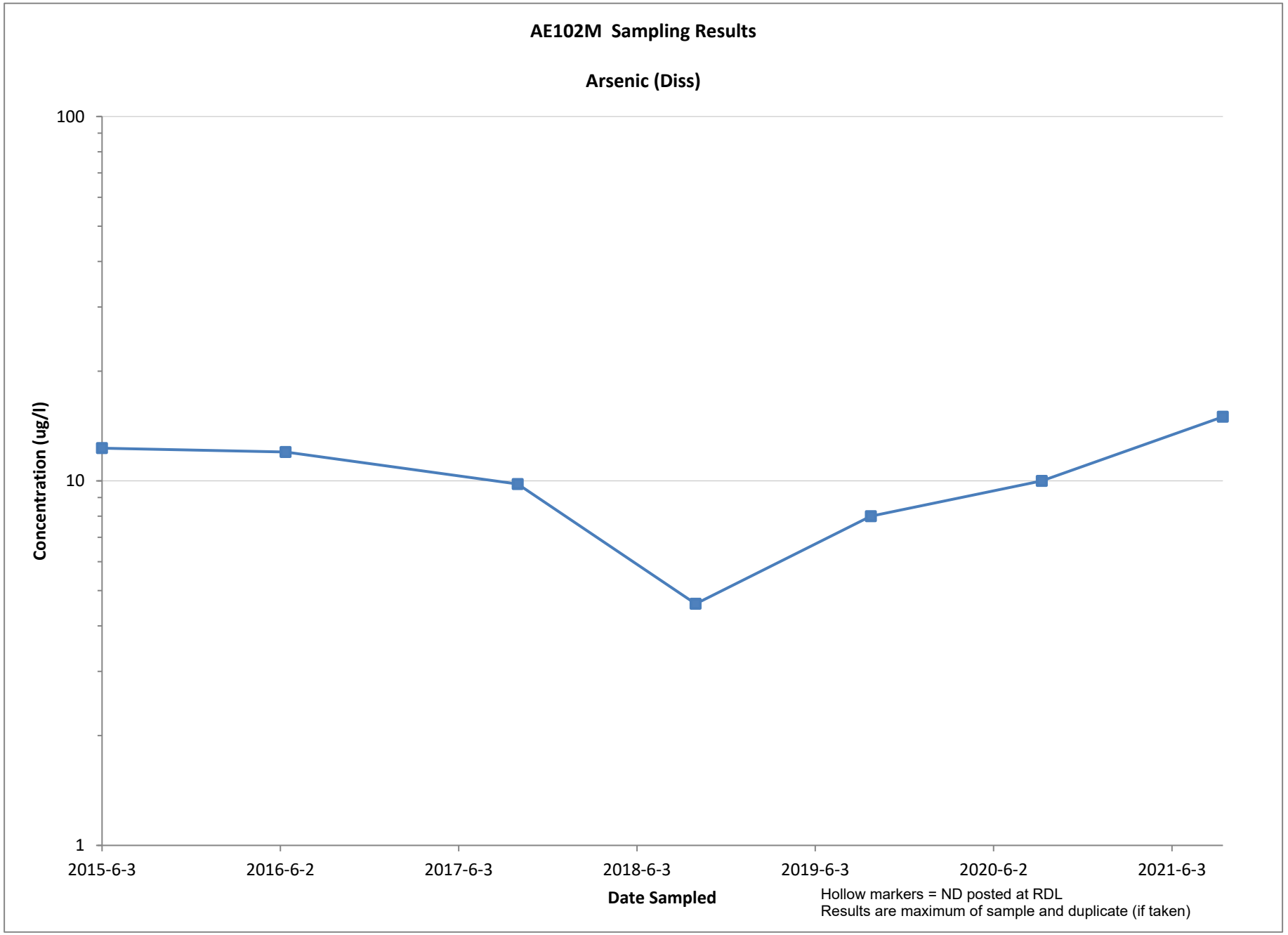
The following samples required dilutions, listed in parentheses, prior to analysis because of the presence of elevated concentrations of target or non-target compounds: 21A-AE2R2-090121-1 (5x), 21A-AE23R-090321-1 (20x), 21A-AE102RR6-00721-1 (5x), 21A-EMW11R2-090821-1 (5x) and 21A-GZA105R-091421-1 (5x).

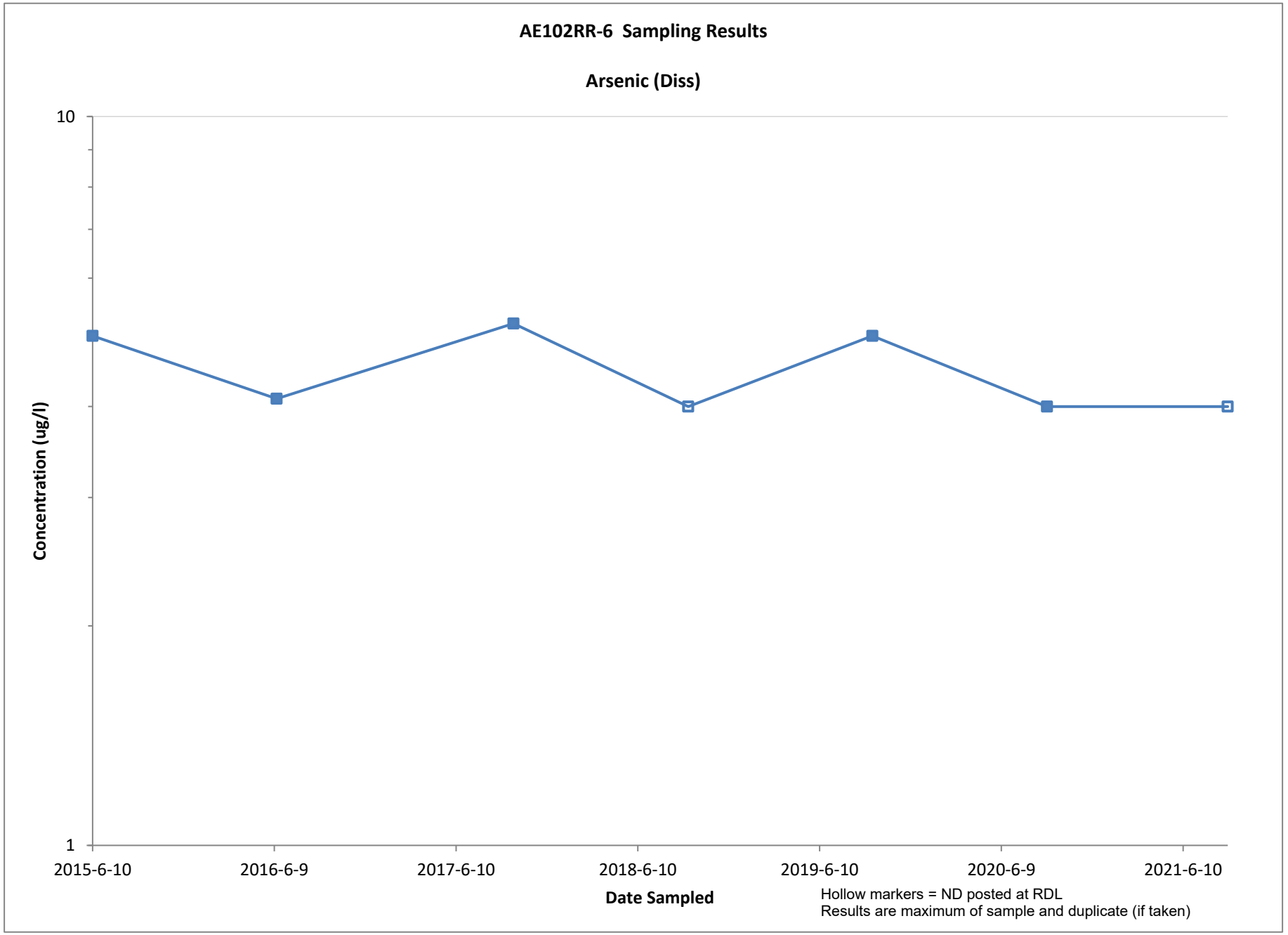
It should be noted that all project action limits may not have been met for all target compounds. As part of the data validation, review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have been reviewed and are noted, if applicable. Sample results have not been compared to any project action limits as part of this data quality/usability assessment process.

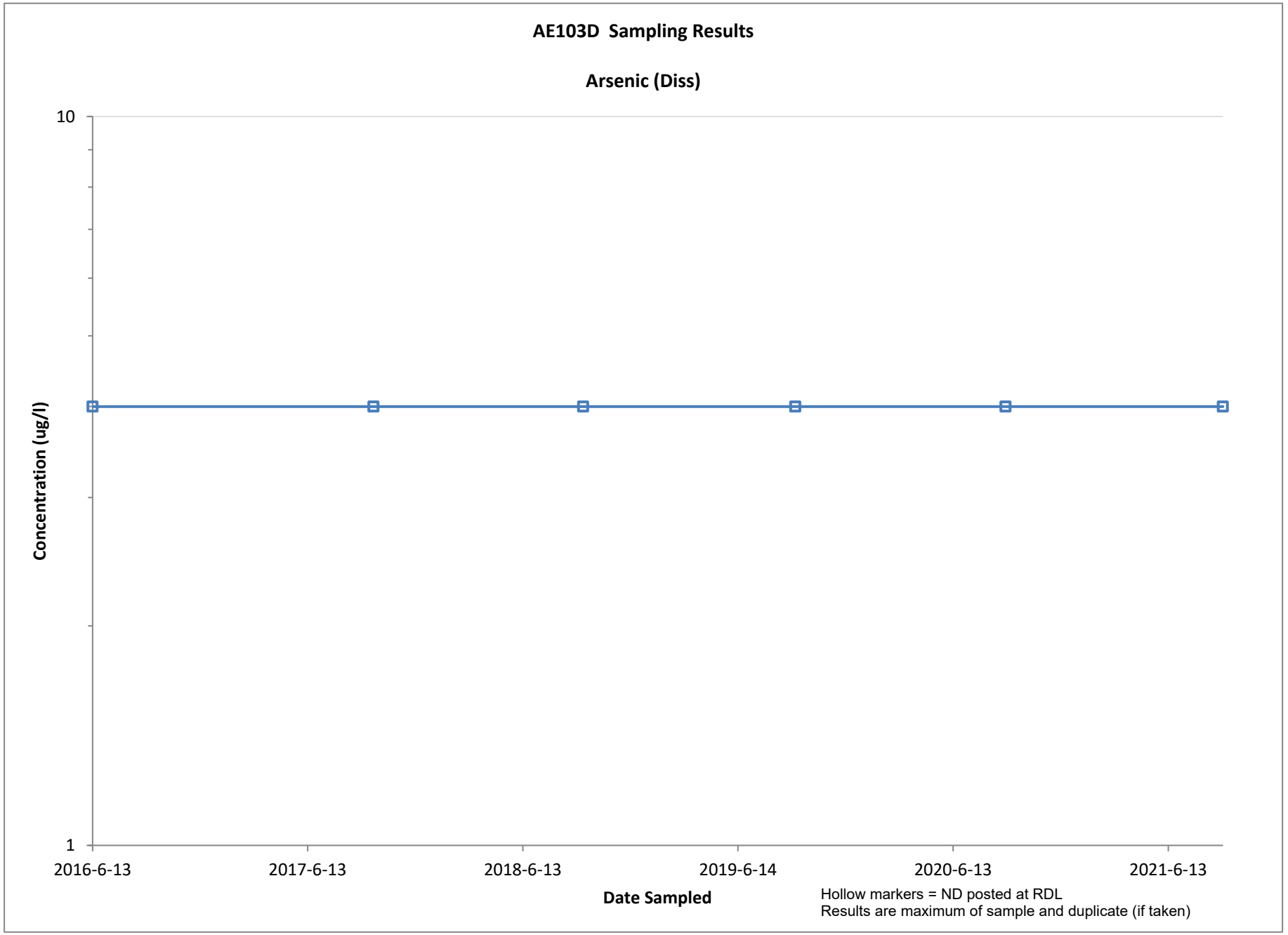
APPENDIX G
GROUNDWATER CONCENTRATION TREND GRAPHS

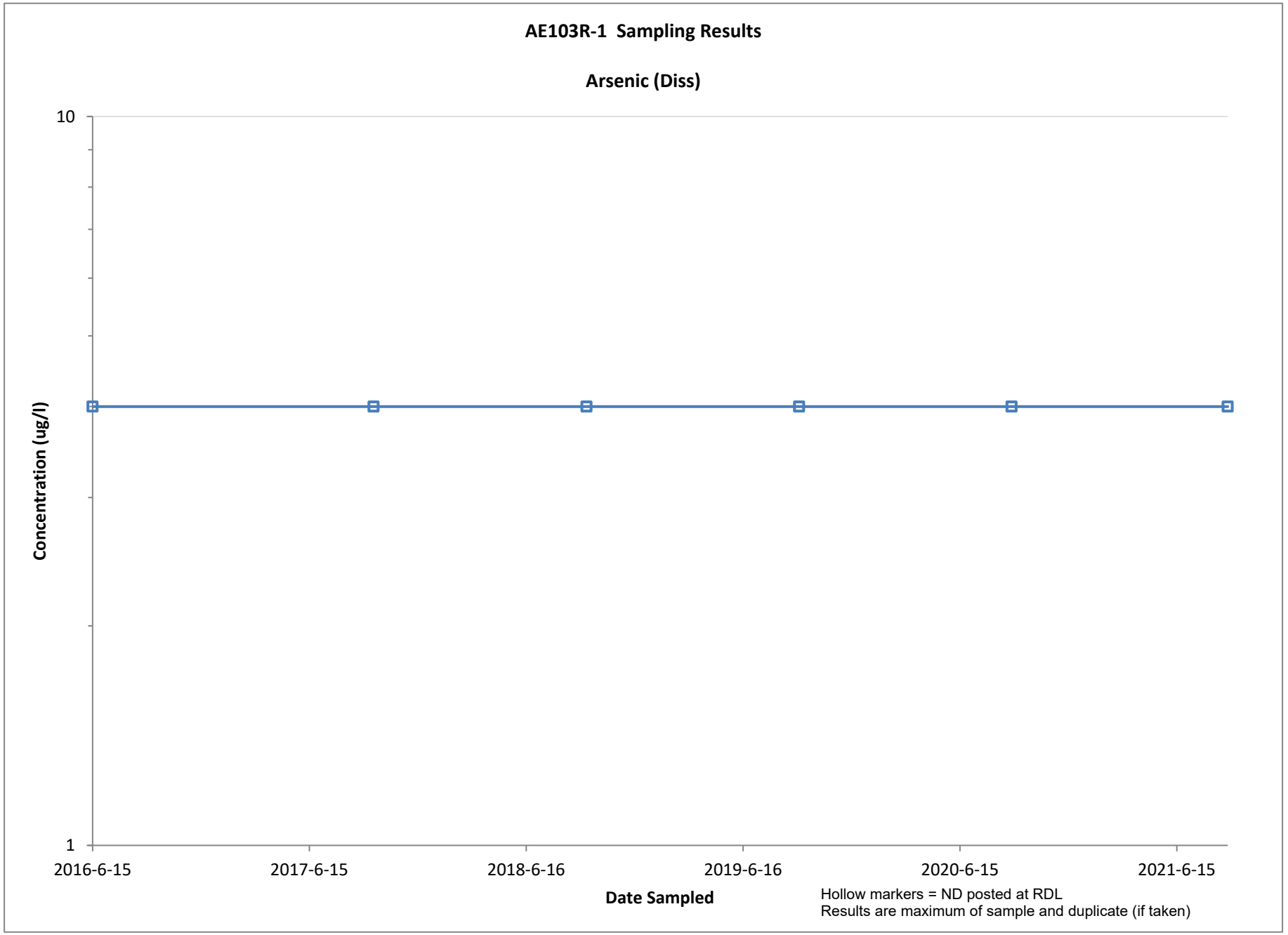

AE03 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2012-9-24
2014-9-24
2016-9-24
2018-9-24
2020-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

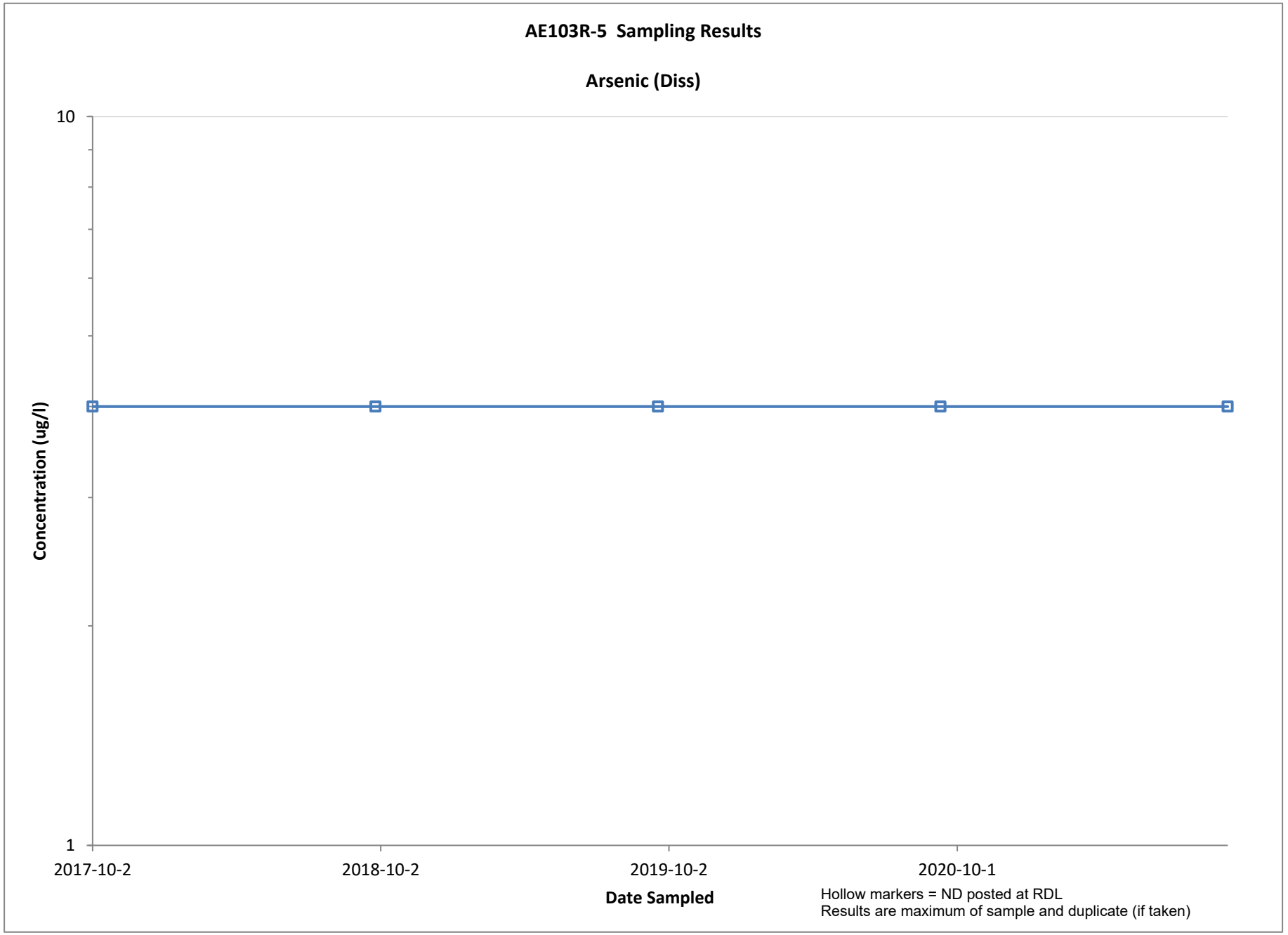

AE100R-5 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2015-6-3
2016-6-2
2017-6-3
2018-6-3
2019-6-3
2020-6-2
2021-6-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

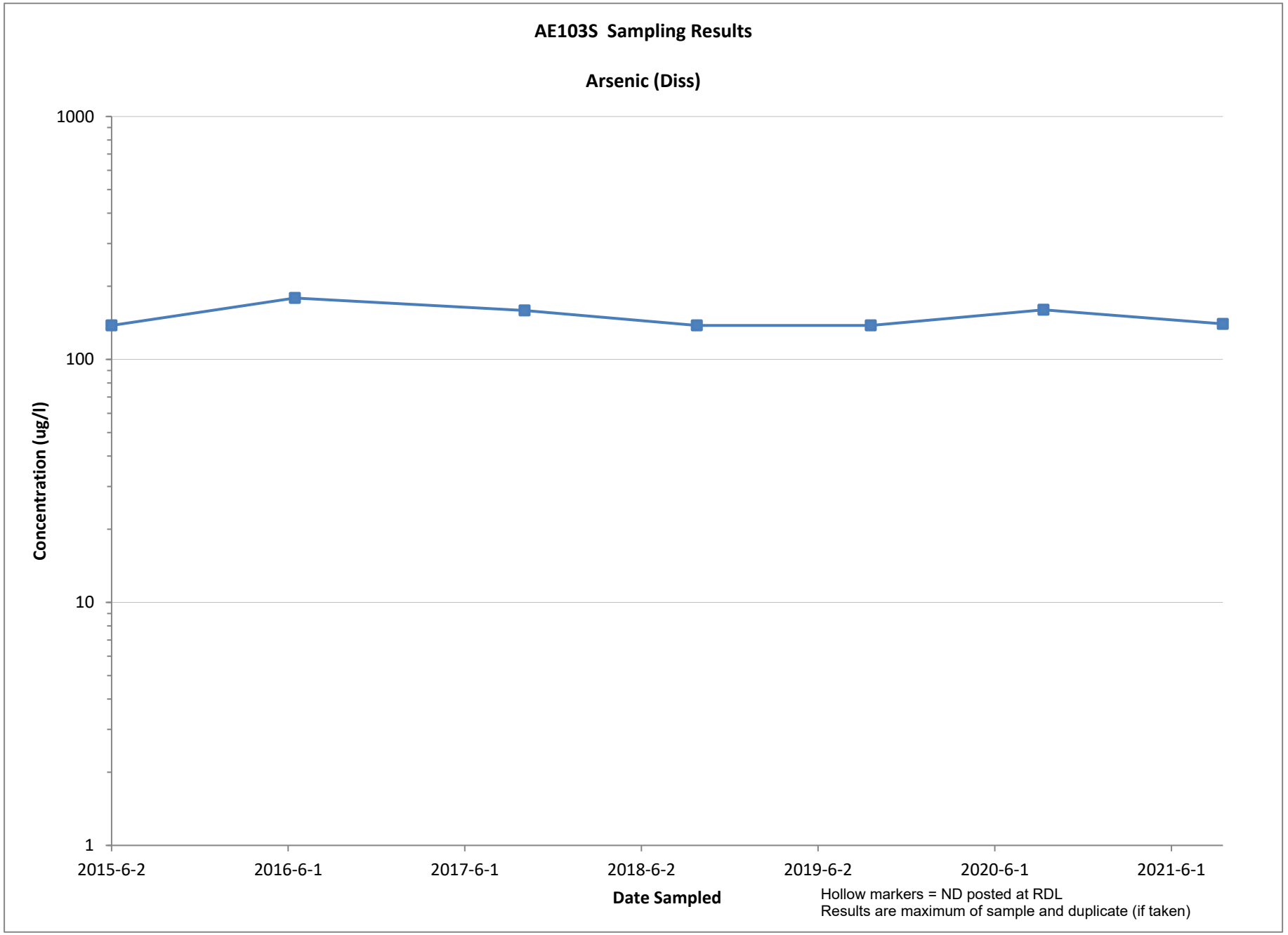

AE102M Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2015-6-3
2016-6-2
2017-6-3
2018-6-3
2019-6-3
2020-6-2
2021-6-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

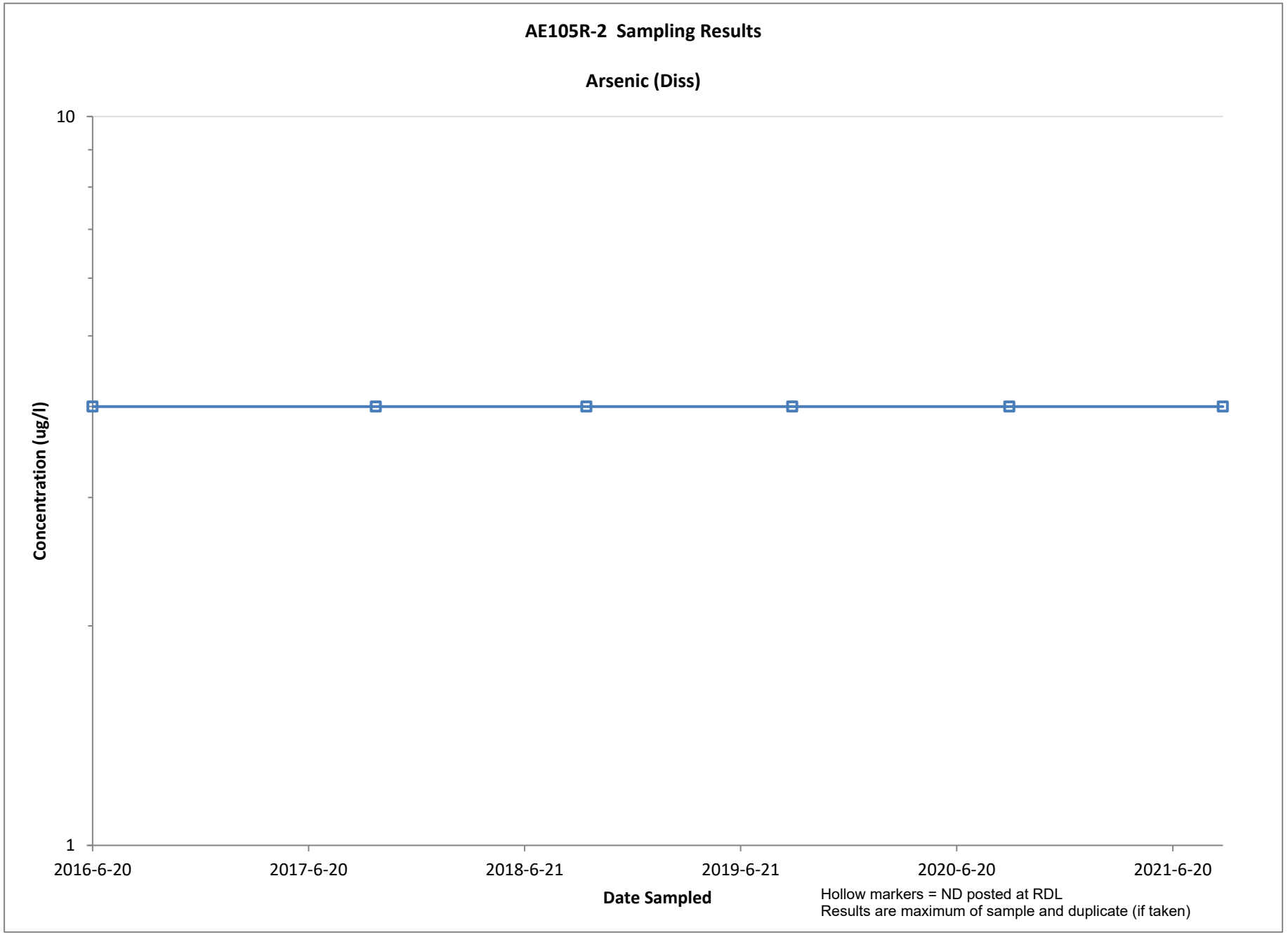

AE102RR-6 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2015-6-10
2016-6-9
2017-6-10
2018-6-10
2019-6-10
2020-6-9
2021-6-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

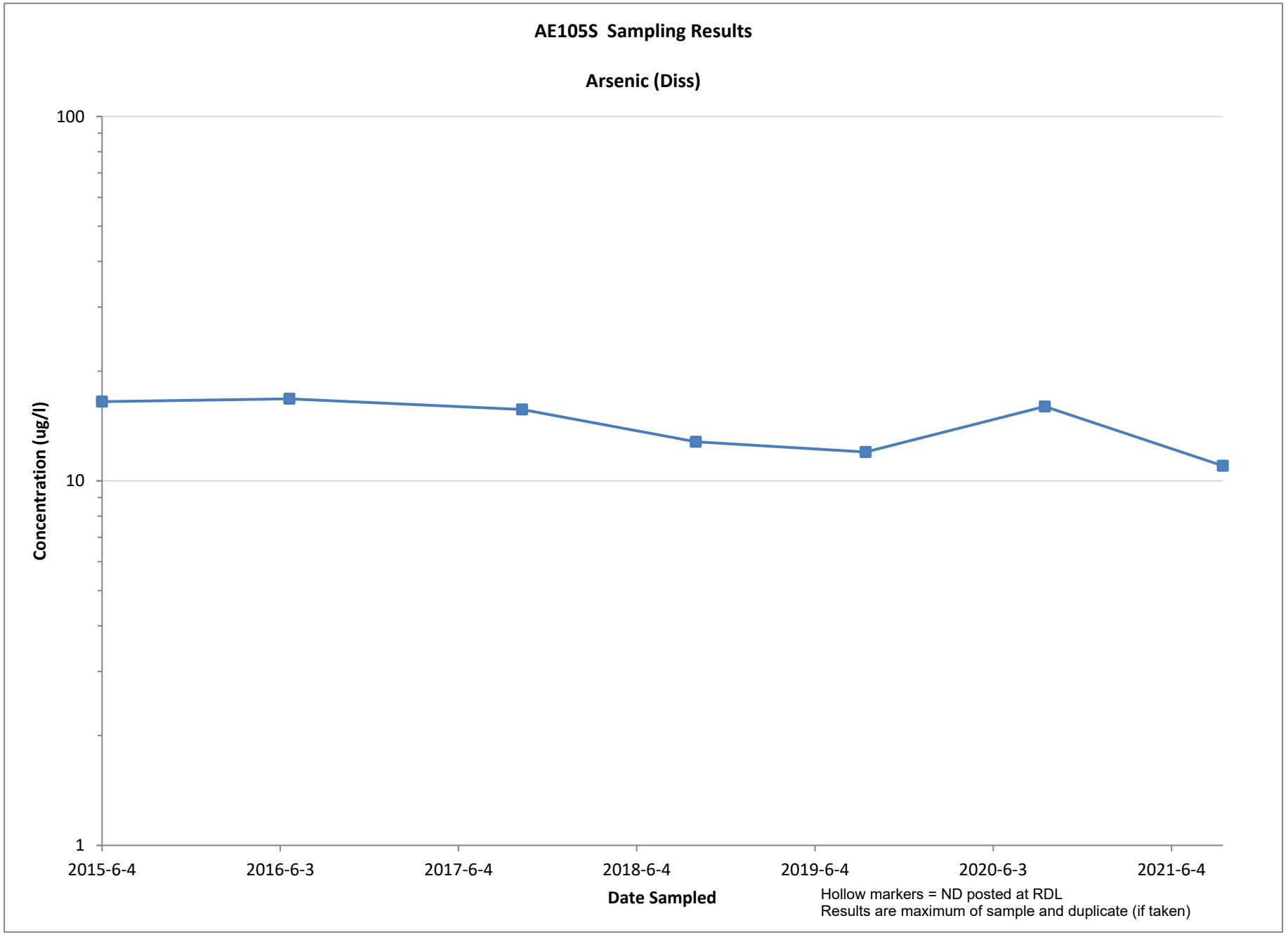

AE103D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-13
2017-6-13
2018-6-13
2019-6-14
2020-6-13
2021-6-13
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

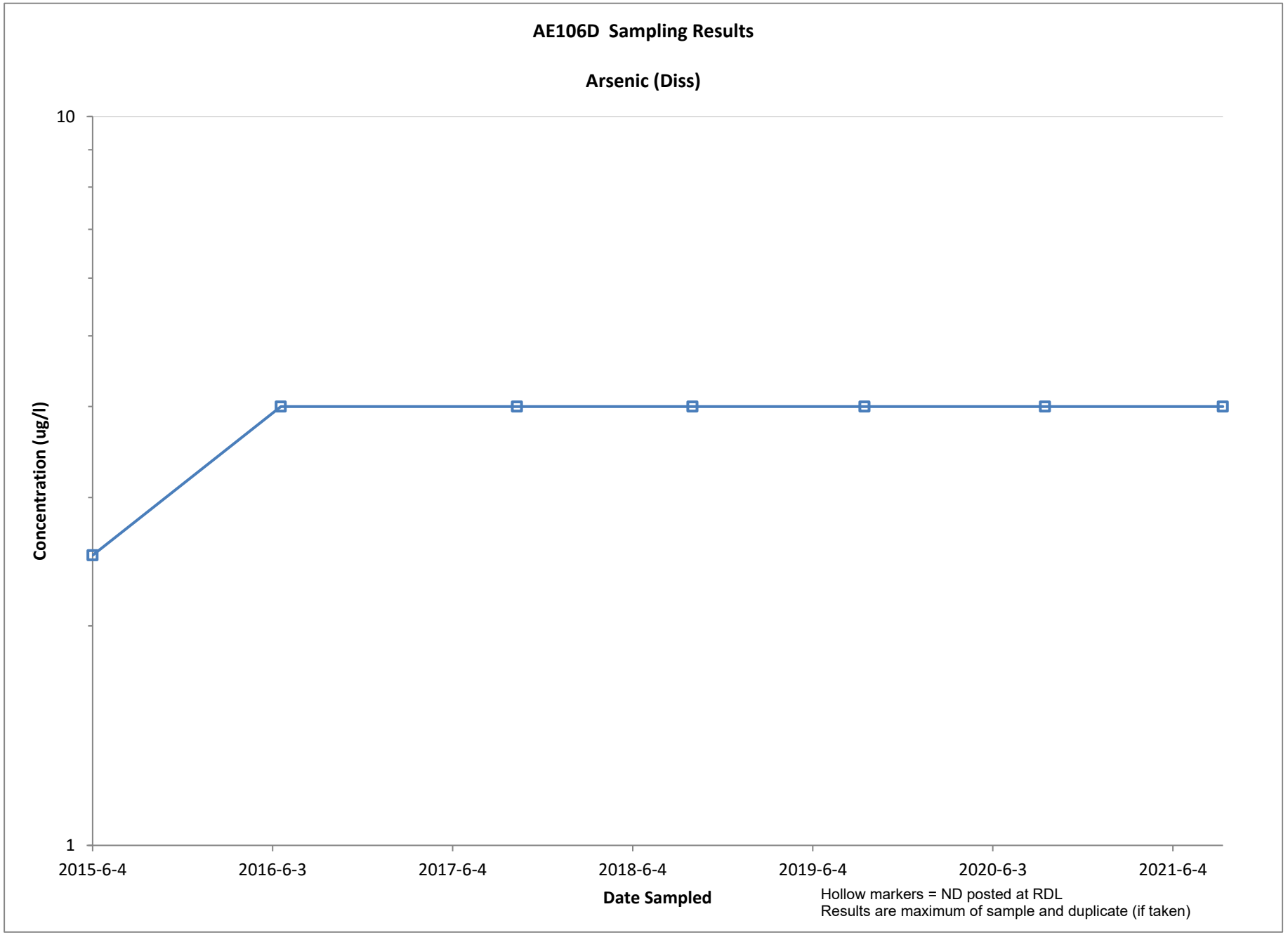

AE103R-1 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-15
2017-6-15
2018-6-16
2019-6-16
2020-6-15
2021-6-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

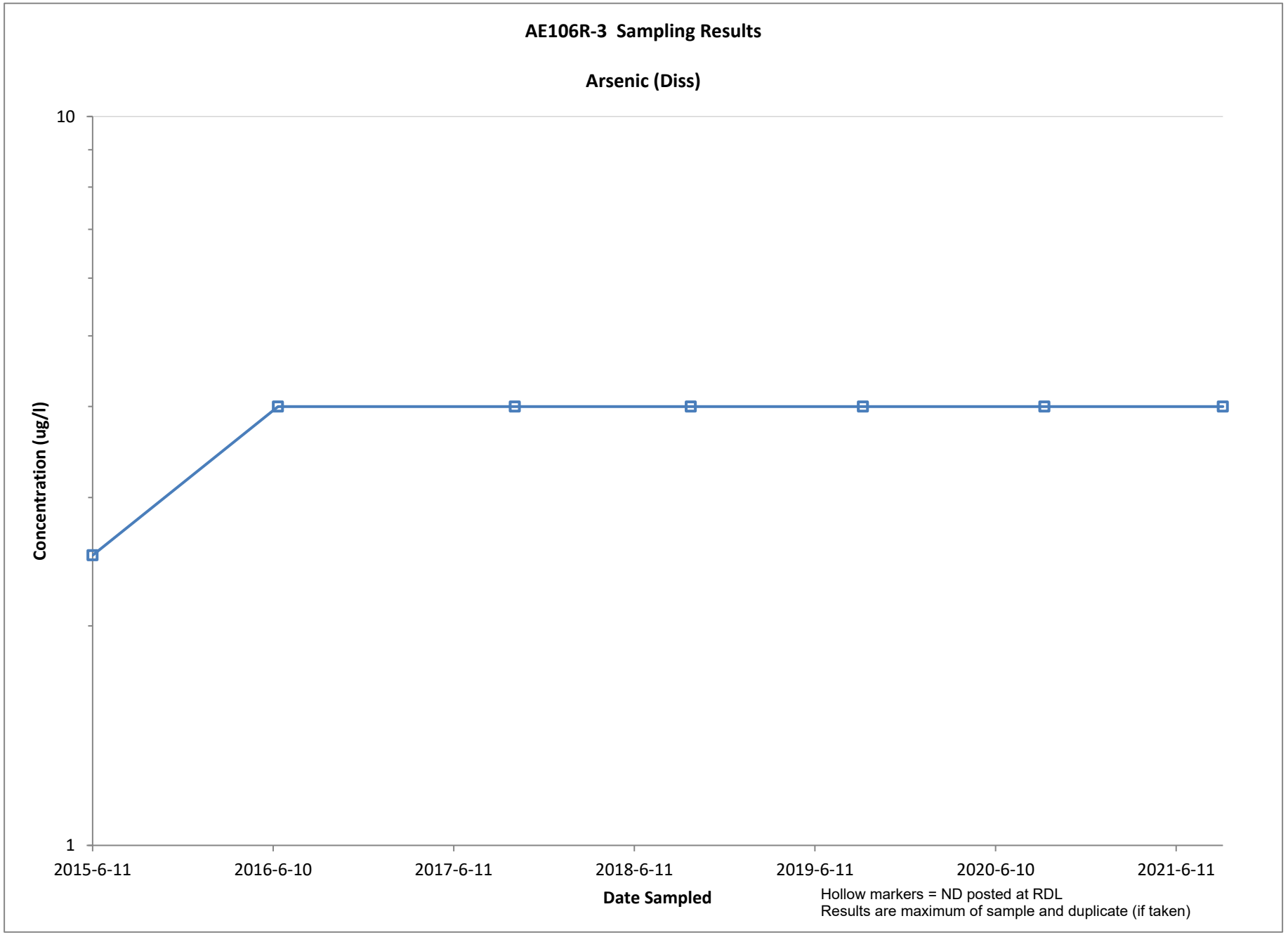

AE103R-5 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2017-10-2
2018-10-2
2019-10-2
2020-10-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

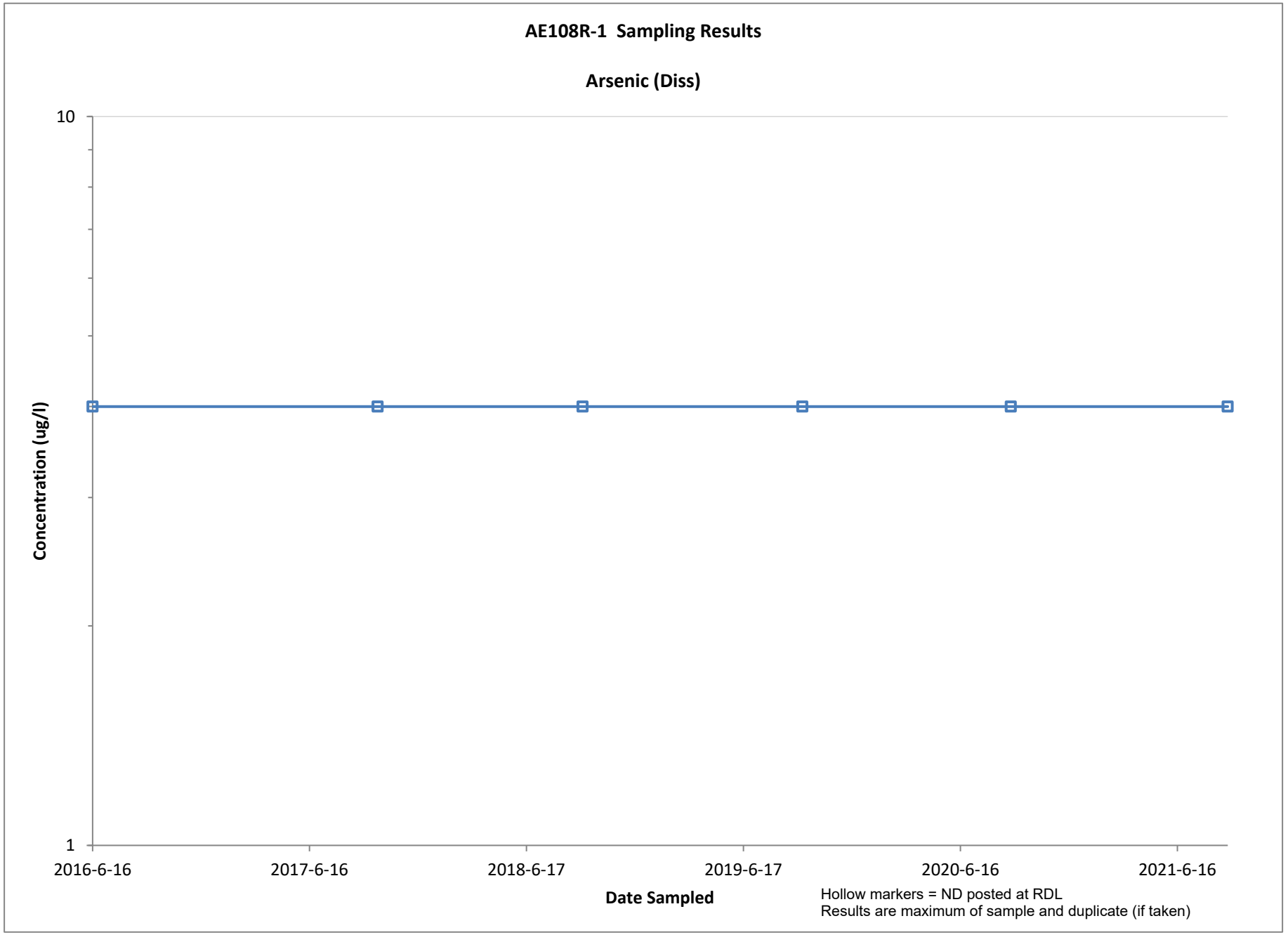

AE103S Sampling Results
Arsenic (Diss)
1000
100
10
1
Concentration (ug/l)
2015-6-2
2016-6-1
2017-6-1
2018-6-2
2019-6-2
2020-6-1
2021-6-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

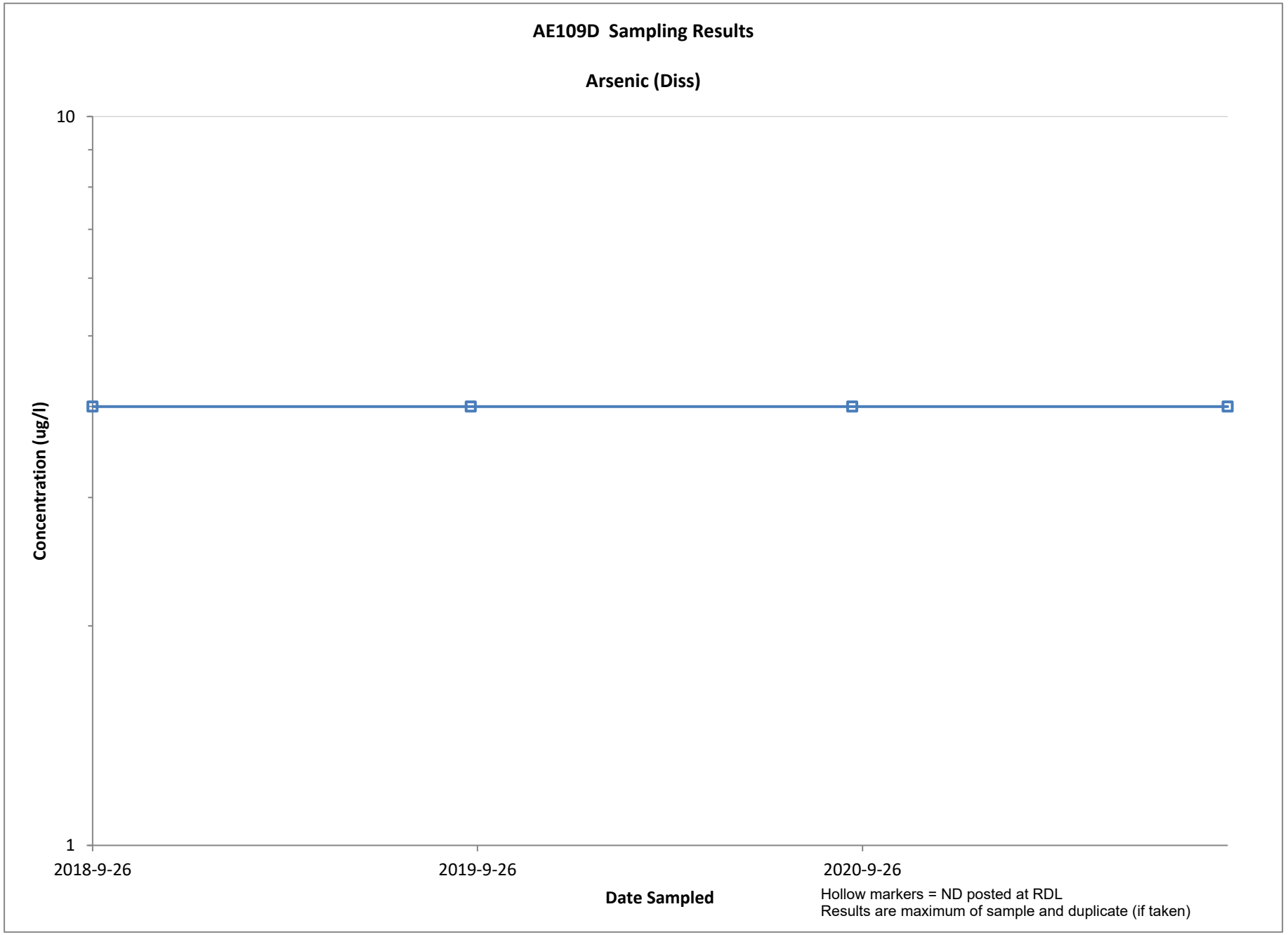

AE105R-2 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-20
2017-6-20
2018-6-21
2019-6-21
2020-6-20
2021-6-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

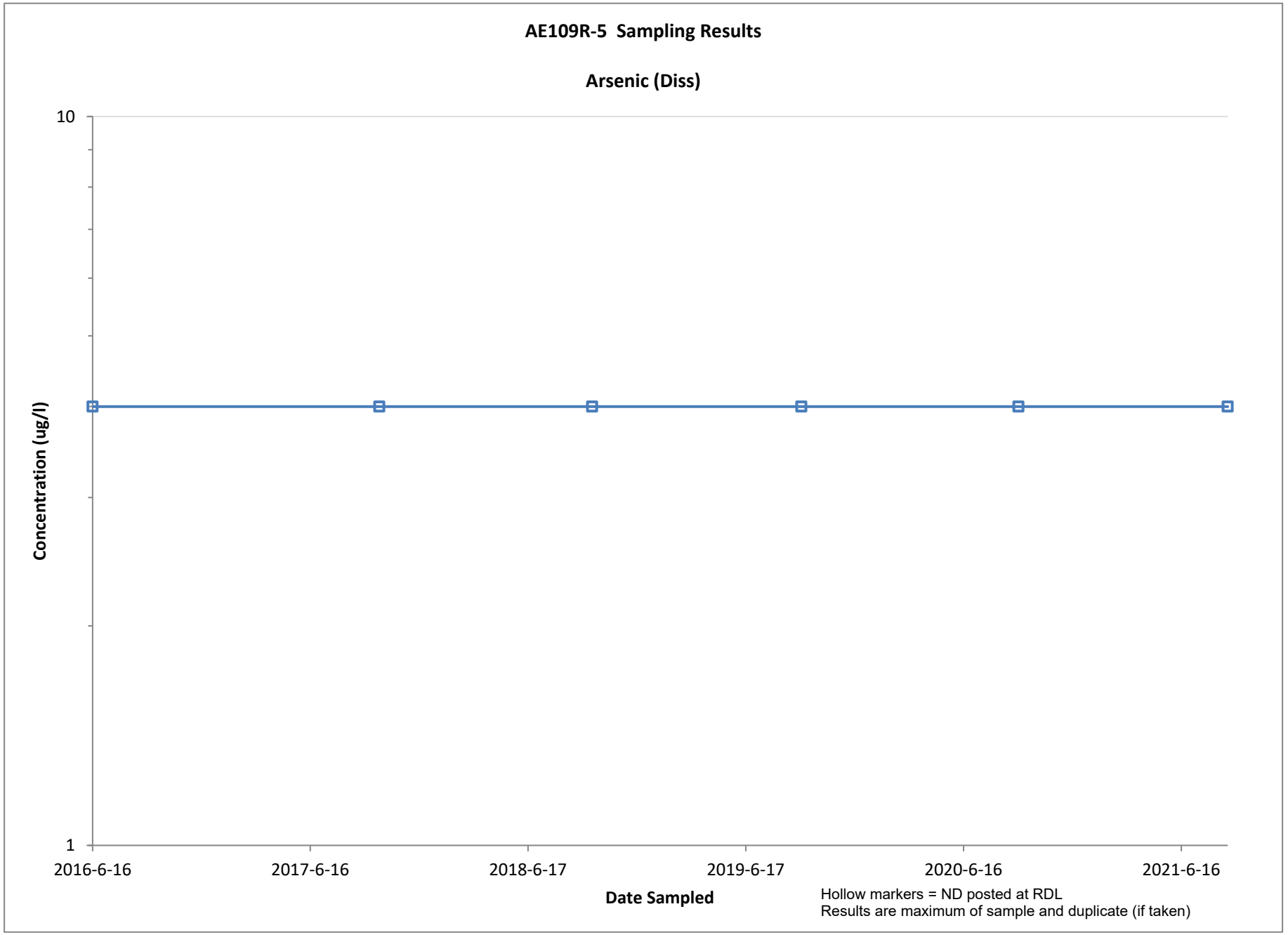

AE105S Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2015-6-4
2016-6-3
2017-6-4
2018-6-4
2019-6-4
2020-6-3
2021-6-4
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

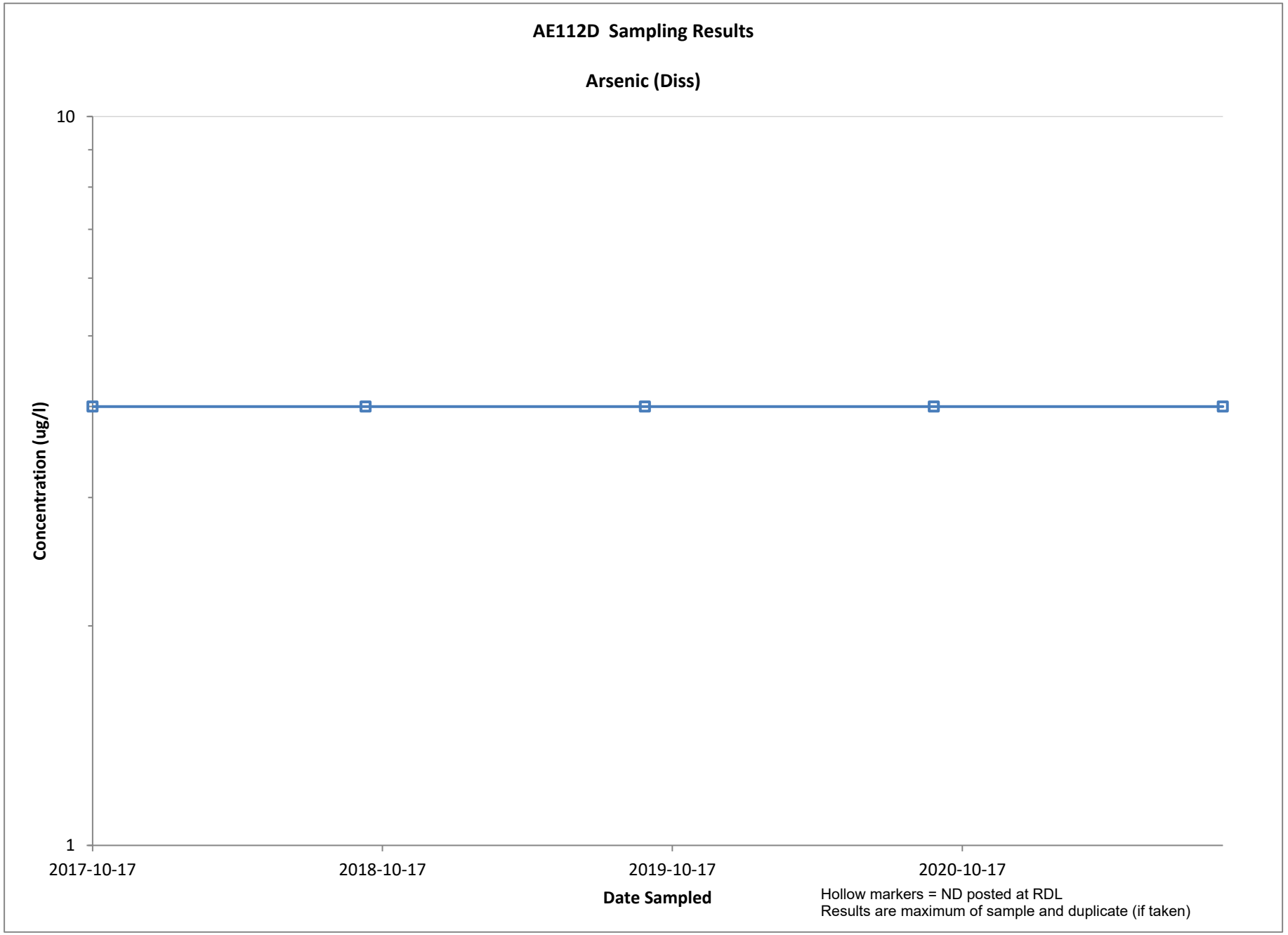

AE106D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2015-6-4
2016-6-3
2017-6-4
2018-6-4
2019-6-4
2020-6-3
2021-6-4
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

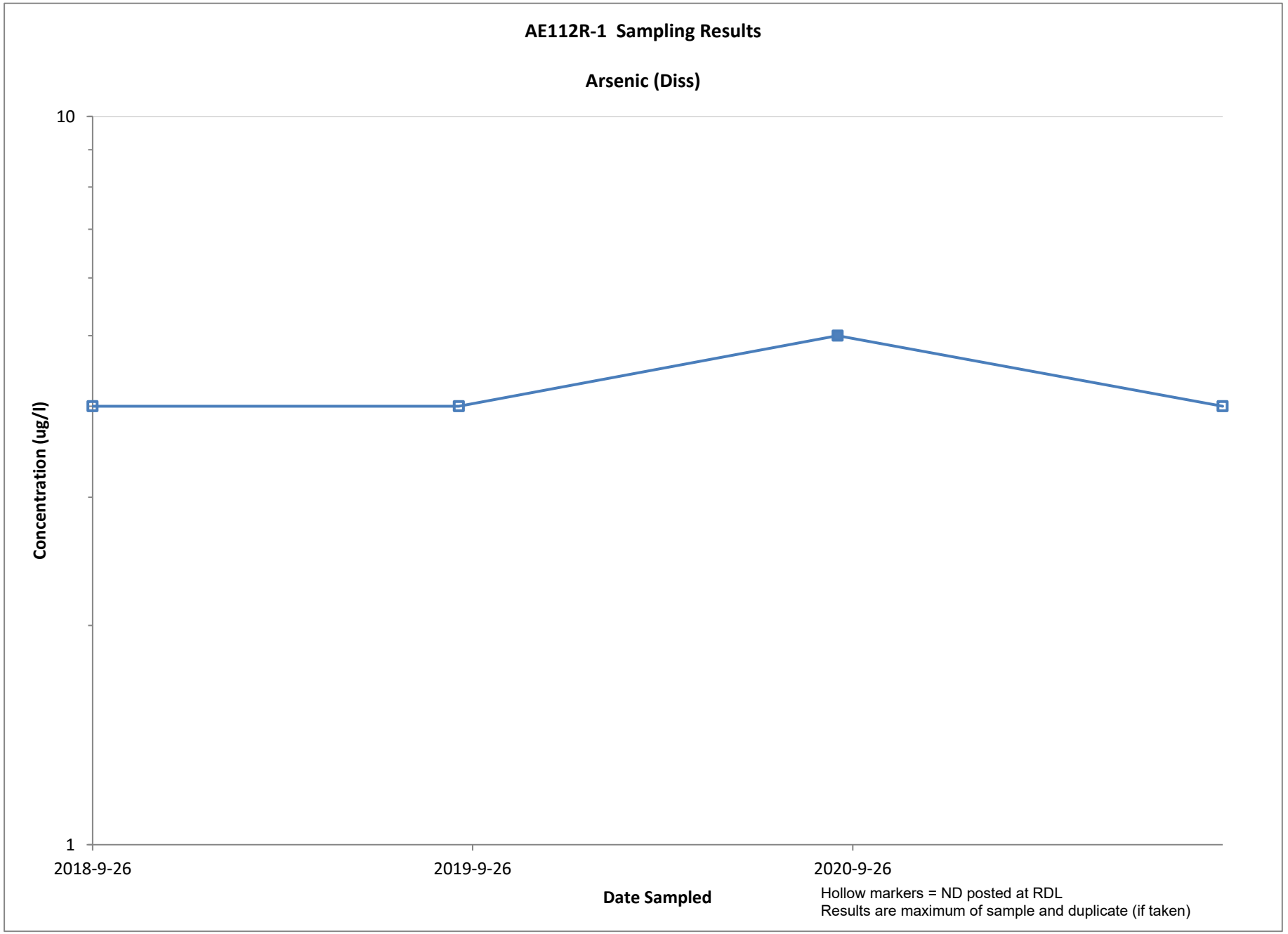

AE106R-3 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2015-6-11
2016-6-10
2017-6-11
2018-6-11
2019-6-11
2020-6-10
2021-6-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

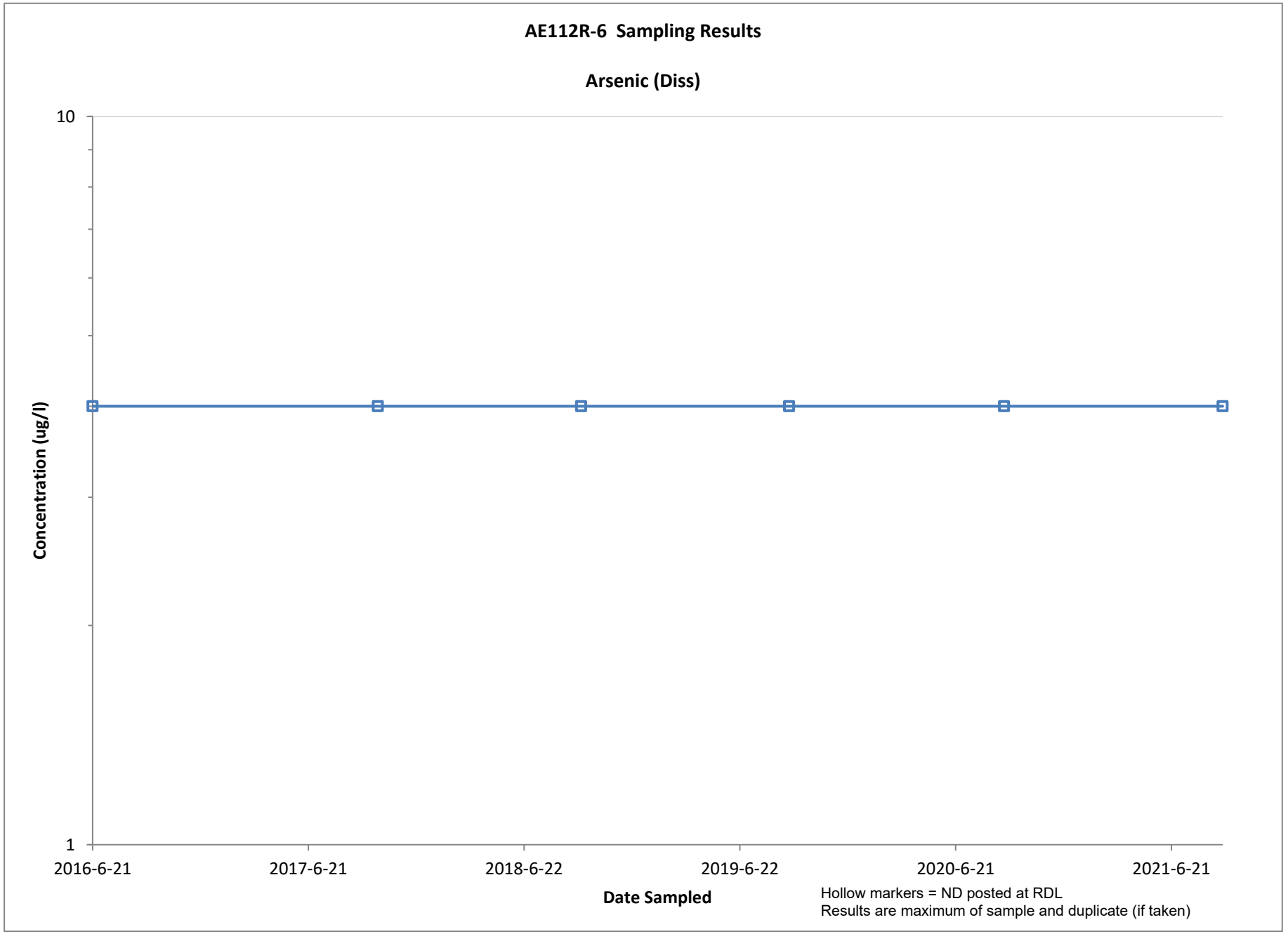

AE108R-1 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

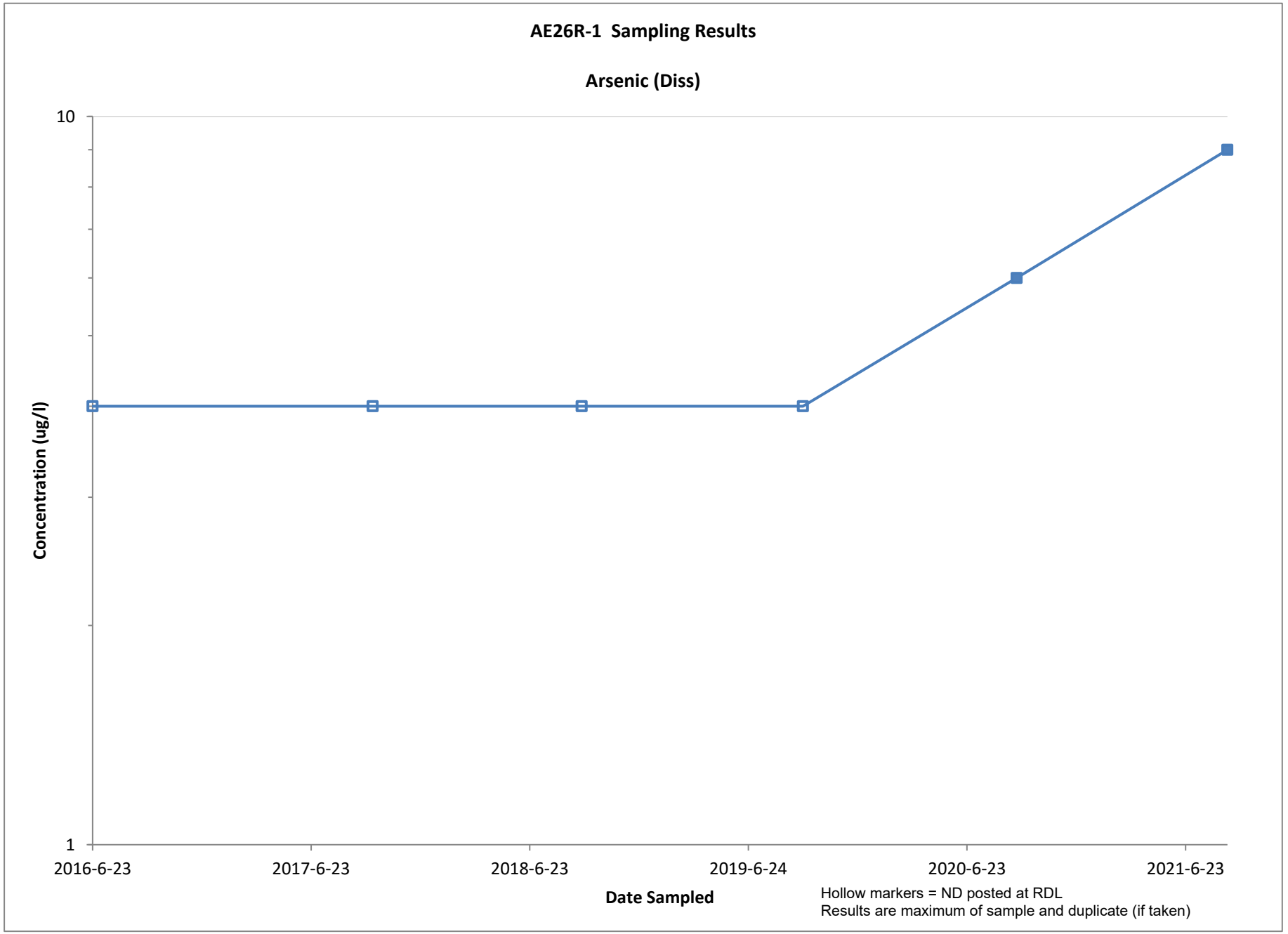

AE109D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2018-9-26
2019-9-26
2020-9-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

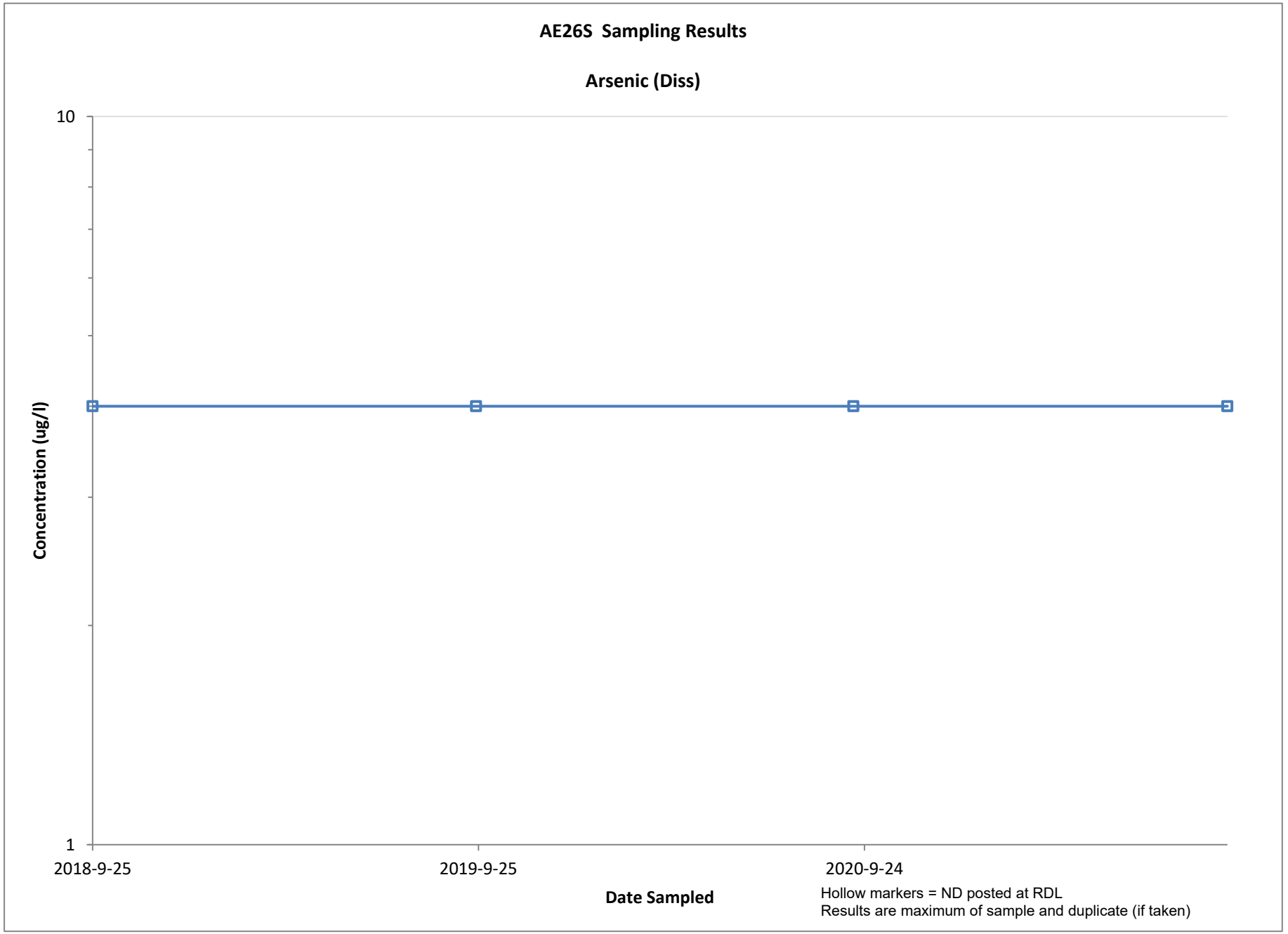

AE109R-5 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

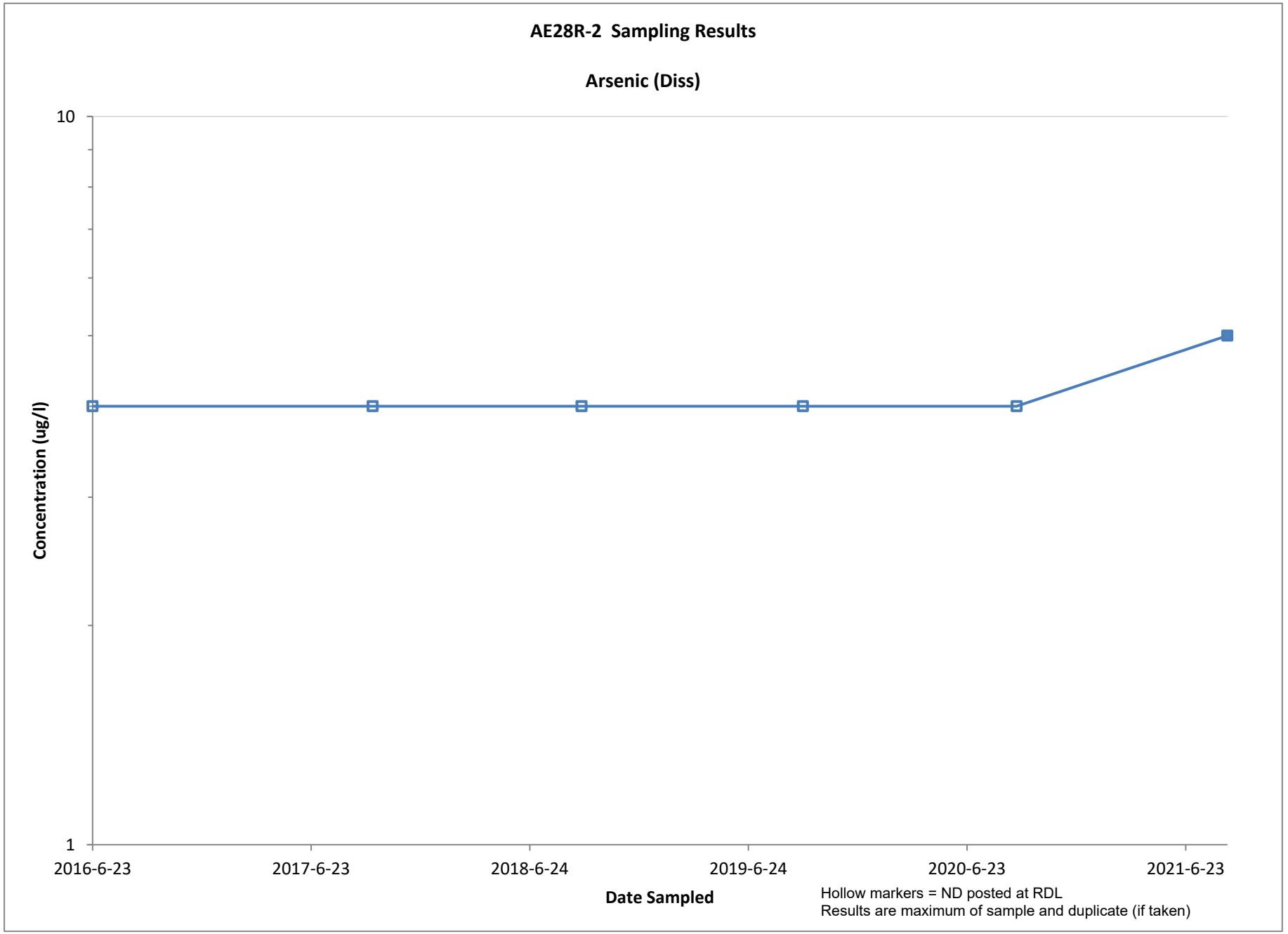

AE112D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2017-10-17
2018-10-17
2019-10-17
2020-10-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

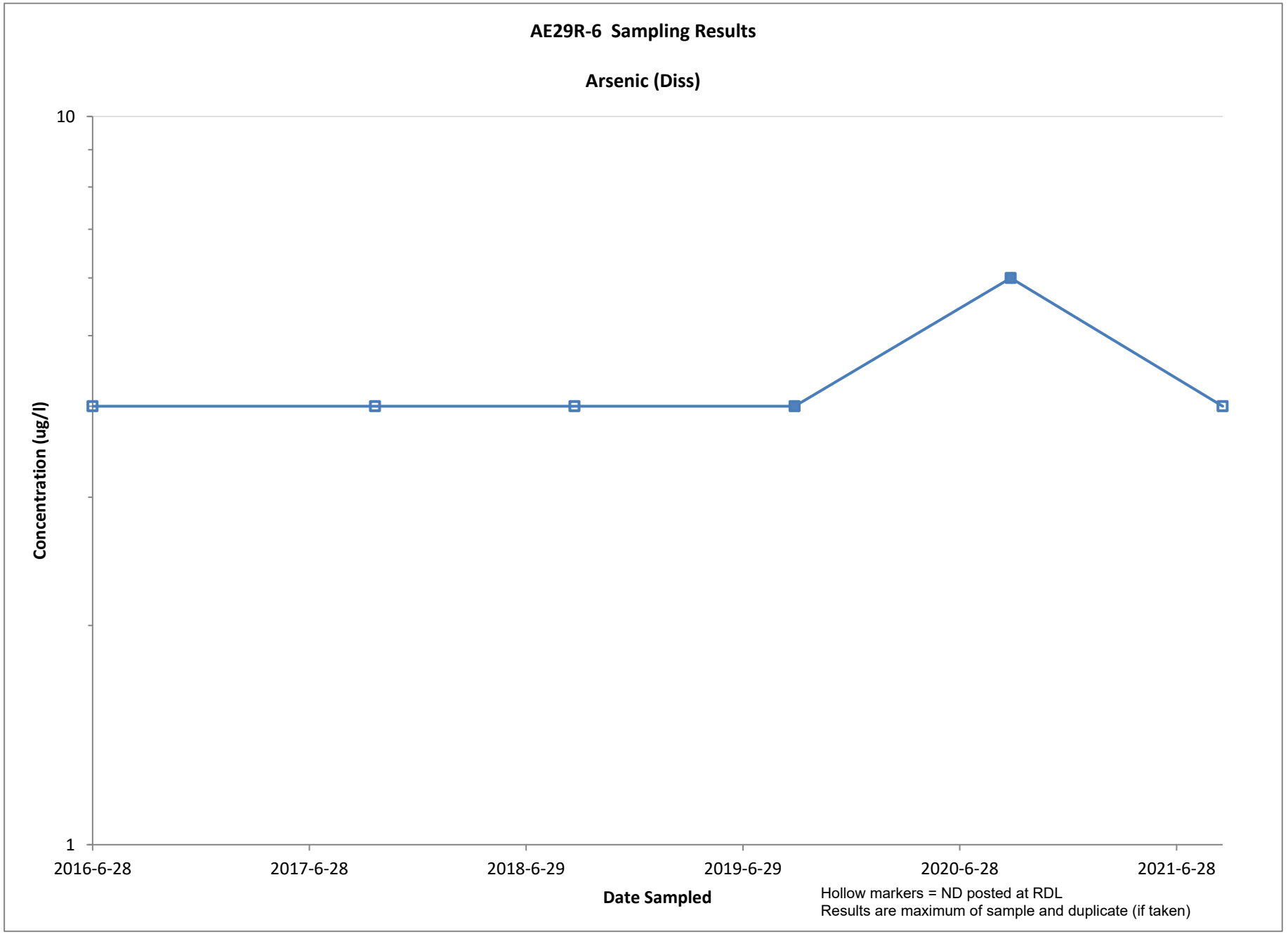

AE112R-1 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2018-9-26
2019-9-26
2020-9-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

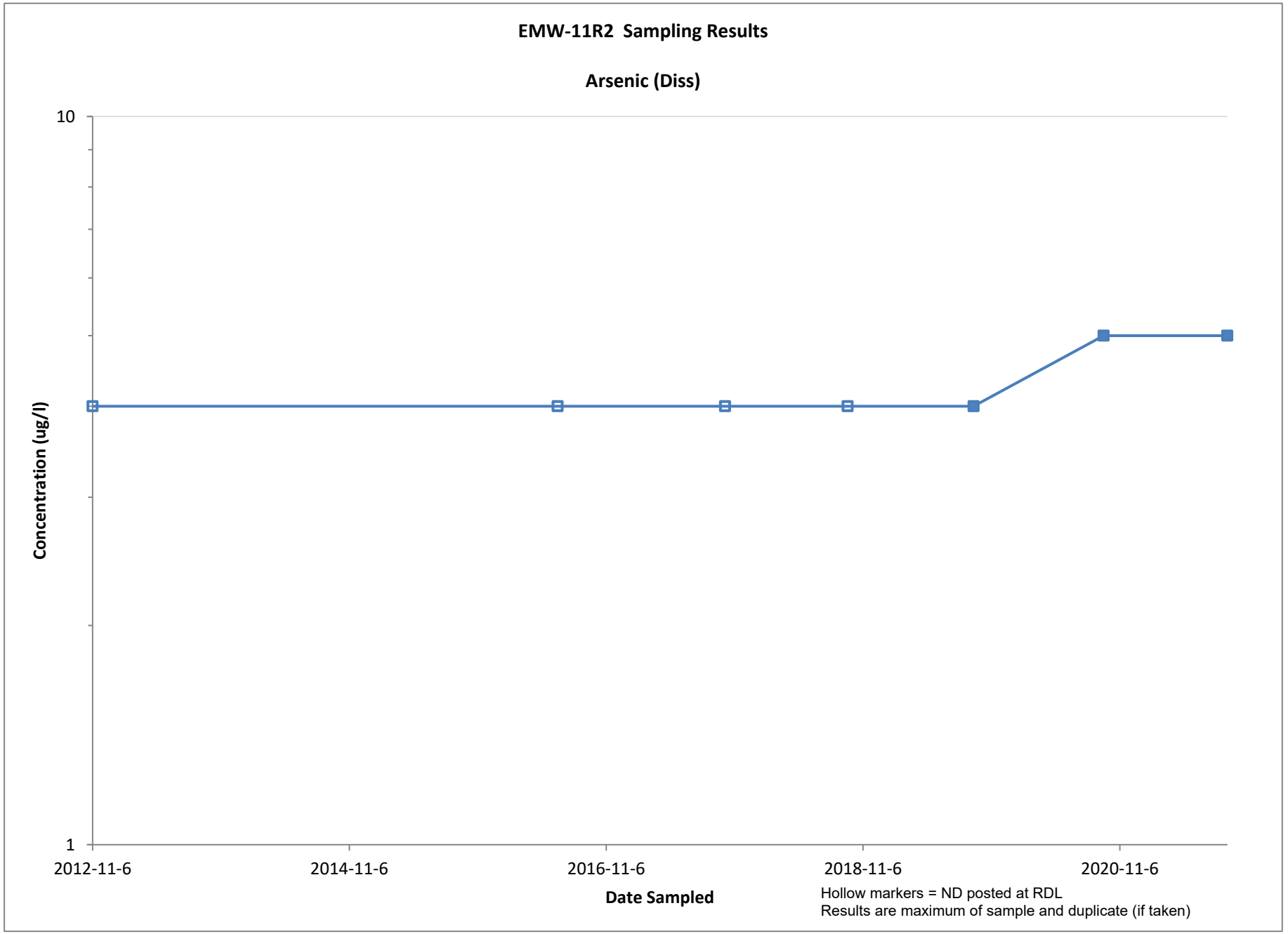

AE112R-6 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-21
2017-6-21
2018-6-22
2019-6-22
2020-6-21
2021-6-21
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

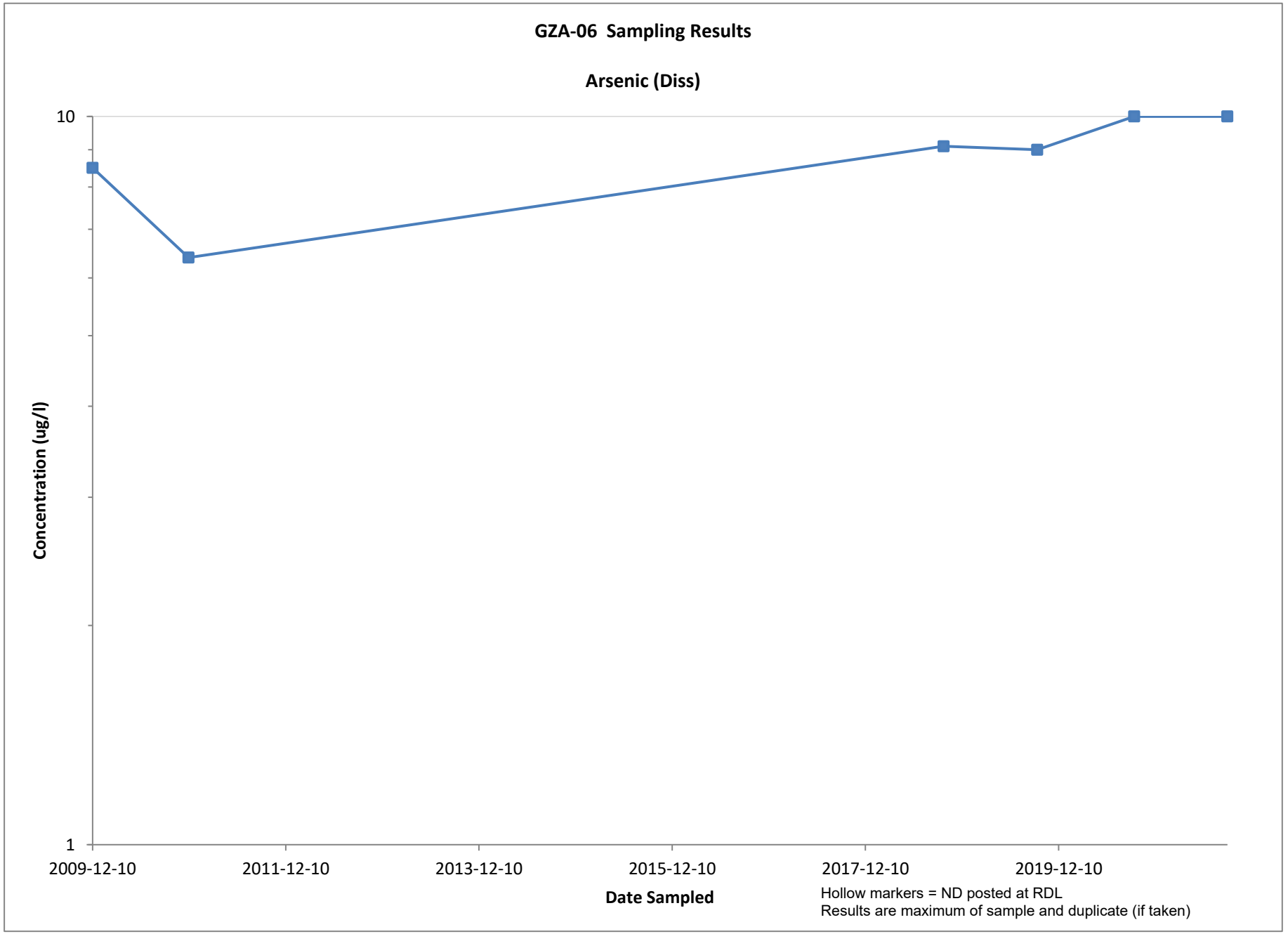

AE26R-1 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-23
2017-6-23
2018-6-23
2019-6-24
2020-6-23
2021-6-23
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

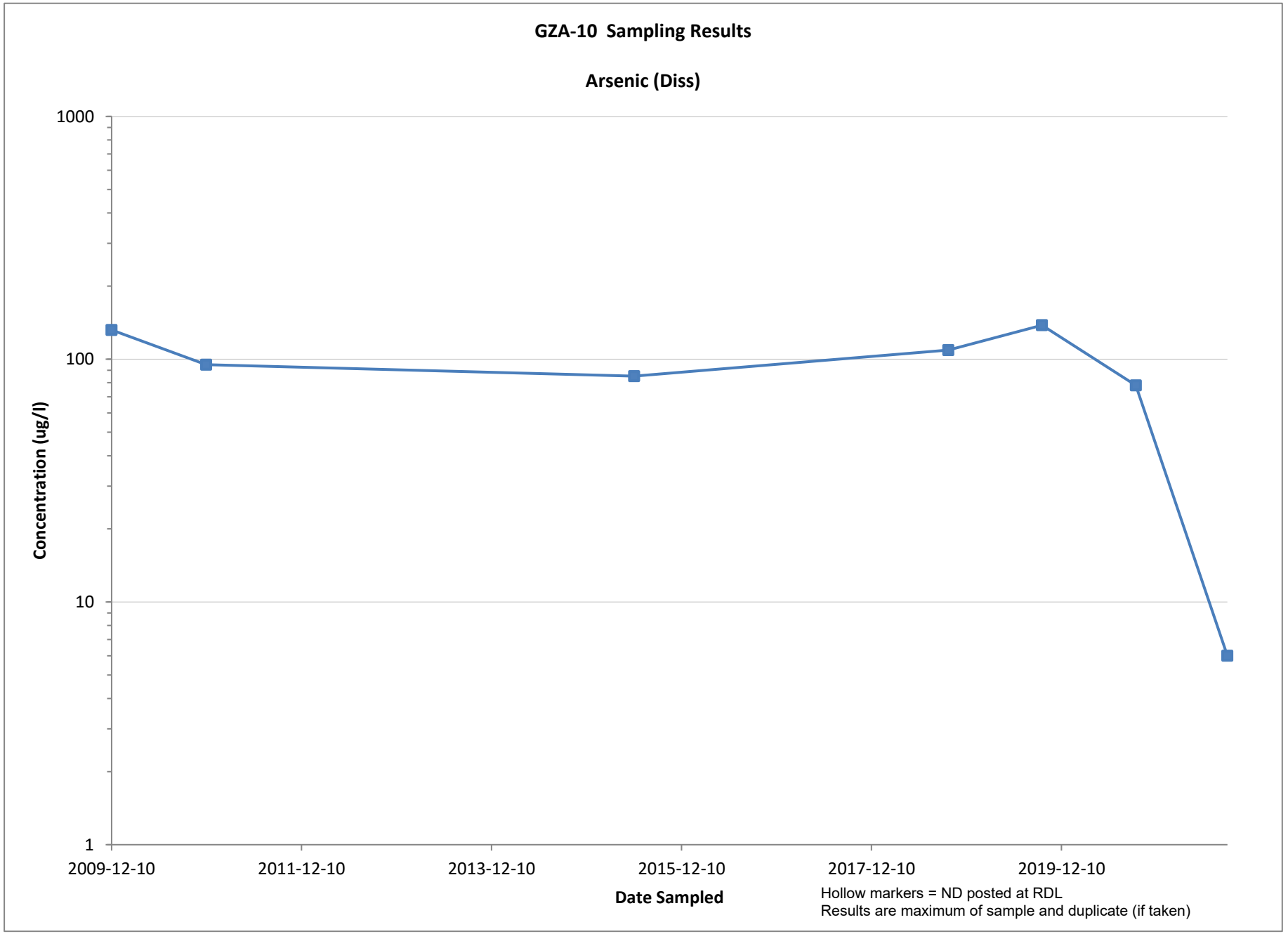

AE26S Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2018-9-25
2019-9-25
2020-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

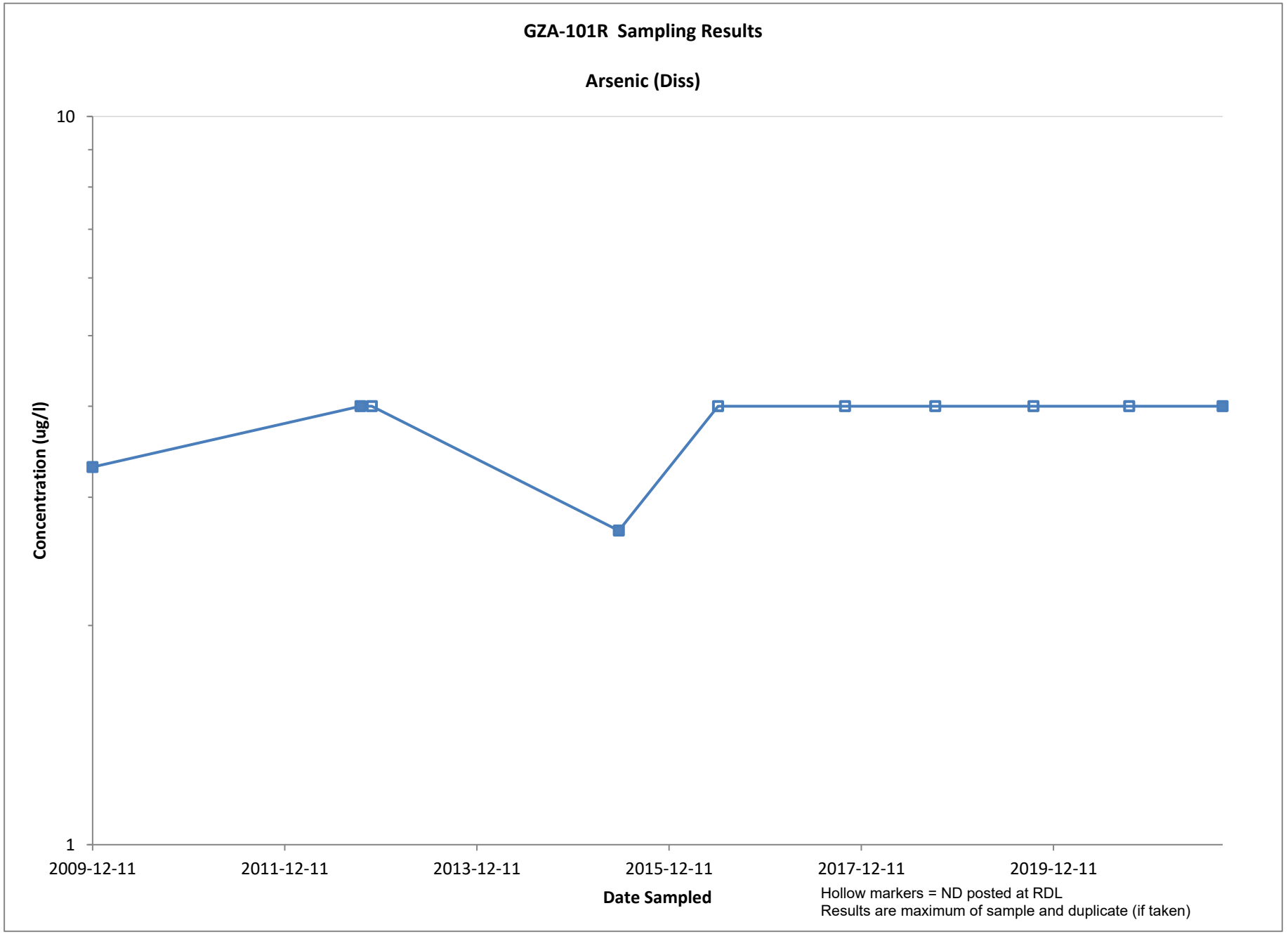

AE28R-2 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-23
2017-6-23
2018-6-24
2019-6-24
2020-6-23
2021-6-23
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

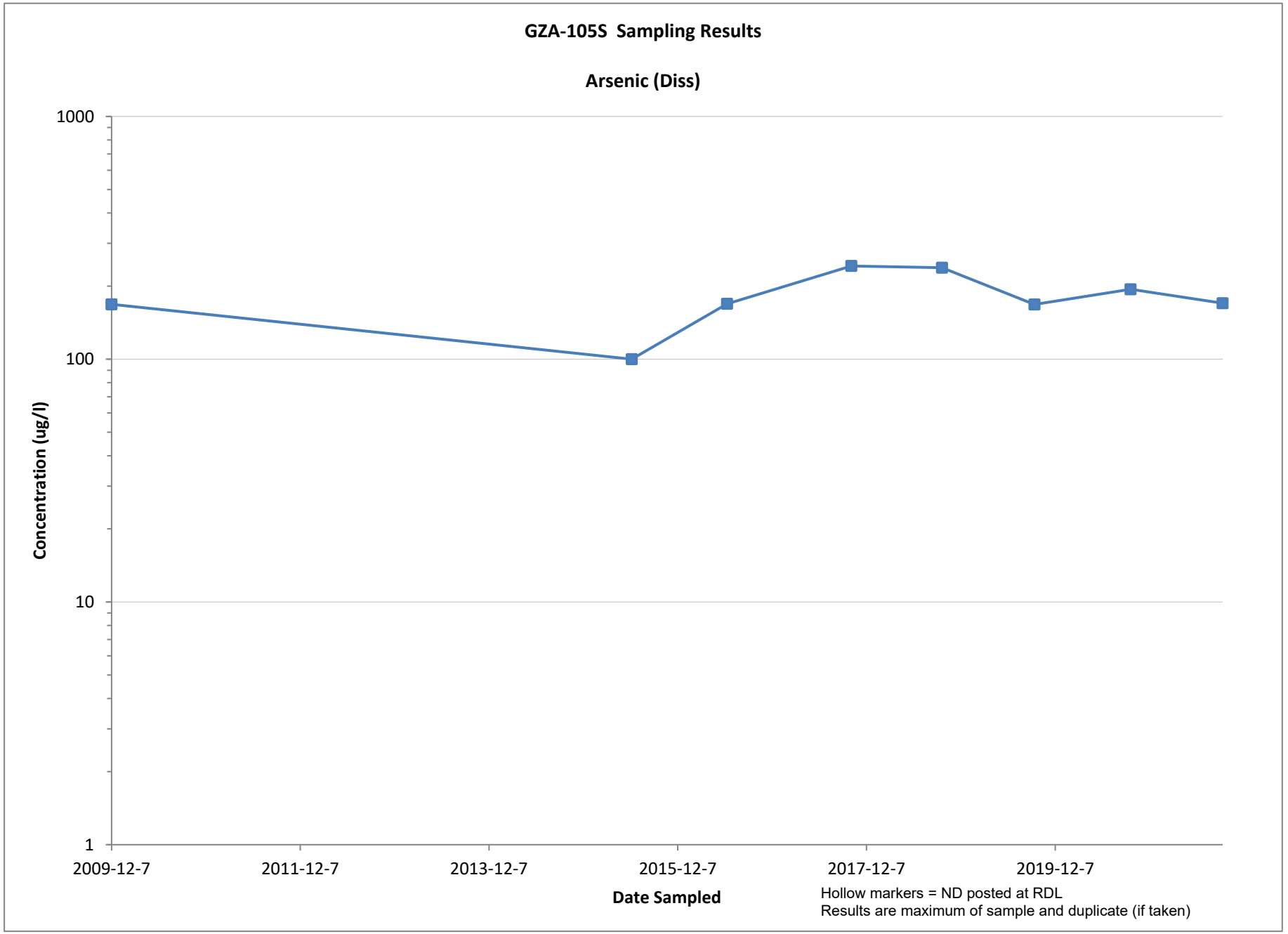

AE29R-6 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-28
2017-6-28
2018-6-29
2019-6-29
2020-6-28
2021-6-28
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

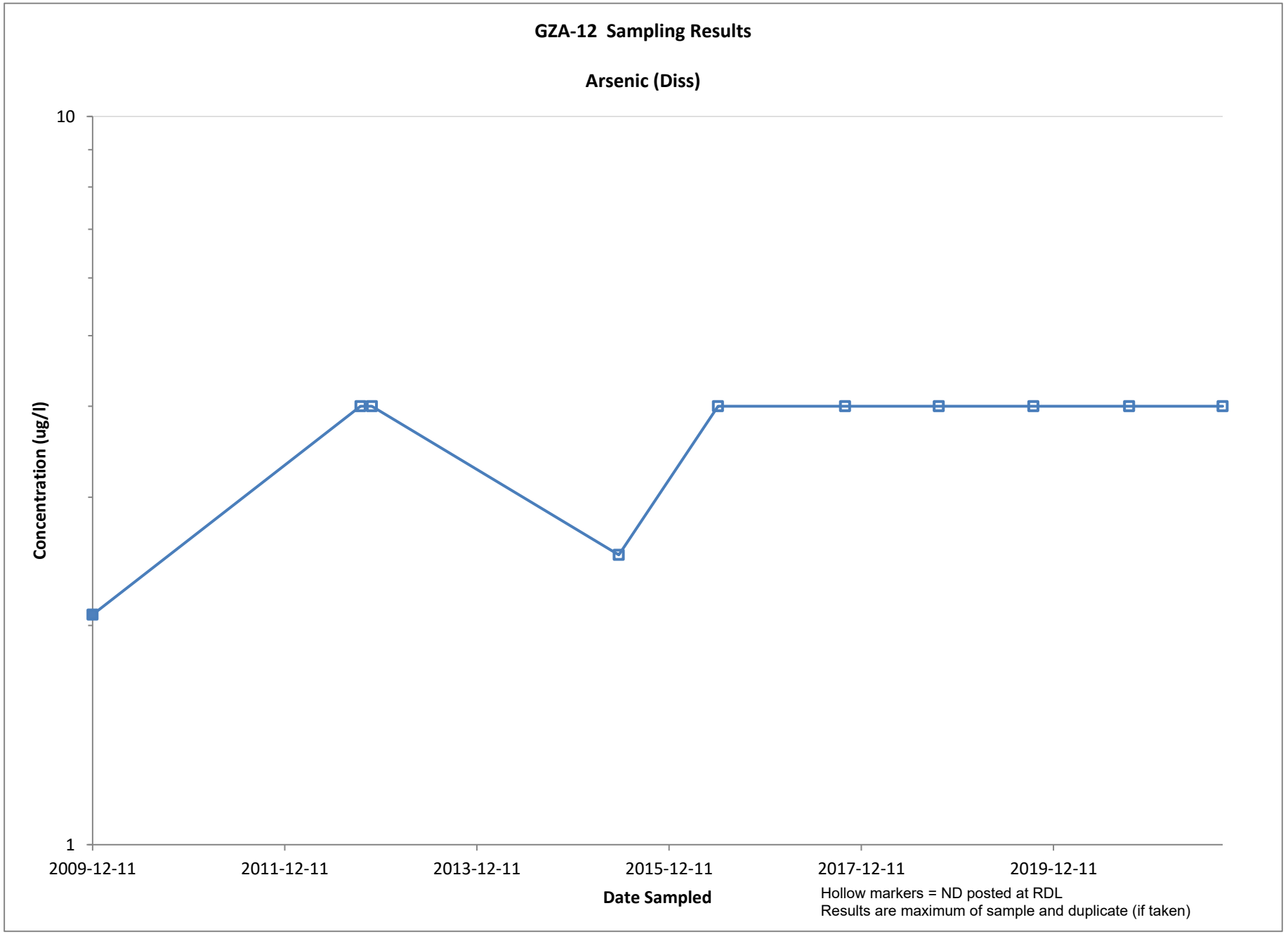

EMW-11R2 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2012-11-6
2014-11-6
2016-11-6
2018-11-6
2020-11-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

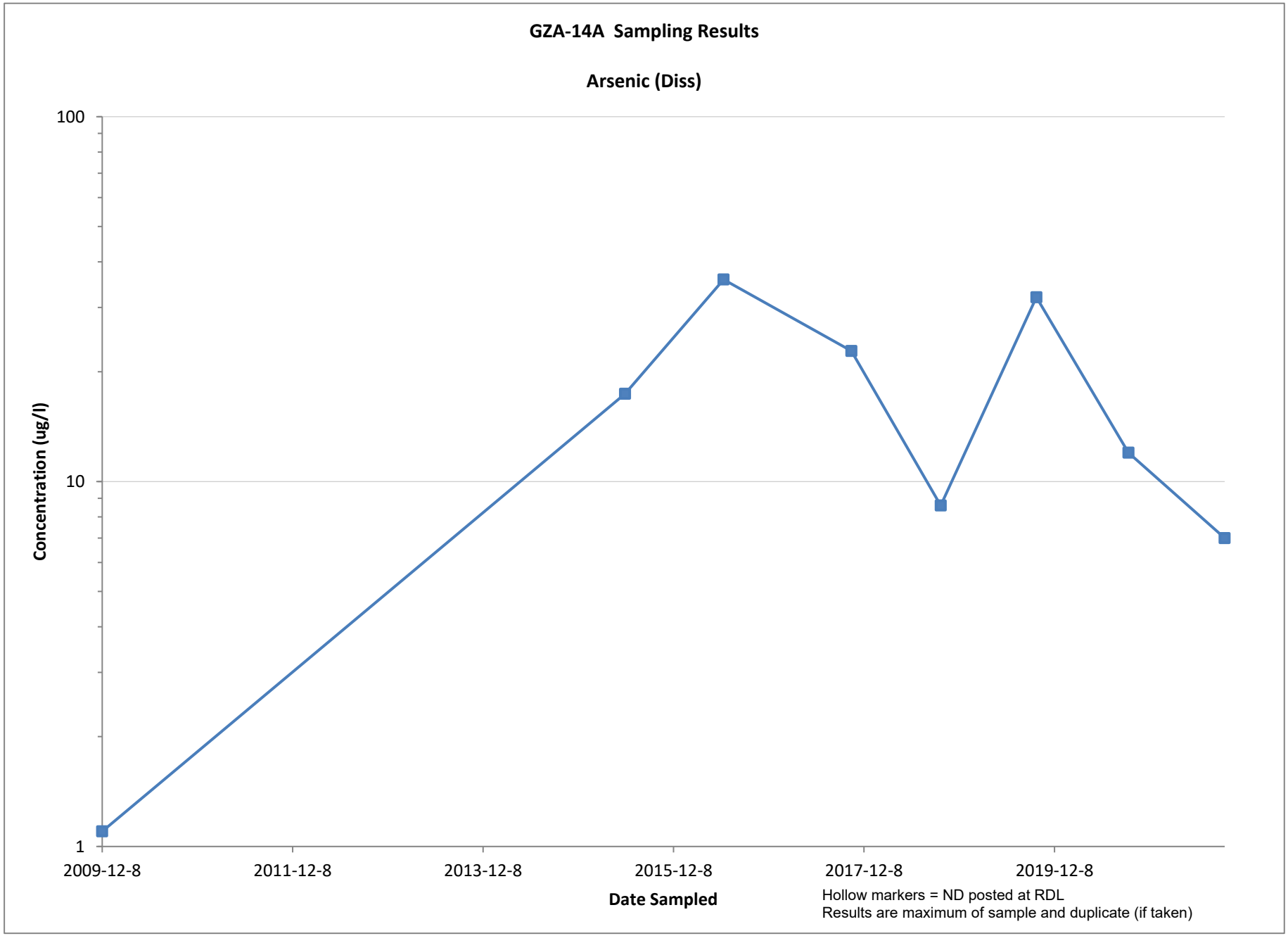

GZA-06 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2009-12-10
2011-12-10
2013-12-10
2015-12-10
2017-12-10
2019-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

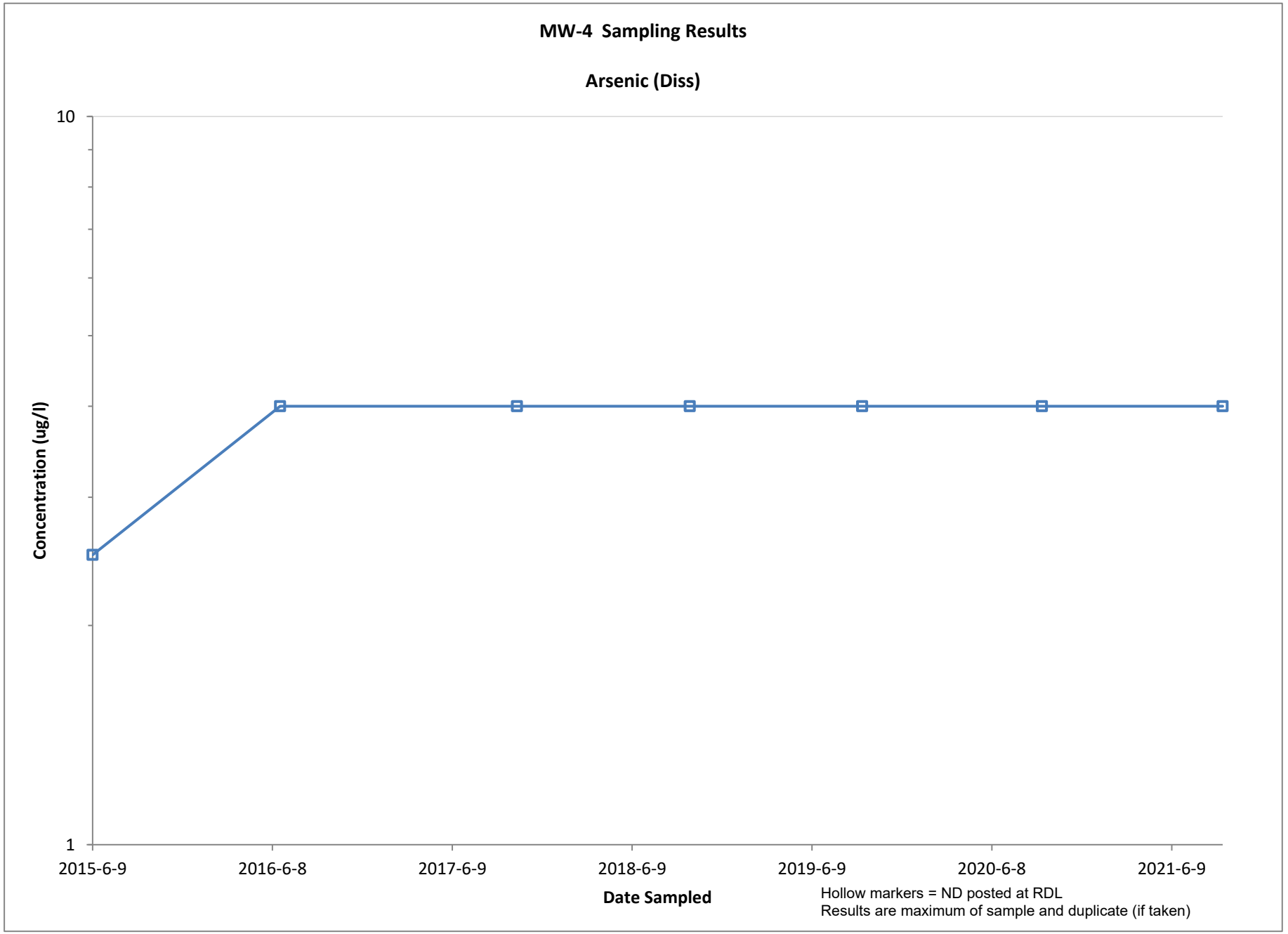

GZA-10 Sampling Results
Arsenic (Diss)
1000
100
10
1
Concentration (ug/l)
2009-12-10
2011-12-10
2013-12-10
2015-12-10
2017-12-10
2019-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

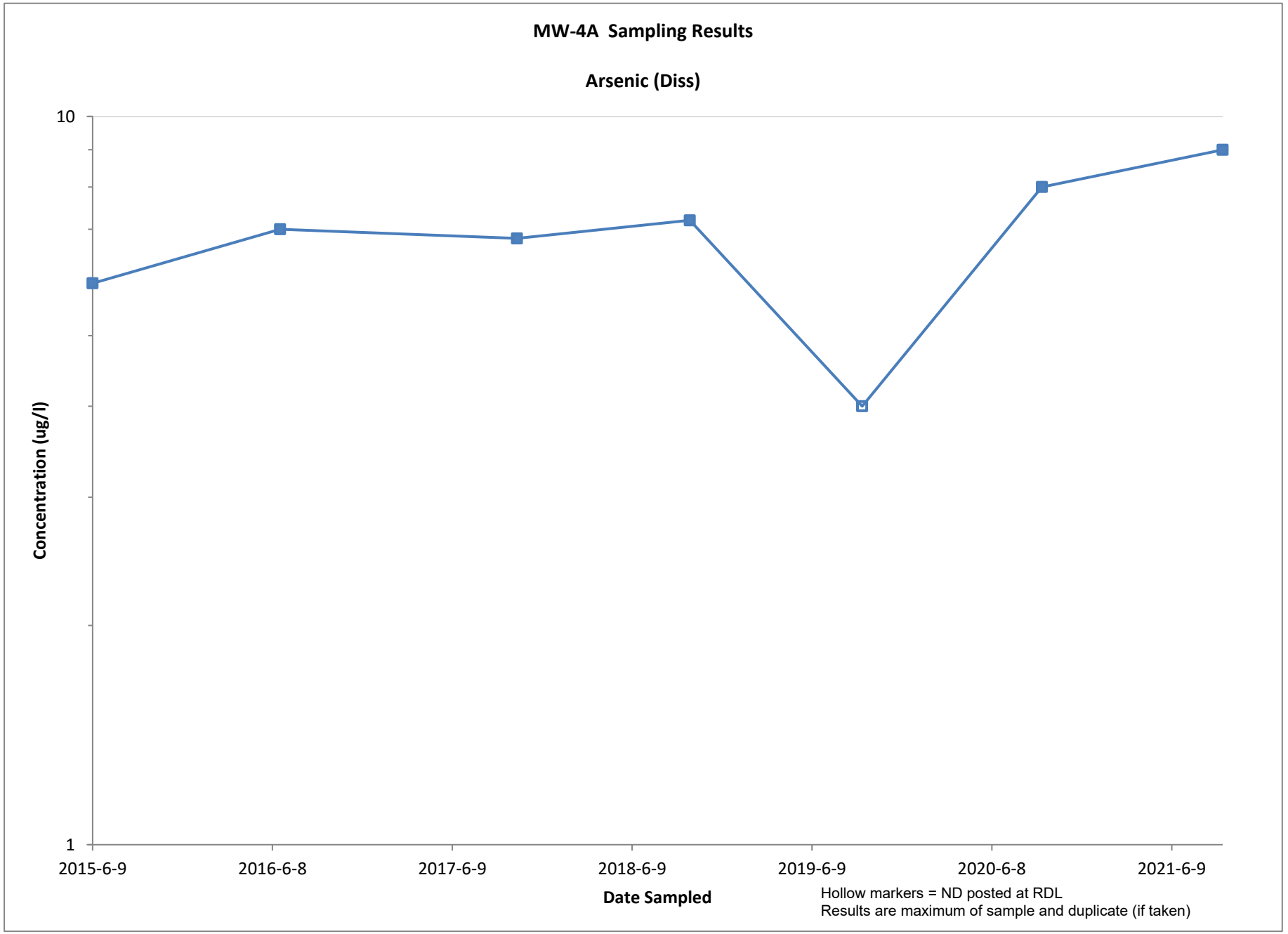

GZA-101R Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2009-12-11
2011-12-11
2013-12-11
2015-12-11
2017-12-11
2019-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

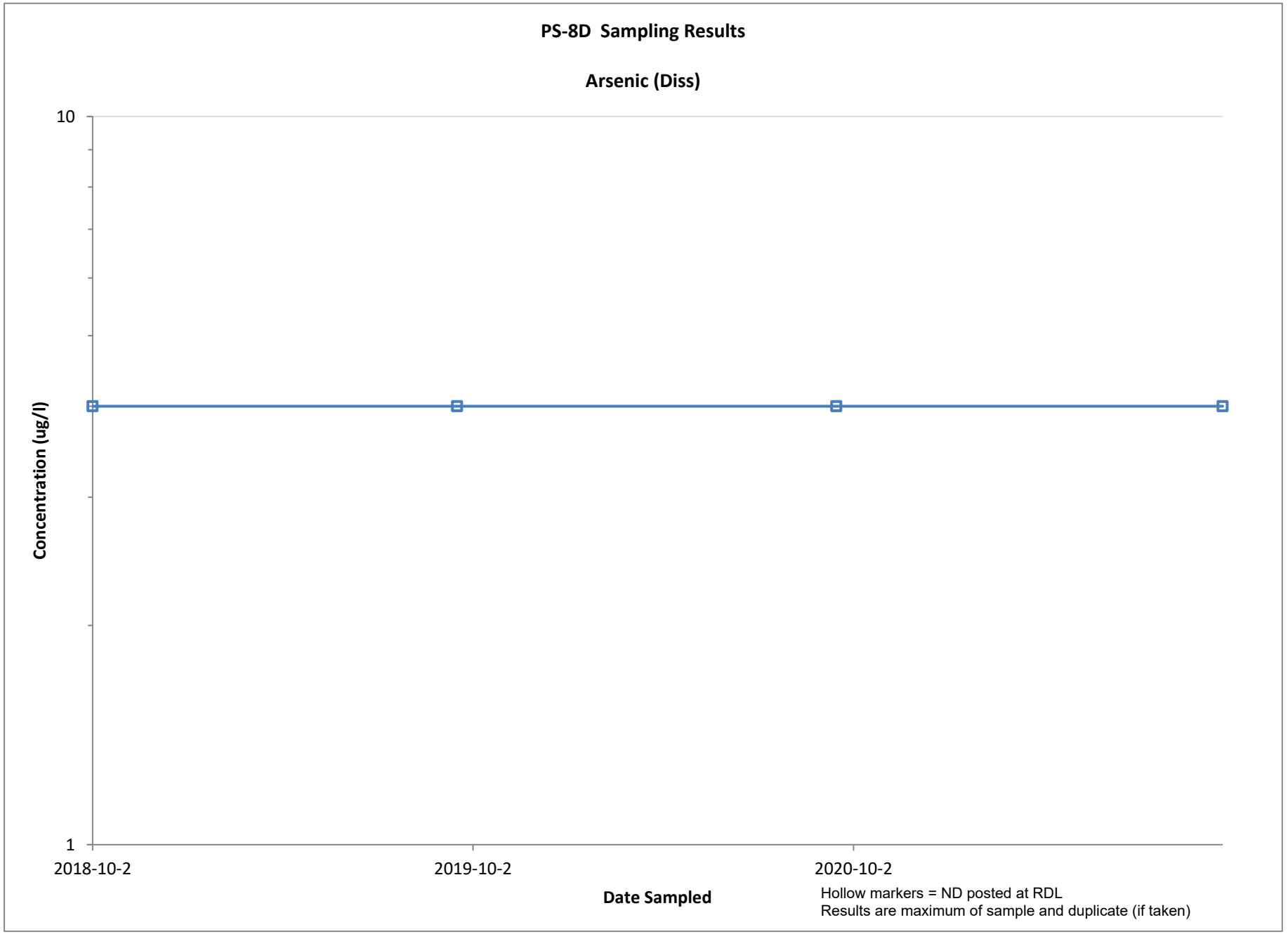

GZA-105S Sampling Results
Arsenic (Diss)
1000
100
10
1
Concentration (ug/l)
2009-12-7
2011-12-7
2013-12-7
2015-12-7
2017-12-7
2019-12-7
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

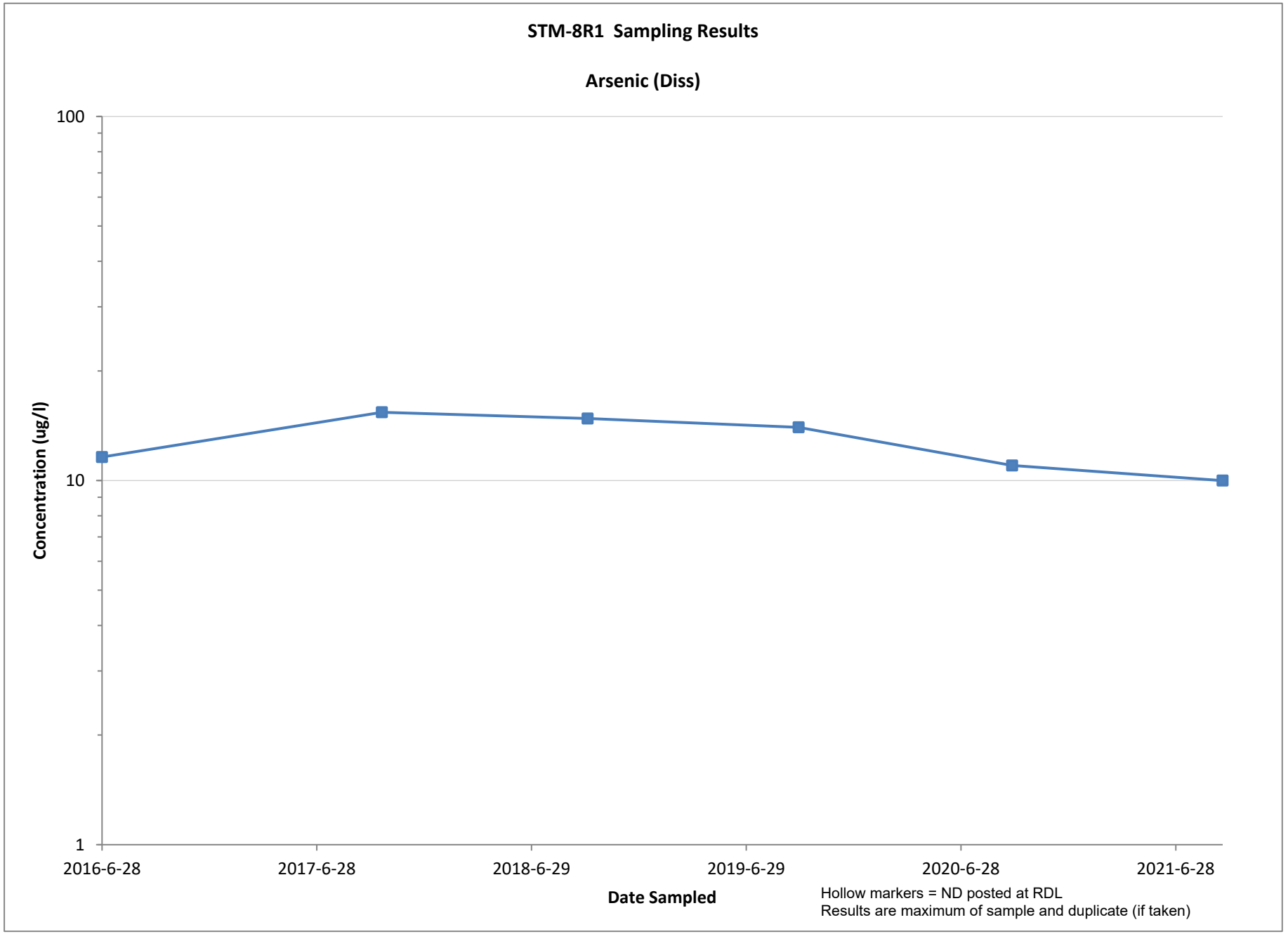

GZA-12 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2009-12-11
2011-12-11
2013-12-11
2015-12-11
2017-12-11
2019-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

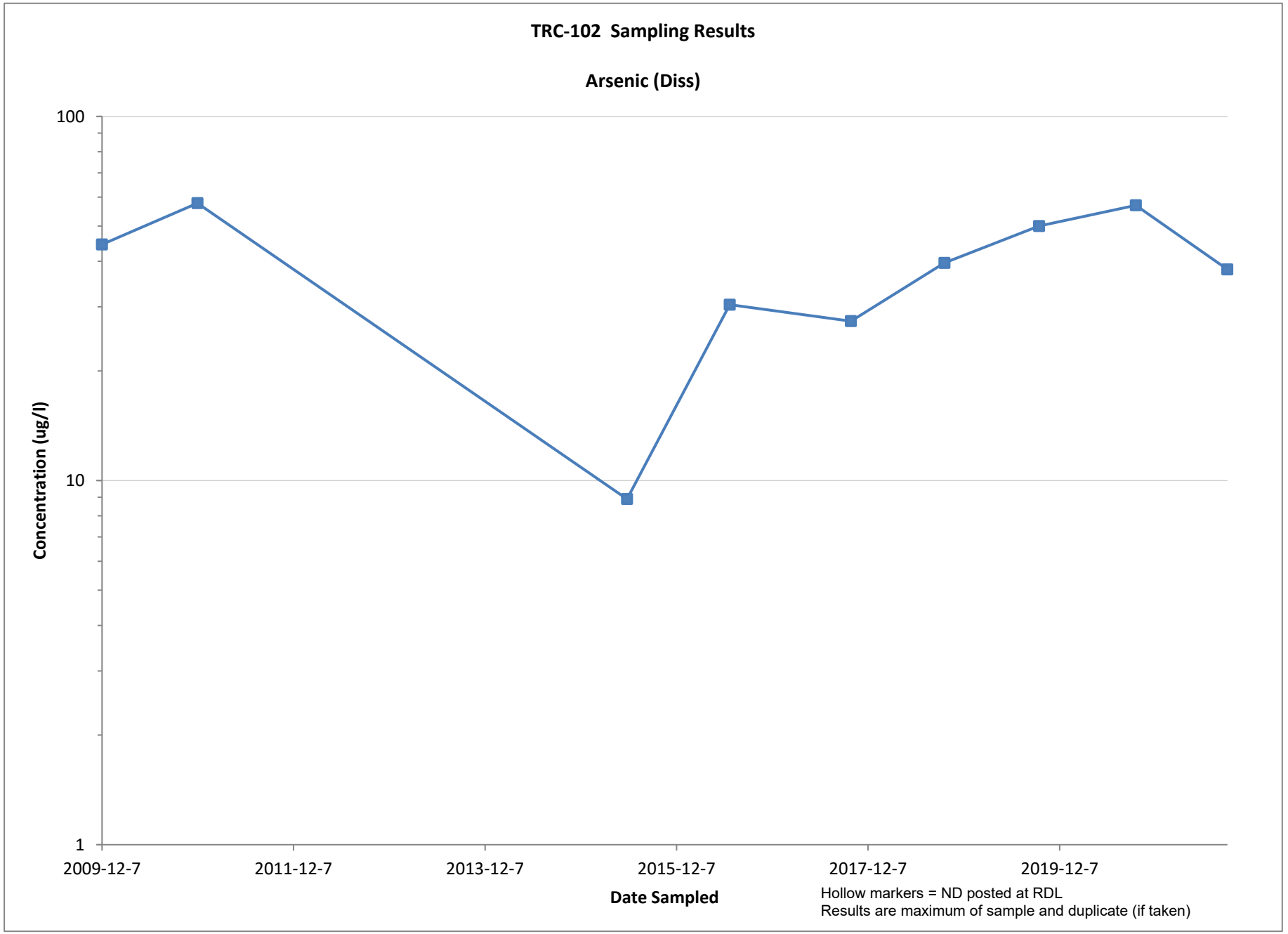

GZA-14A Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2009-12-8
2011-12-8
2013-12-8
2015-12-8
2017-12-8
2019-12-8
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

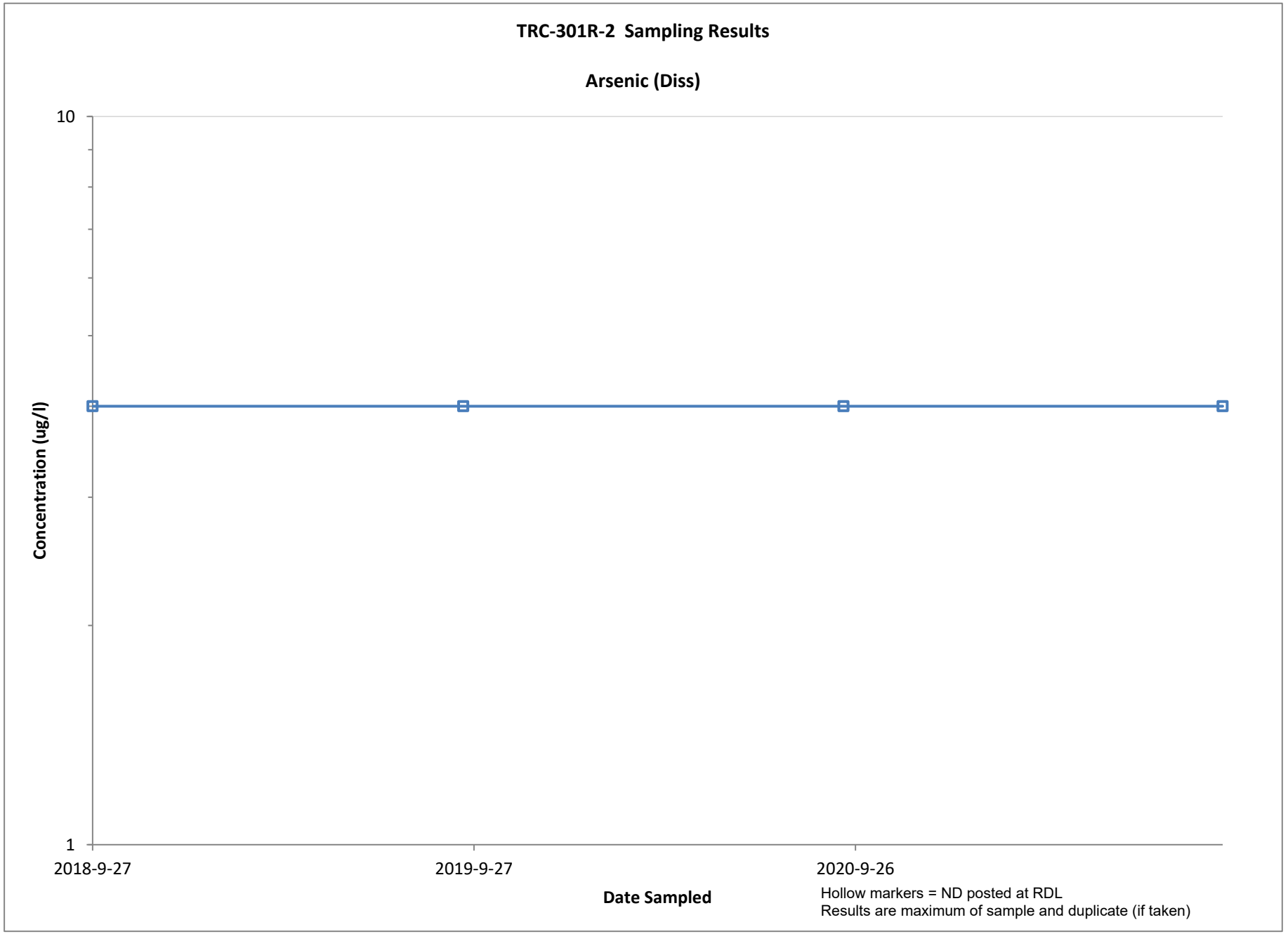

MW-4 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2015-6-9
2016-6-8
2017-6-9
2018-6-9
2019-6-9
2020-6-8
2021-6-9
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

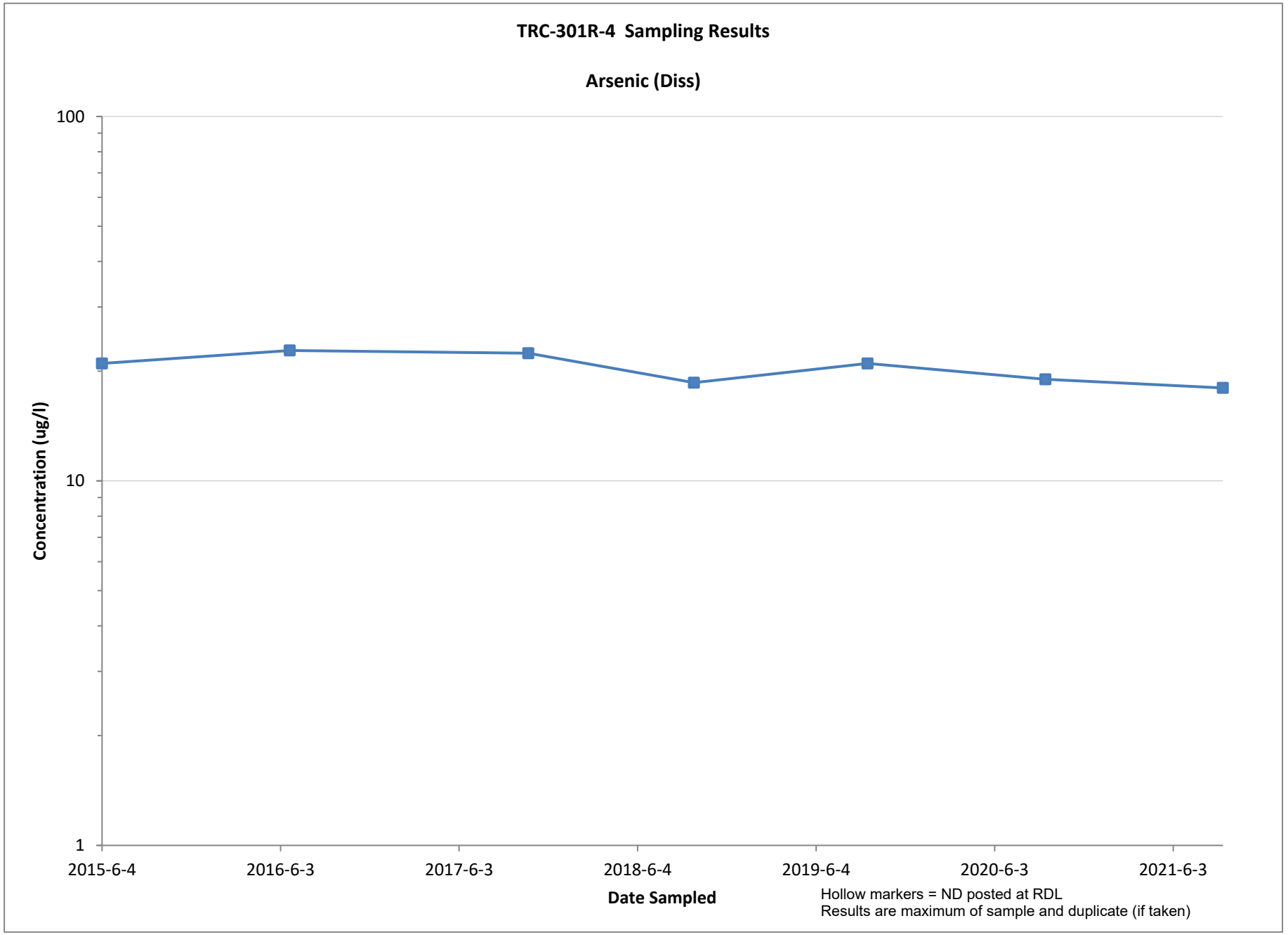

MW-4A Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2015-6-9
2016-6-8
2017-6-9
2018-6-9
2019-6-9
2020-6-8
2021-6-9
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

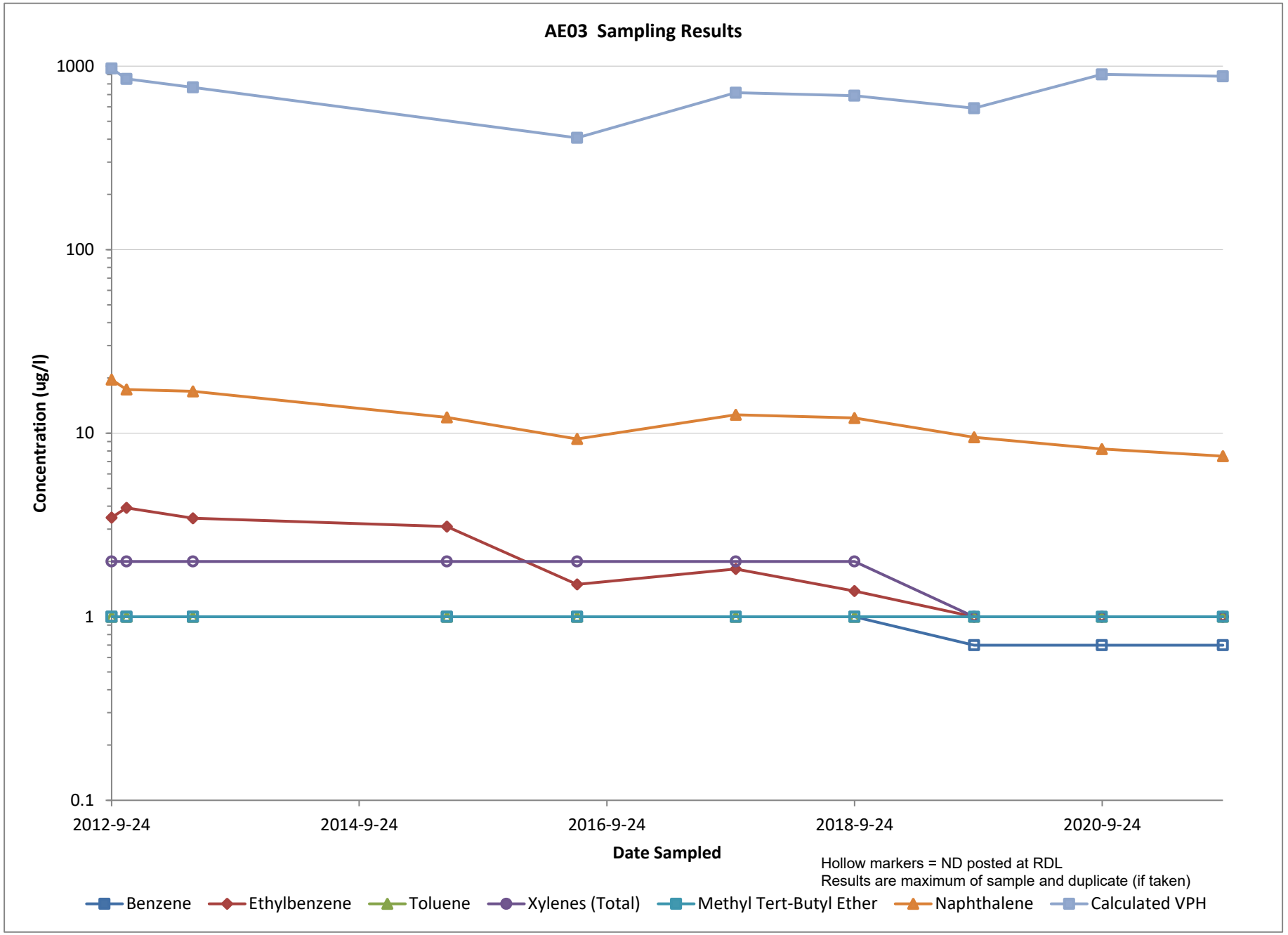

PS-8D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2018-10-2
2019-10-2
2020-10-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

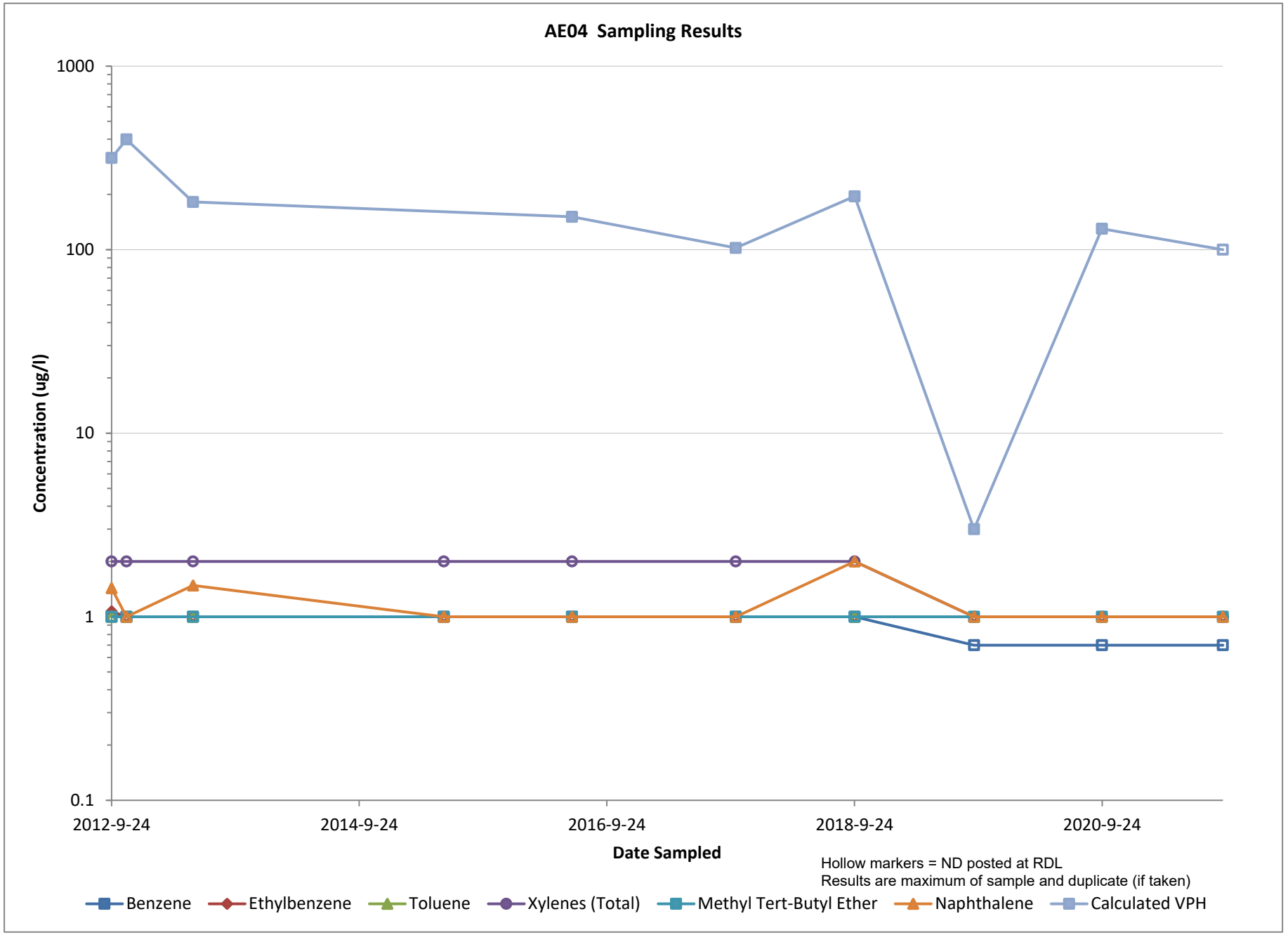

STM-8R1 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2016-6-28
2017-6-28
2018-6-29
2019-6-29
2020-6-28
2021-6-28
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

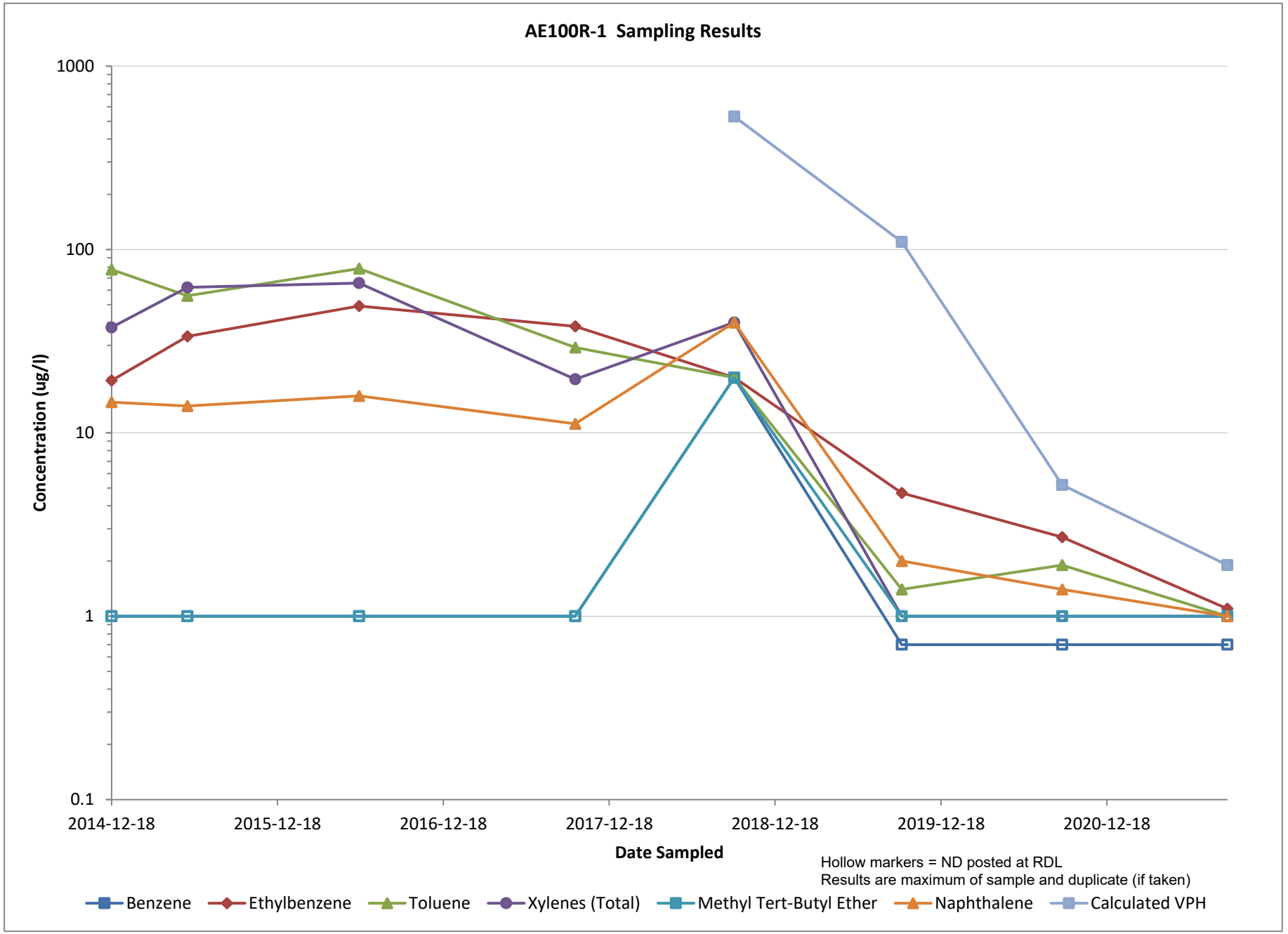

TRC-102 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2009-12-7
2011-12-7
2013-12-7
2015-12-7
2017-12-7
2019-12-7
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

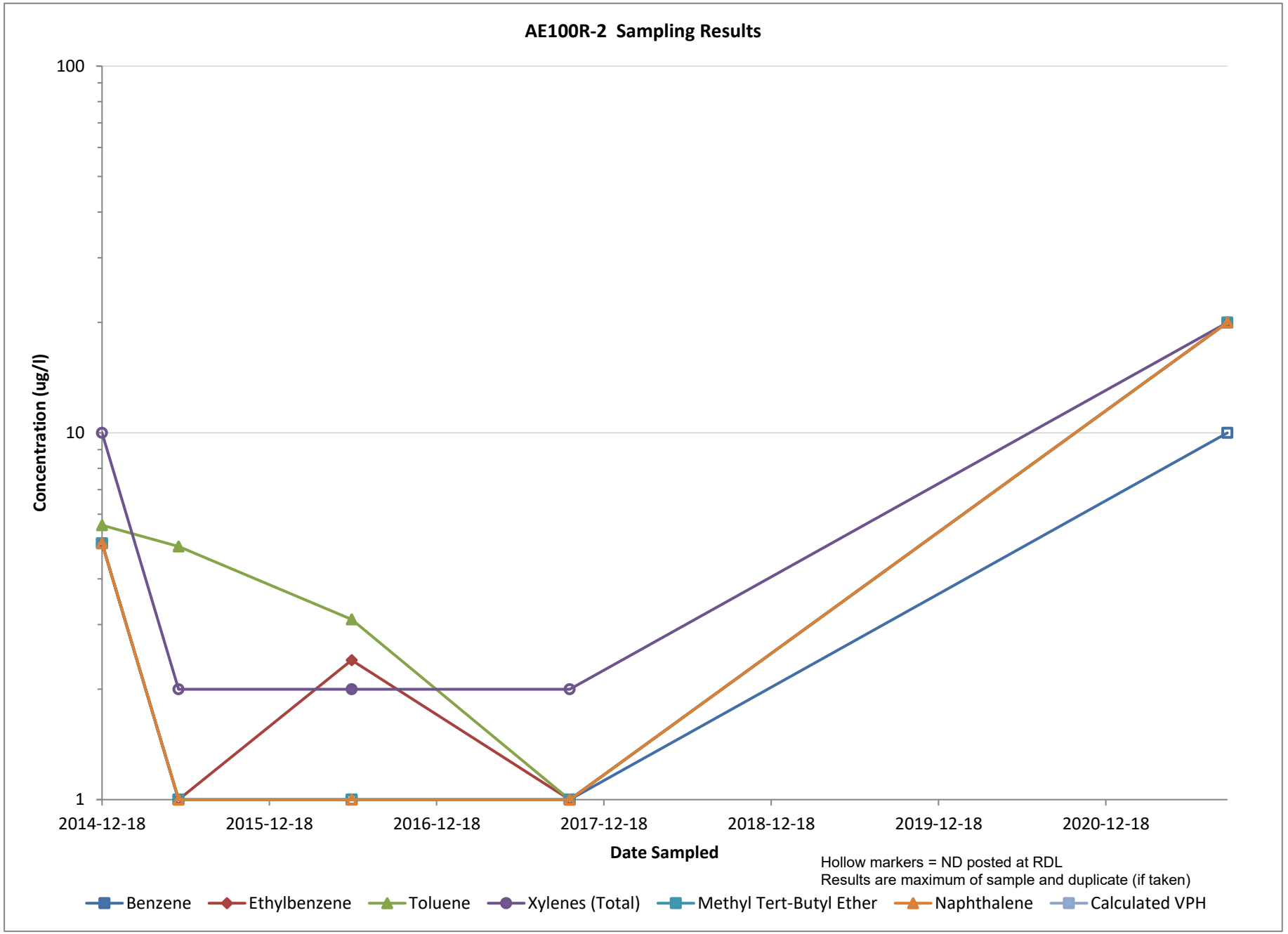

TRC-301R-2 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2018-9-27
2019-9-27
2020-9-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

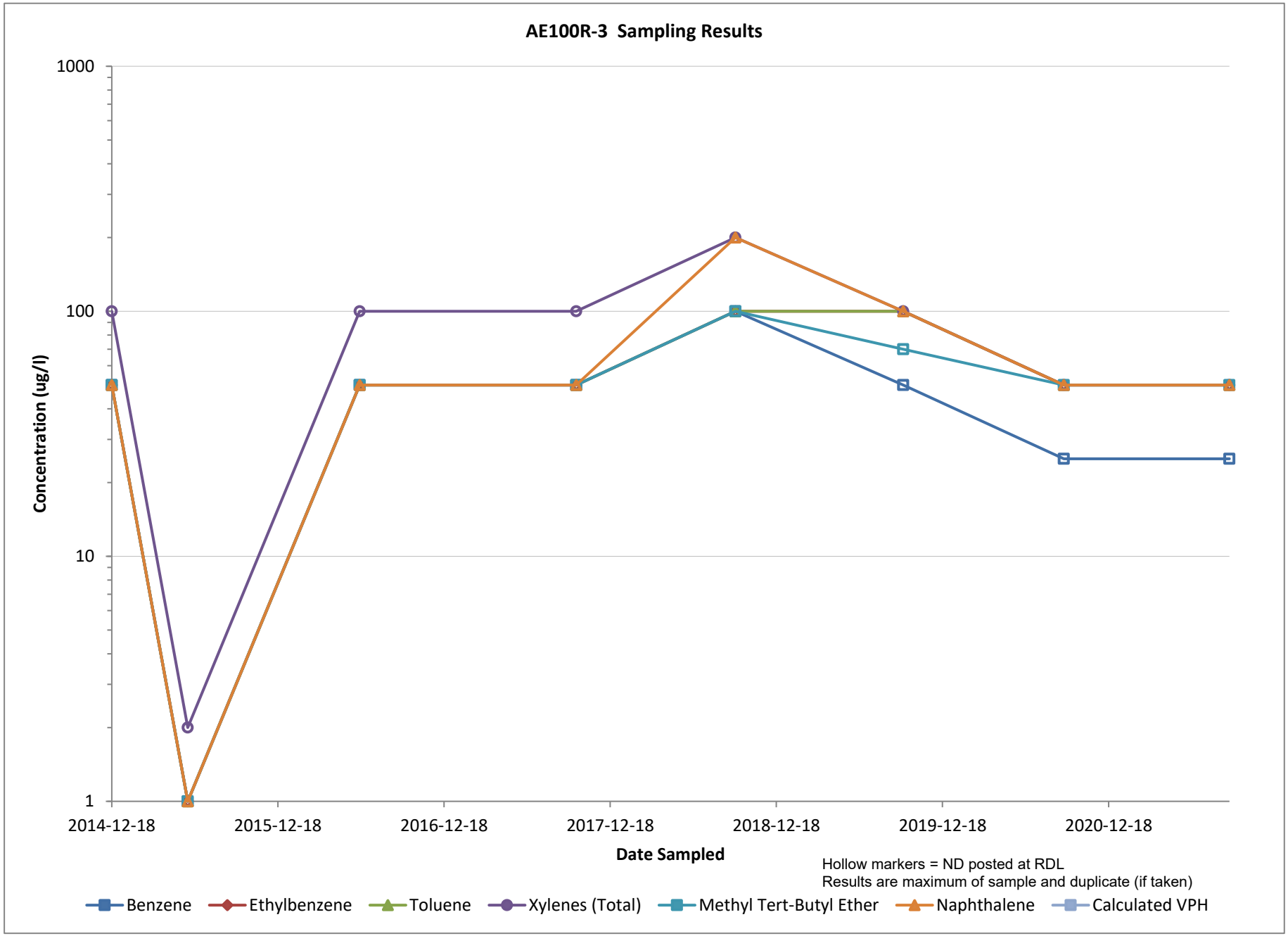

TRC-301R-4 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2015-6-4
2016-6-3
2017-6-3
2018-6-4
2019-6-4
2020-6-3
2021-6-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

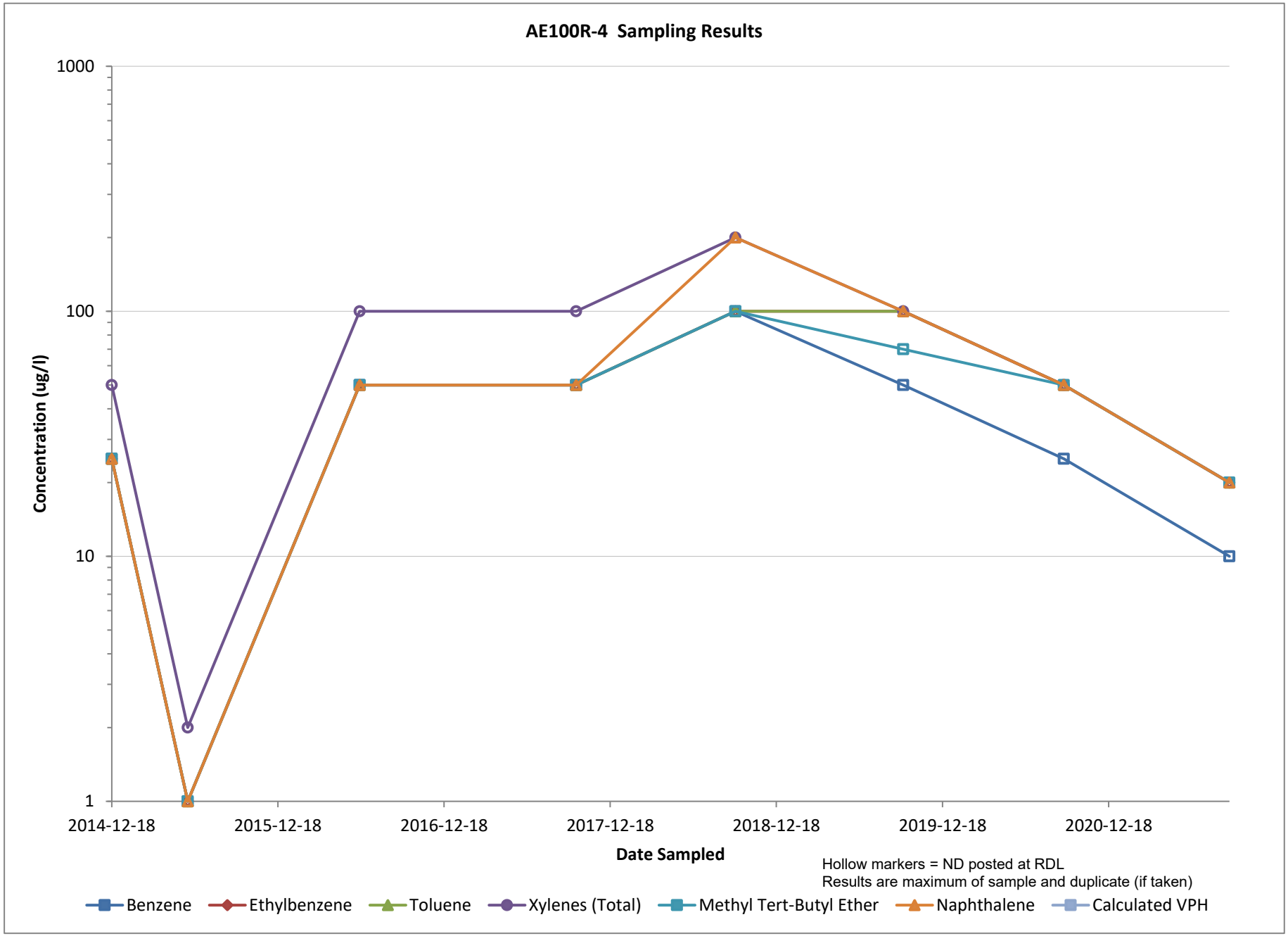

AE03 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2012-9-24
2014-9-24
2016-9-24
2018-9-24
2020-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

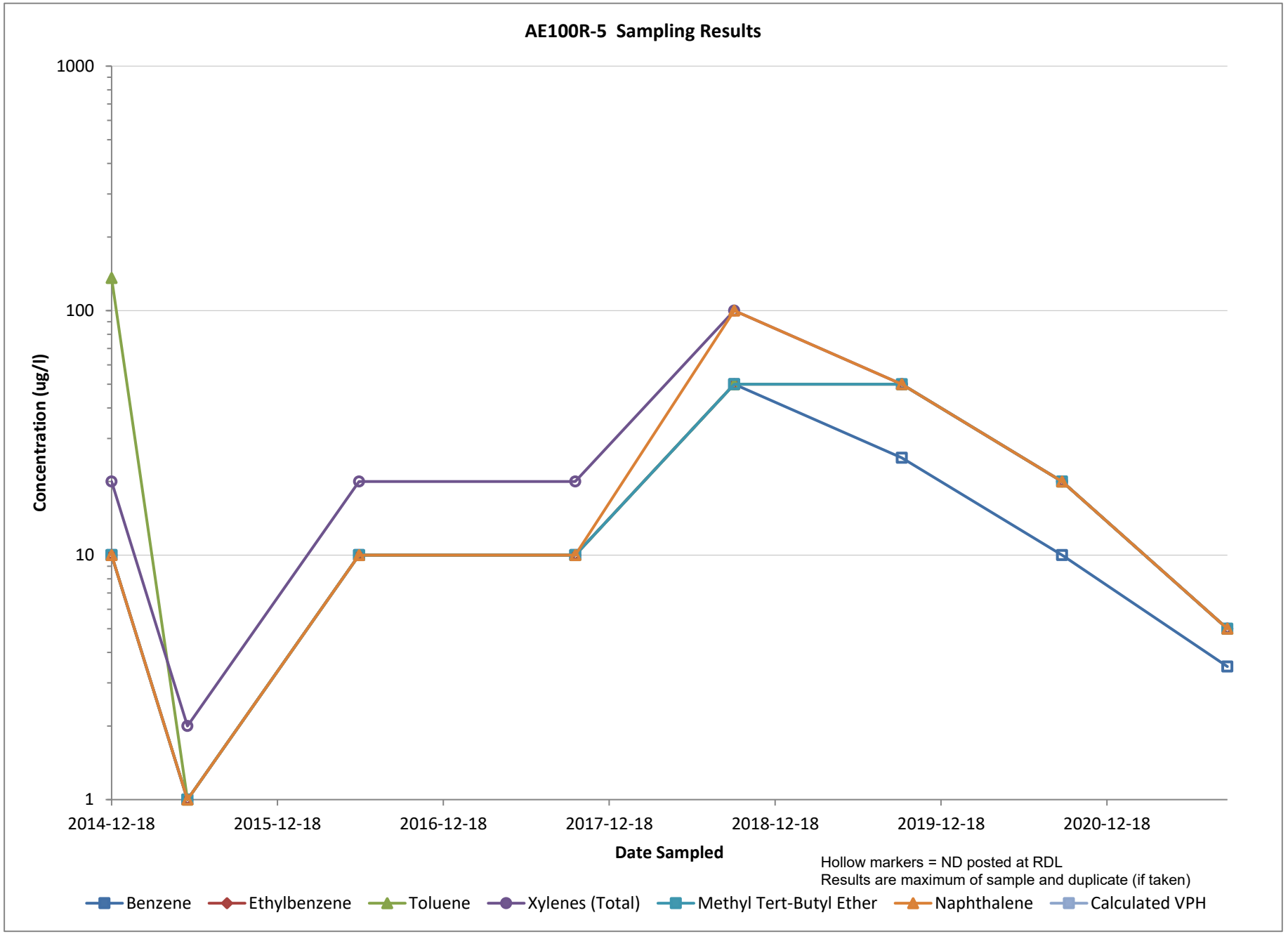

AE04 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2012-9-24
2014-9-24
2016-9-24
2018-9-24
2020-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

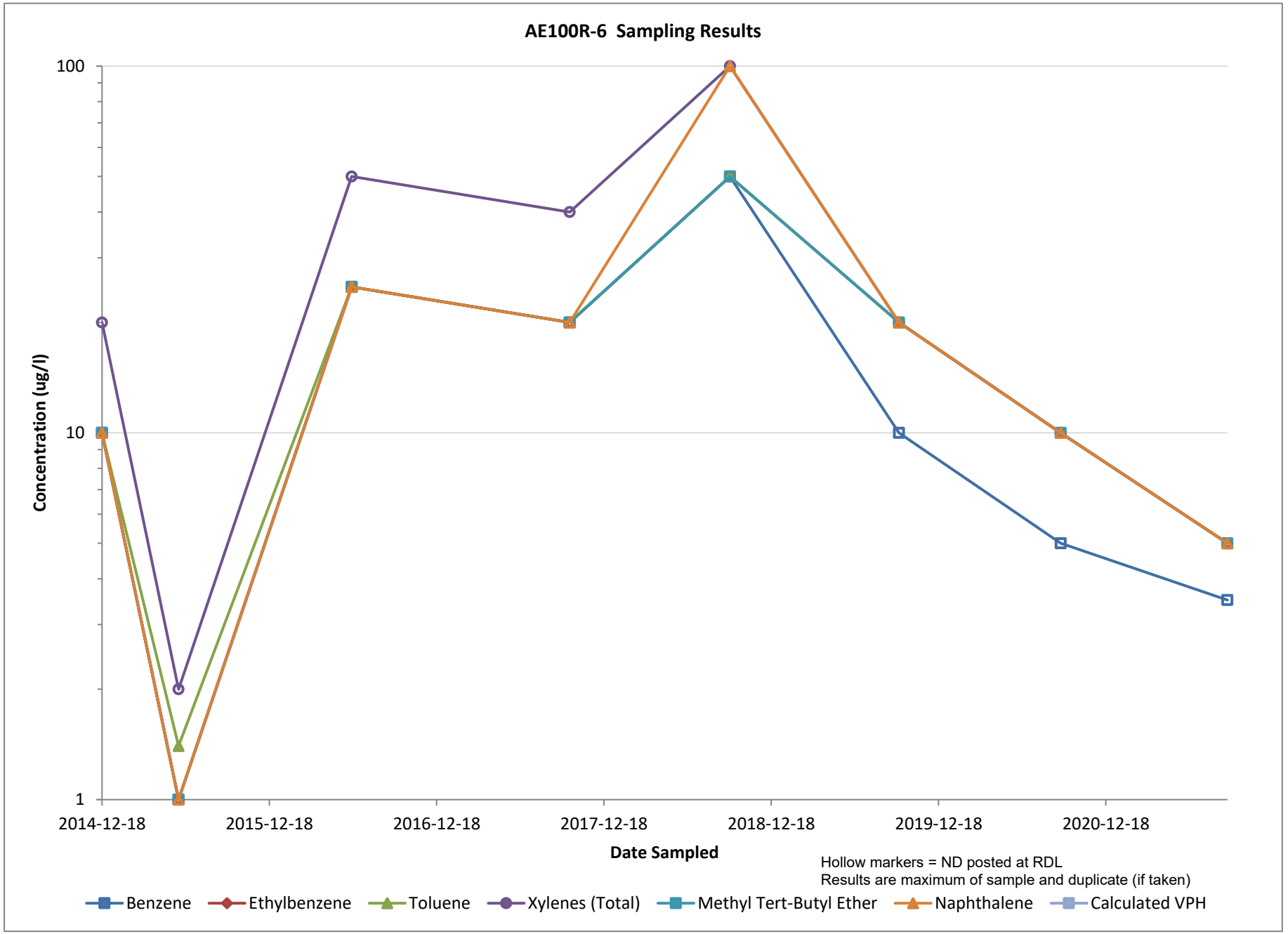

AE100R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

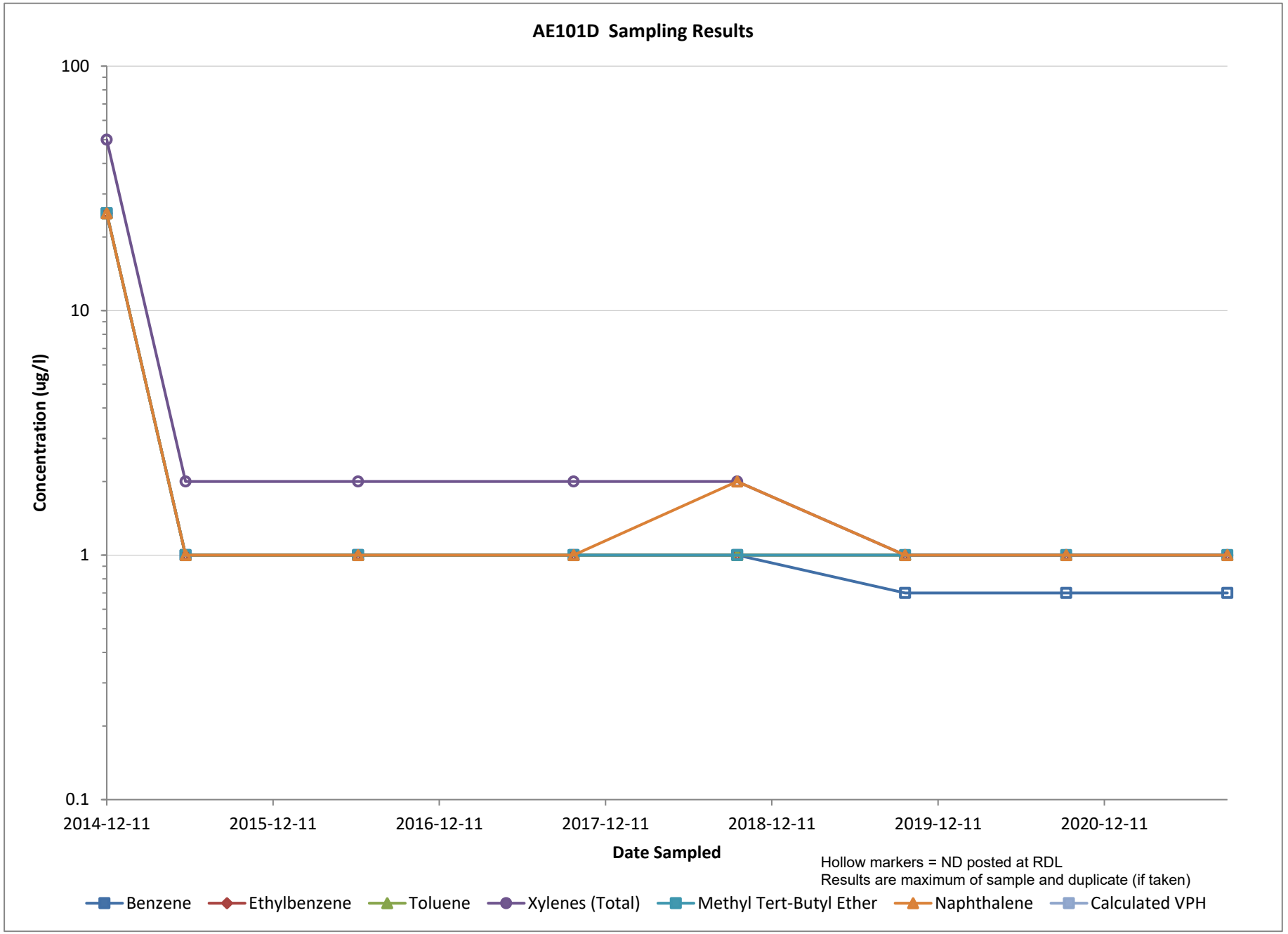

AE100R-2 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

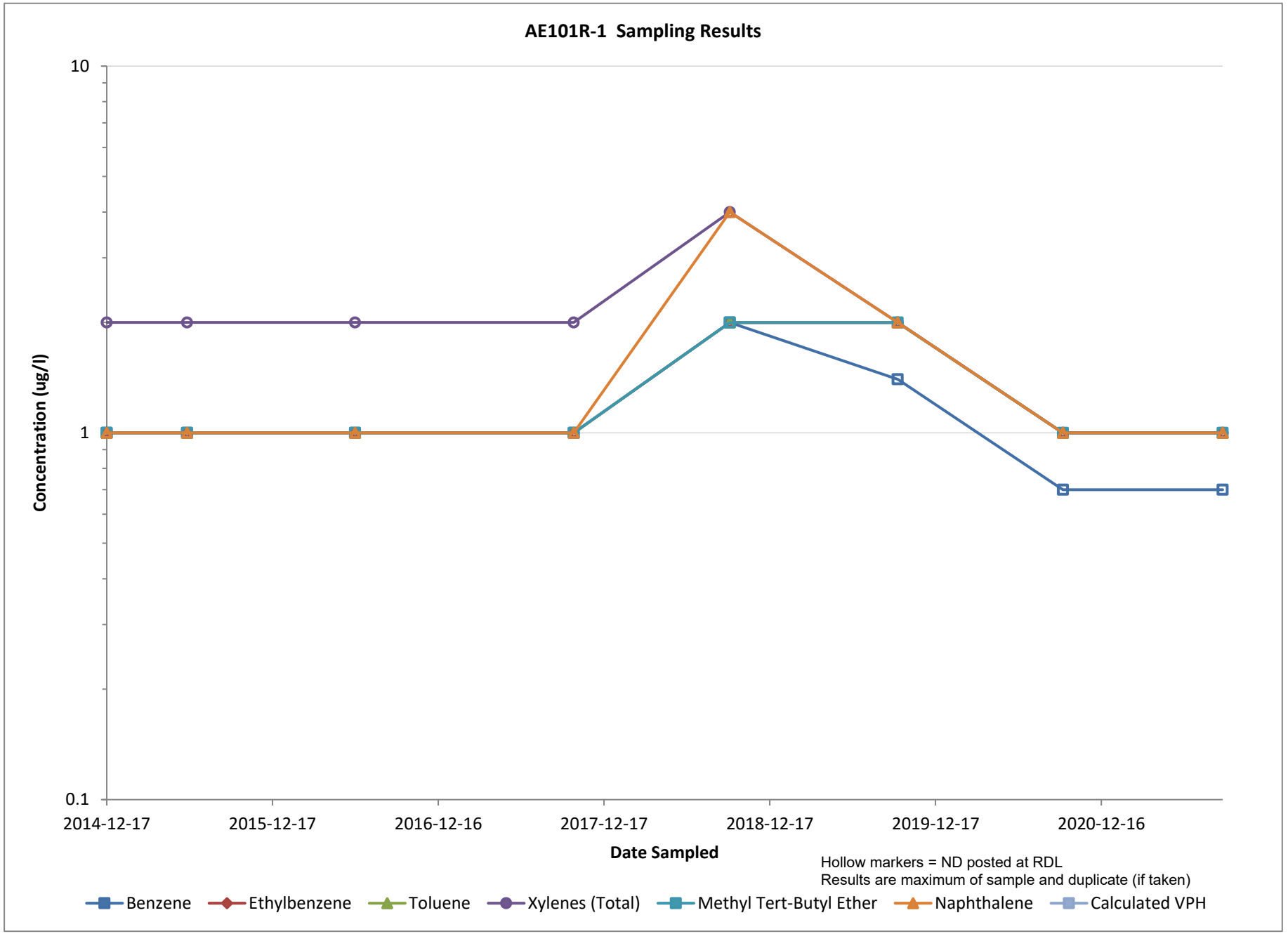

AE100R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

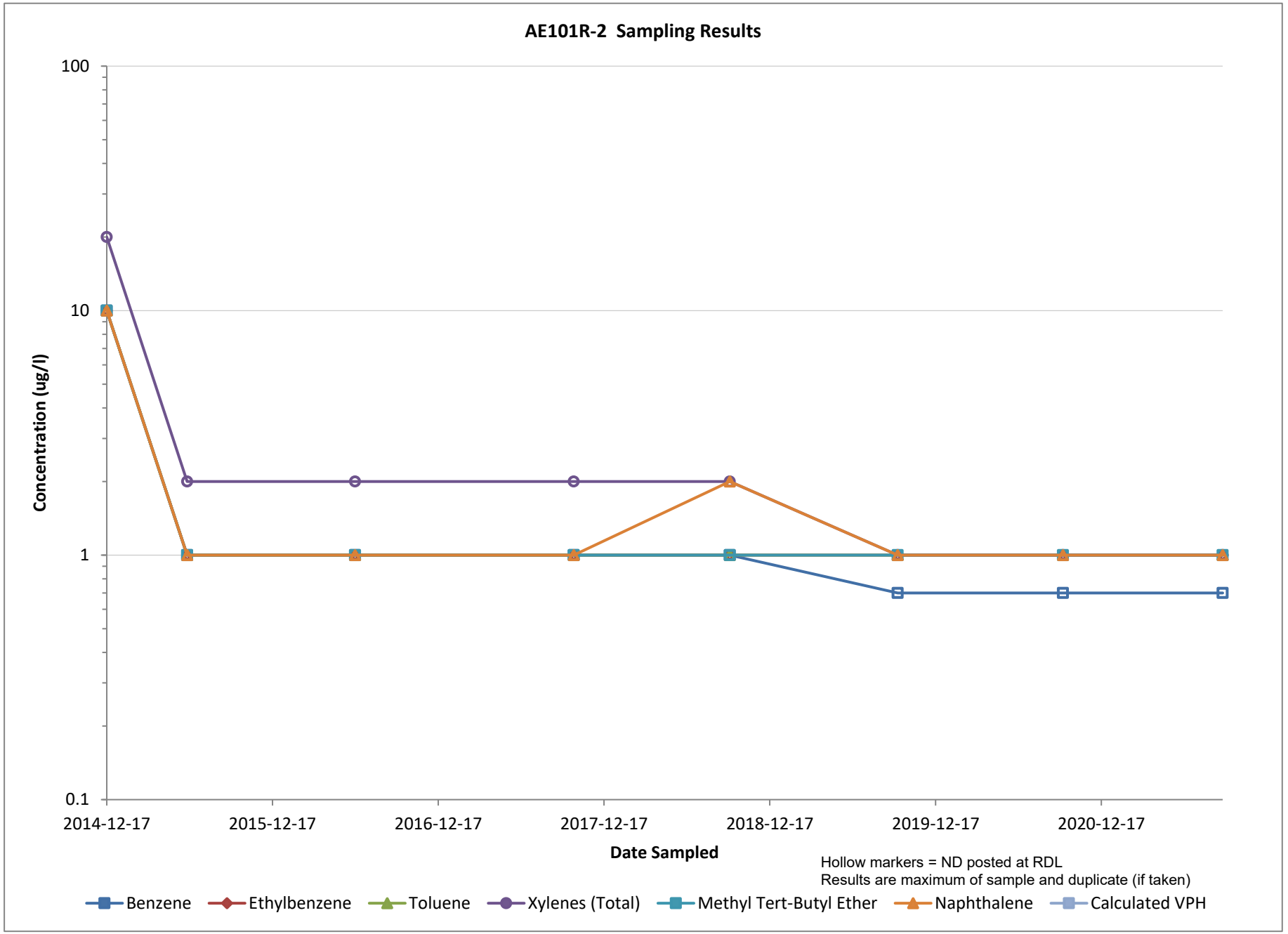

AE100R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

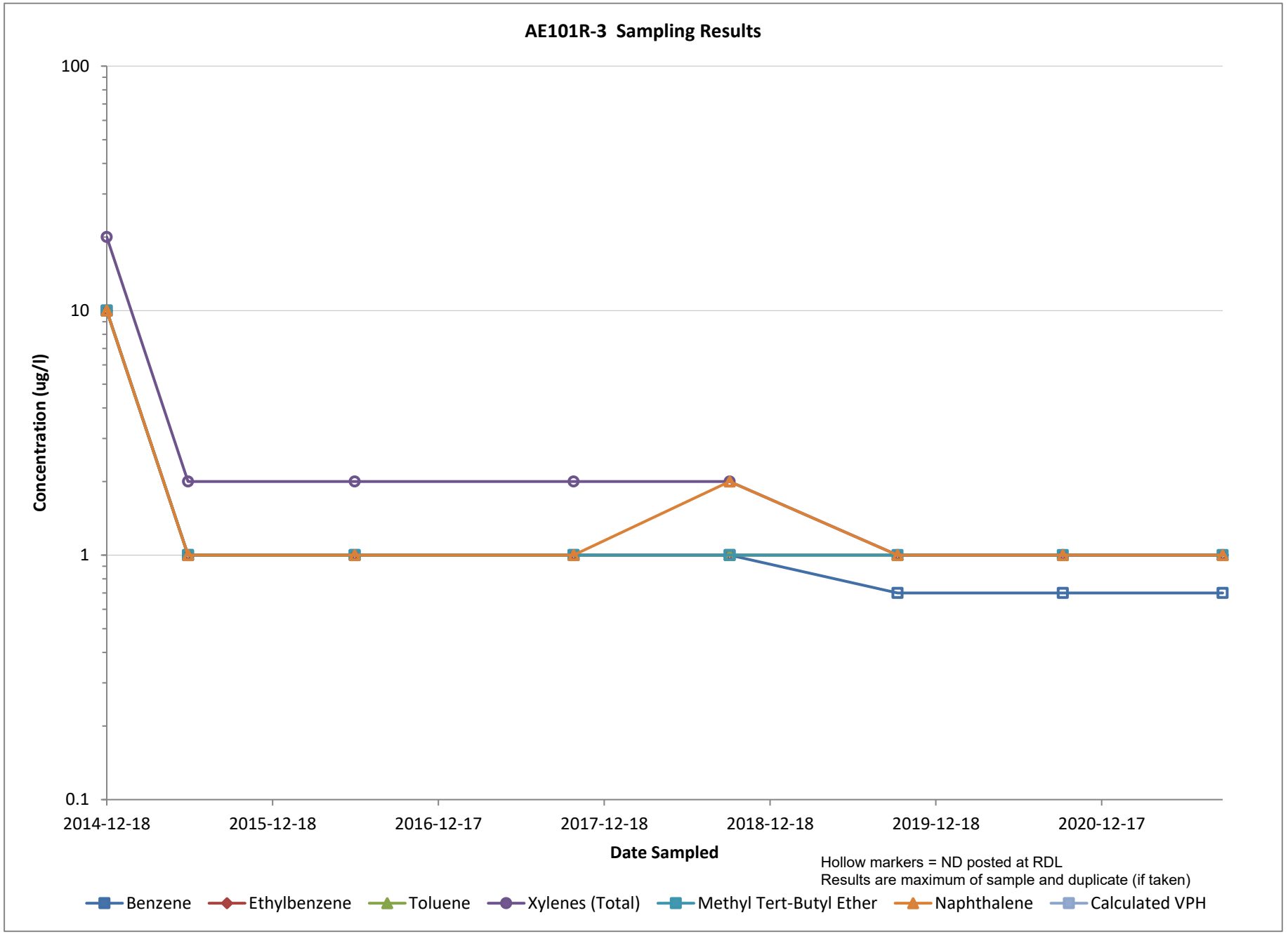

AE100R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

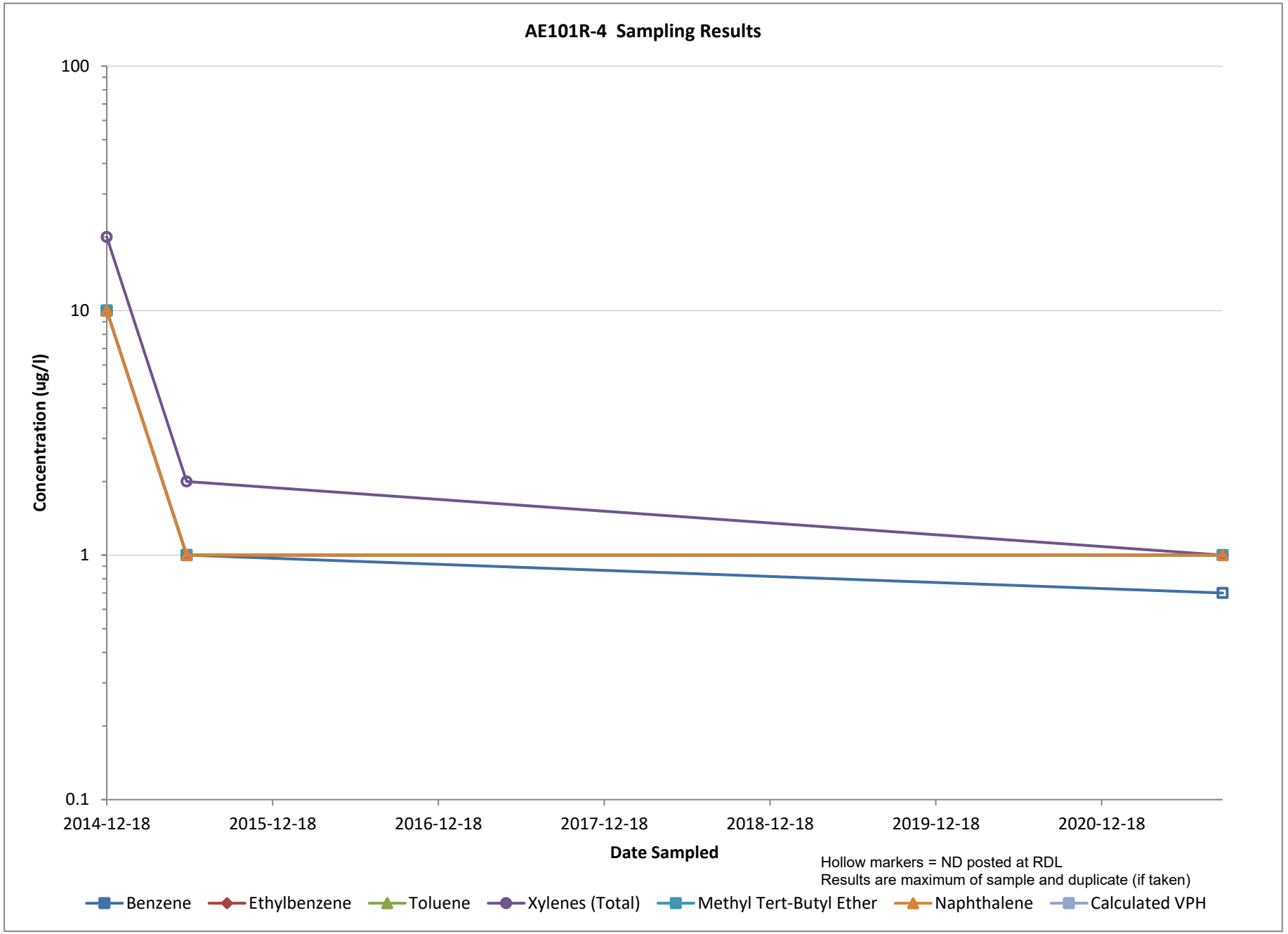

AE100R-6 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

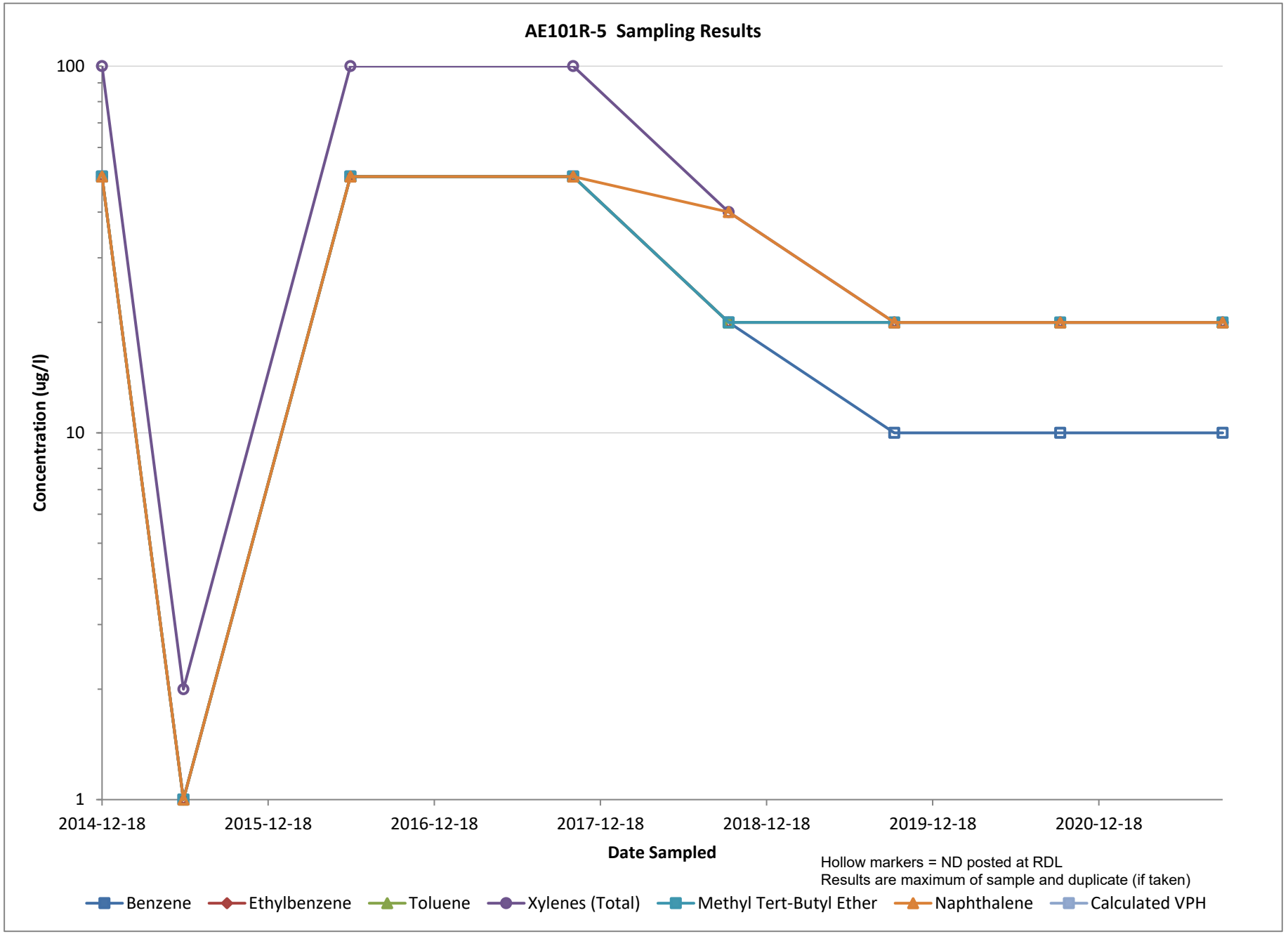

AE101D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

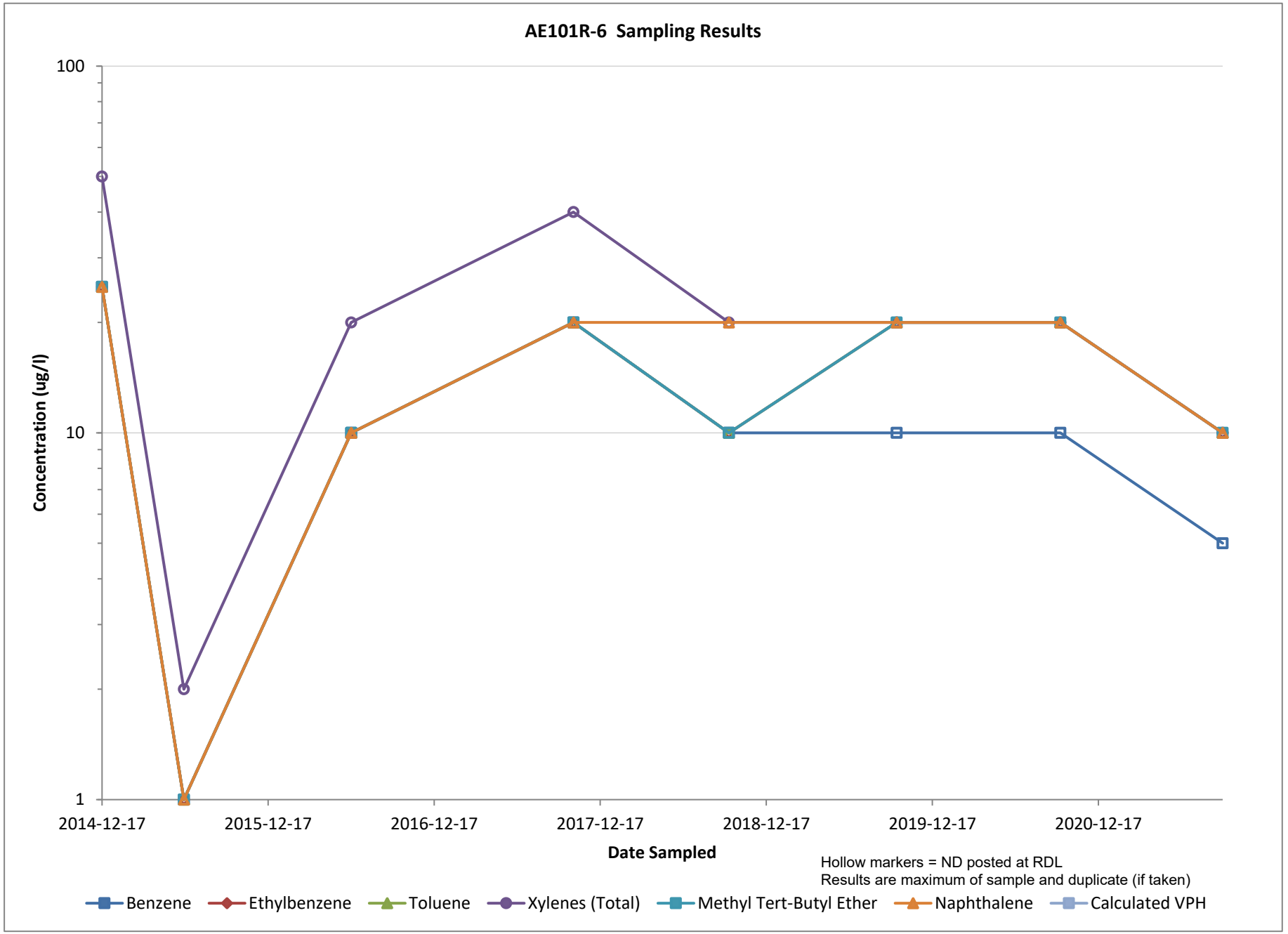

AE101R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-16
2017-12-17
2018-12-17
2019-12-17
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

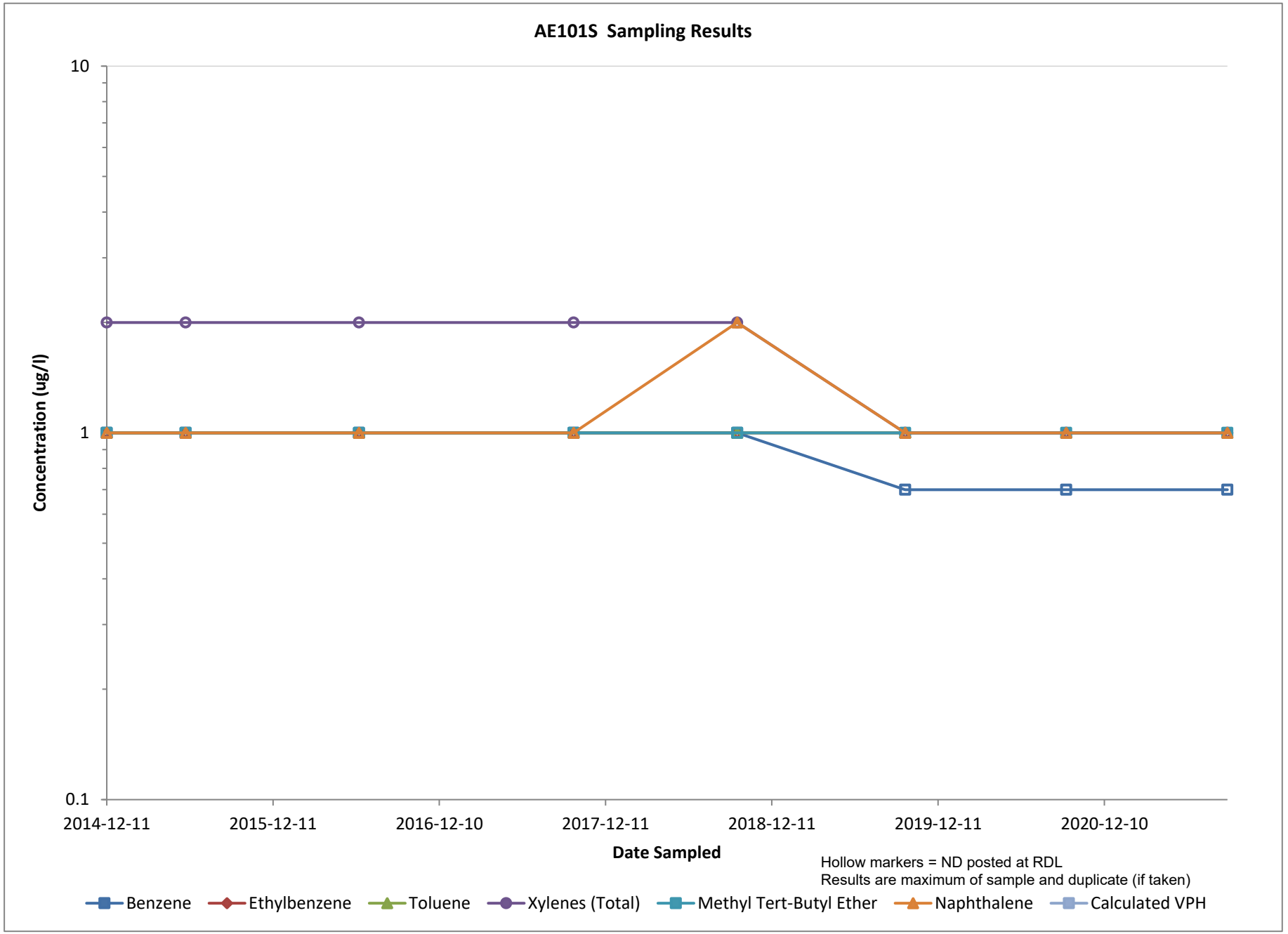

AE101R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

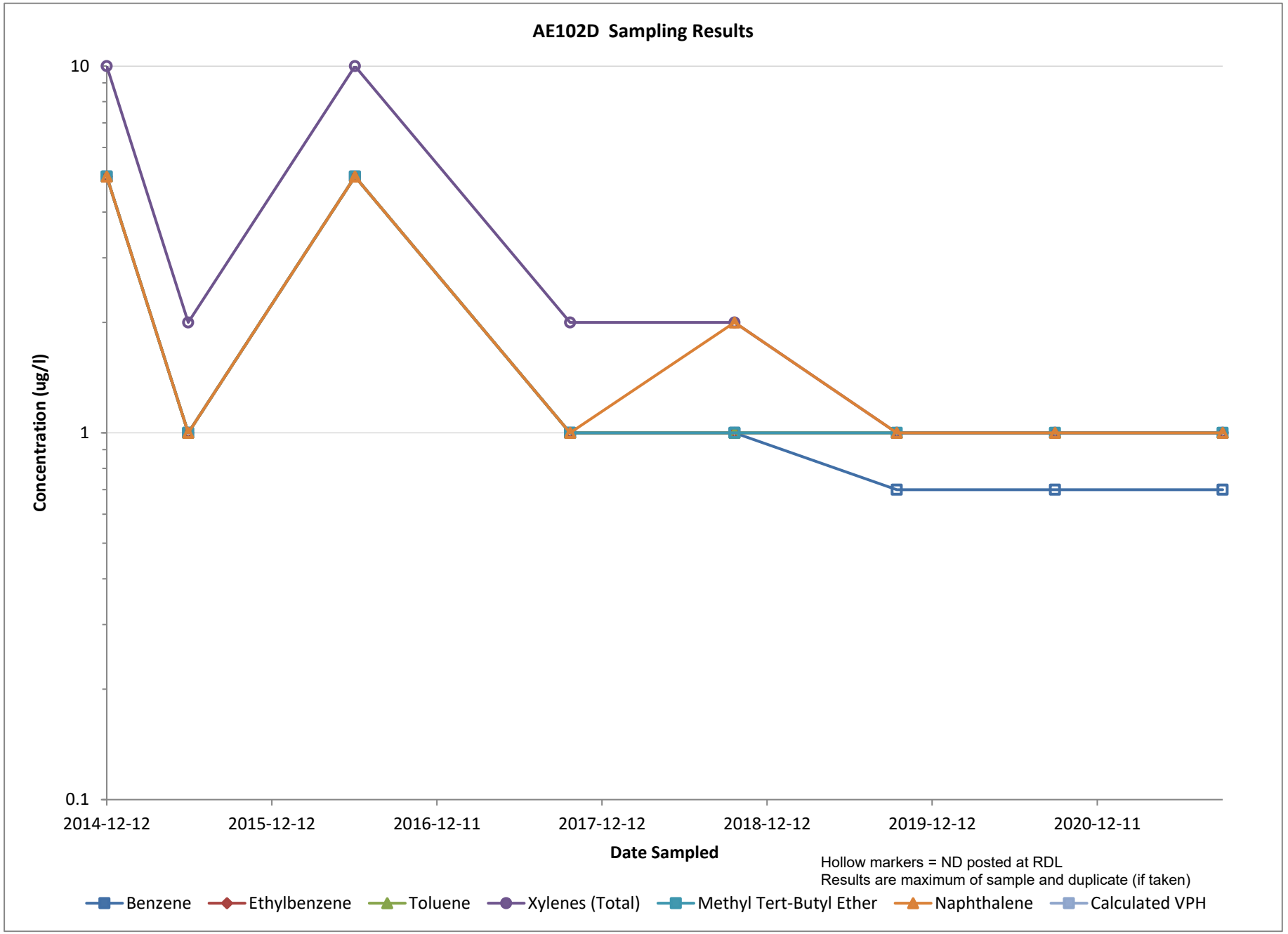

AE101R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-17
2017-12-18
2018-12-18
2019-12-18
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

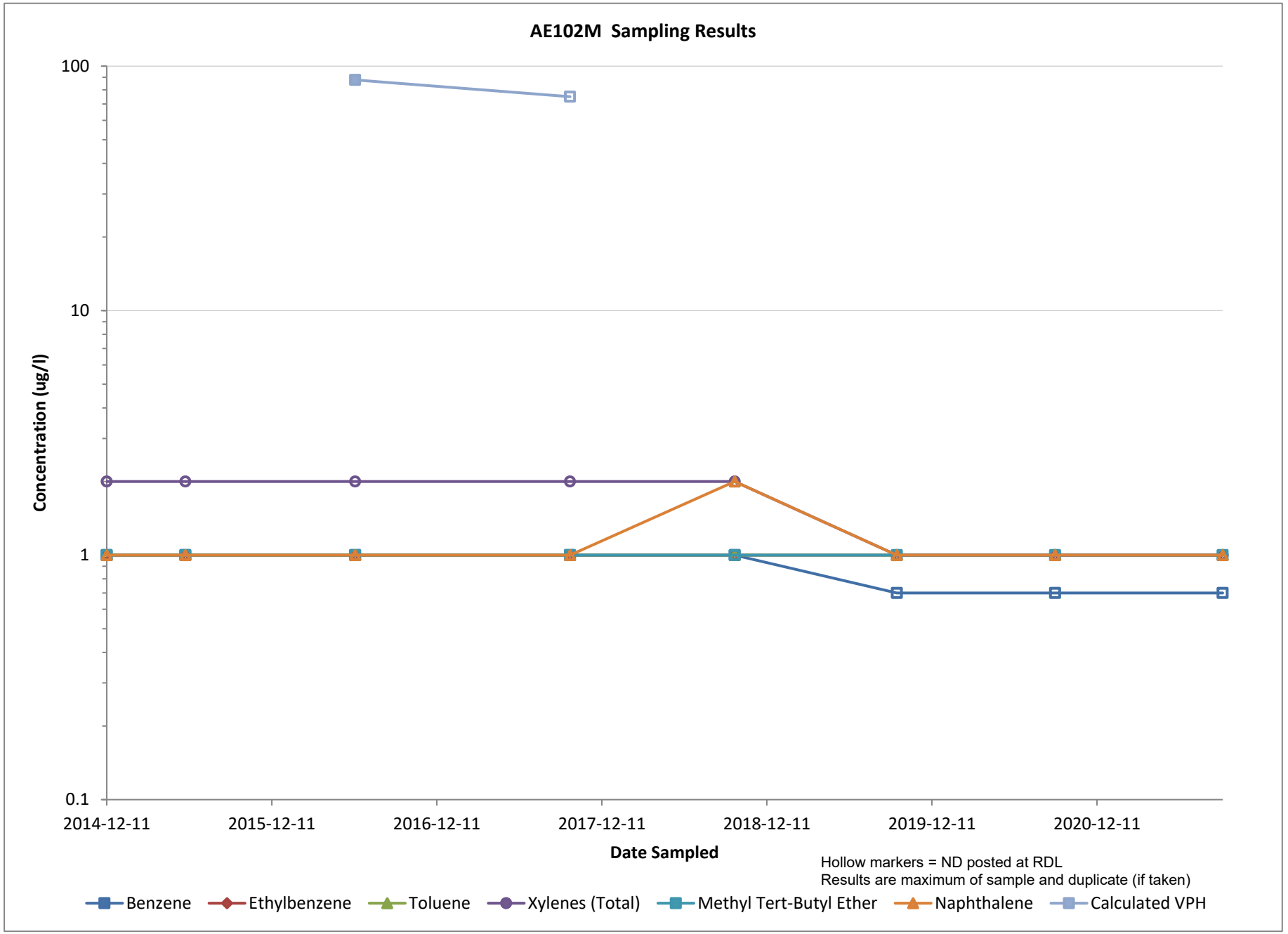

AE101R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

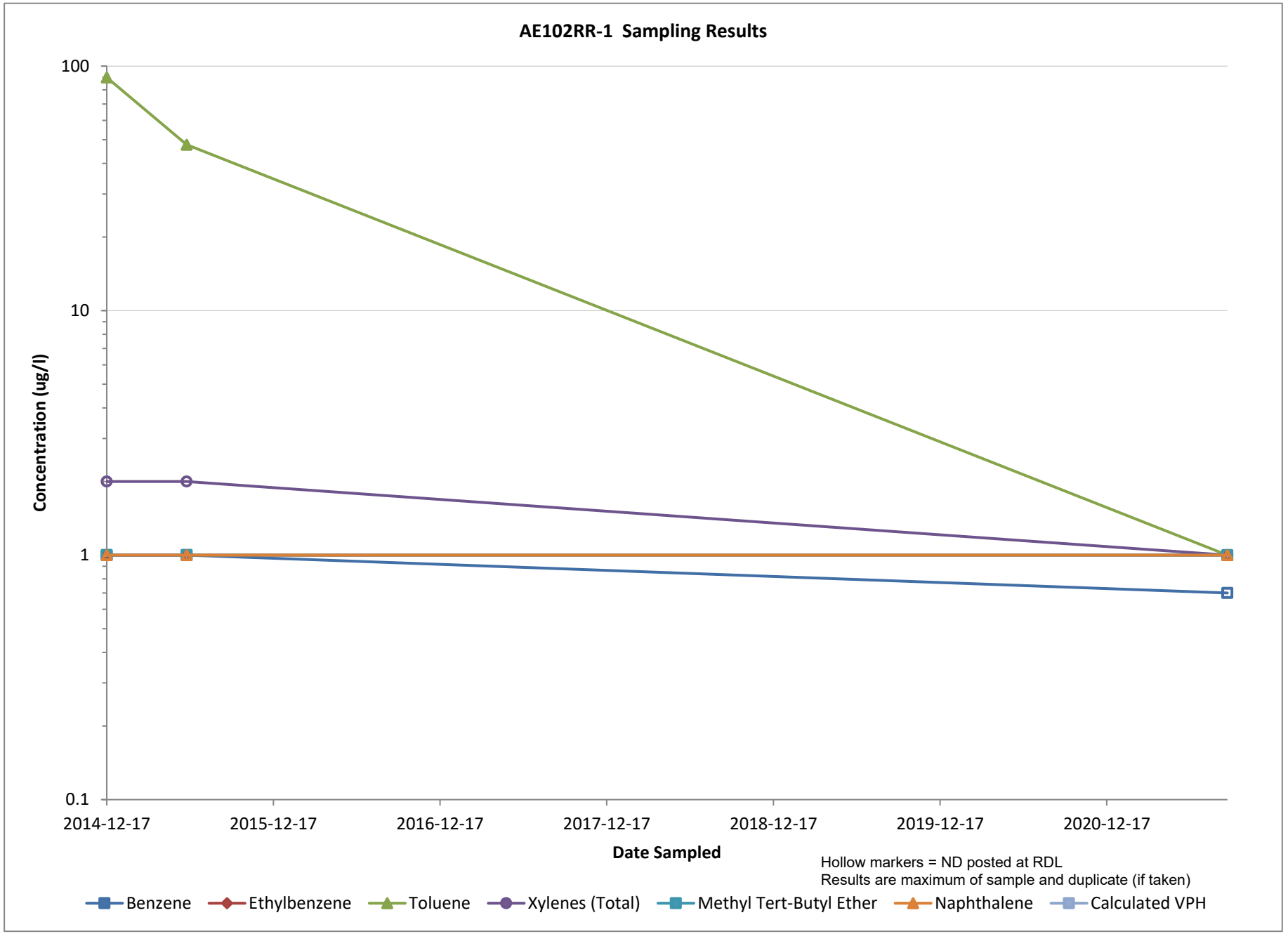

AE101R-5 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

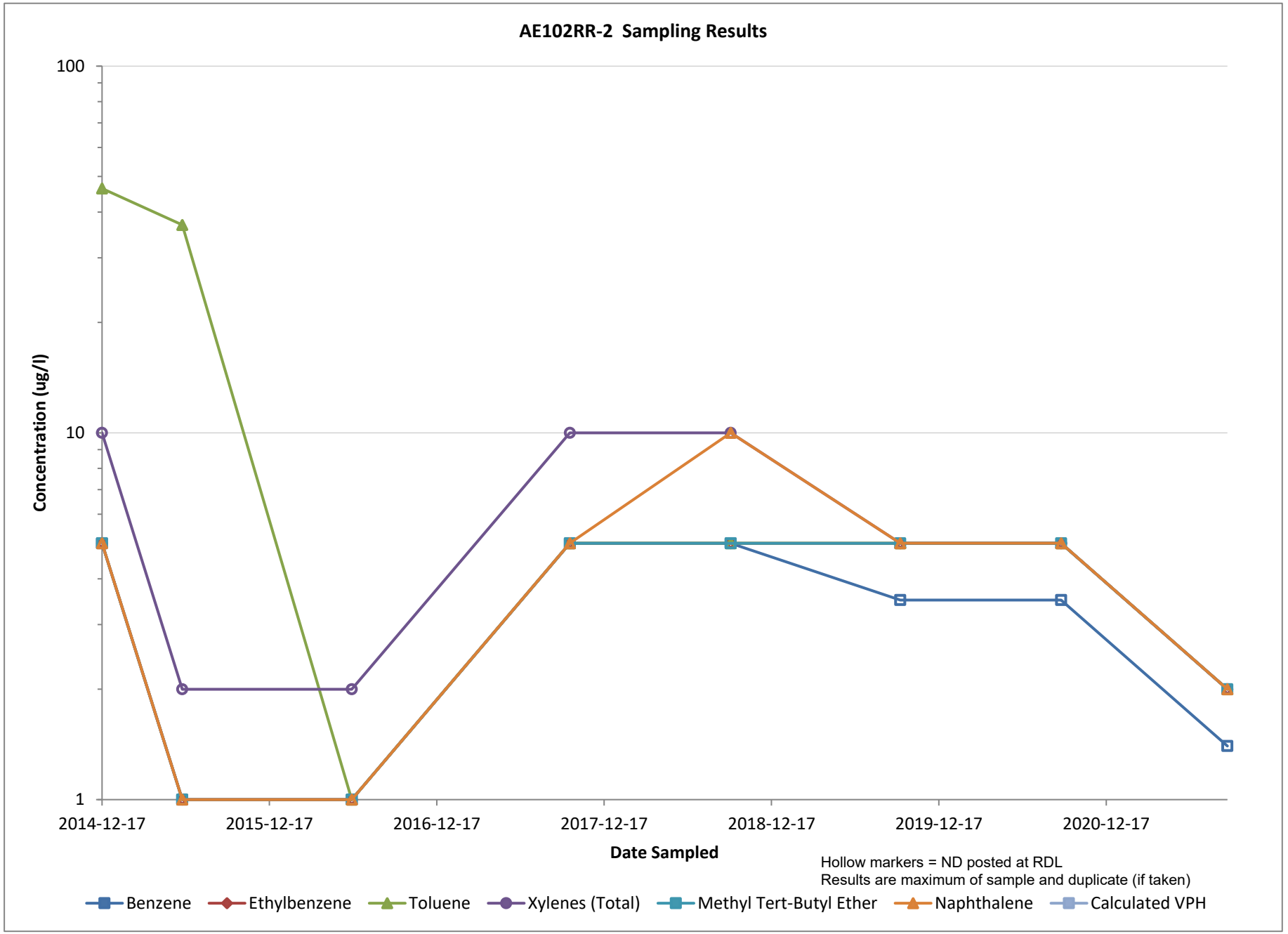

AE101R-6 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

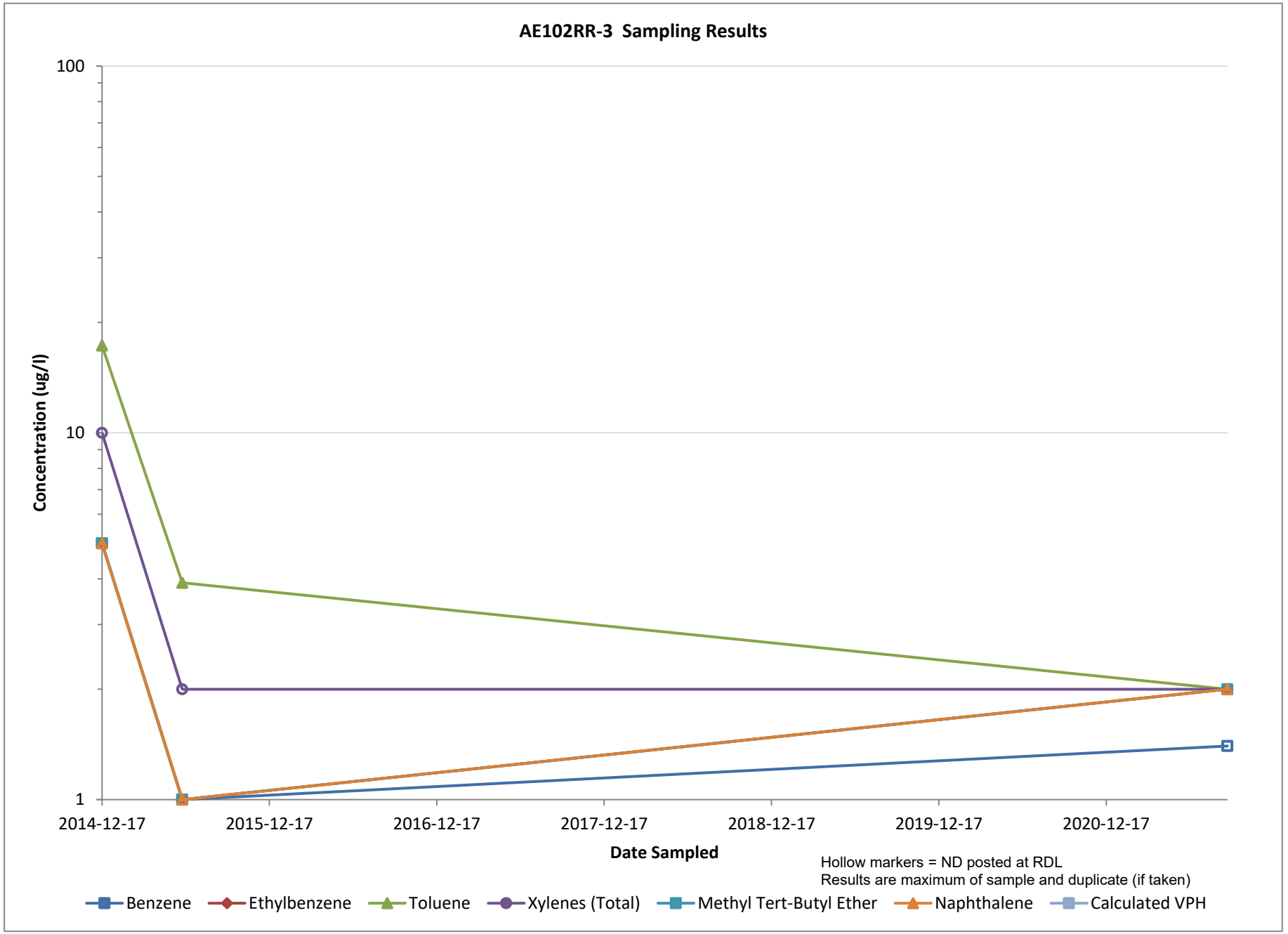

AE101S Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-10
2017-12-11
2018-12-11
2019-12-11
2020-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

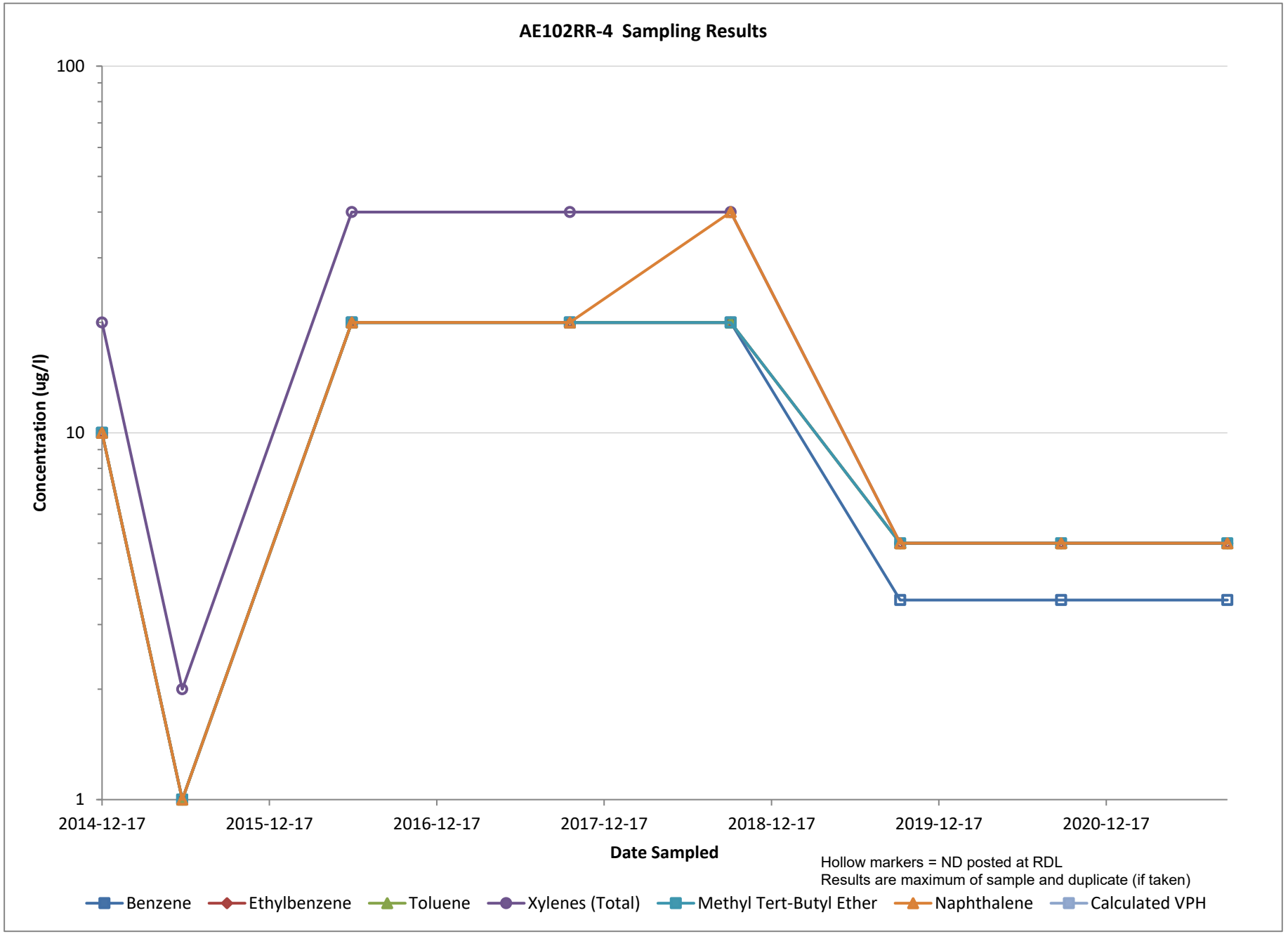

AE102D Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

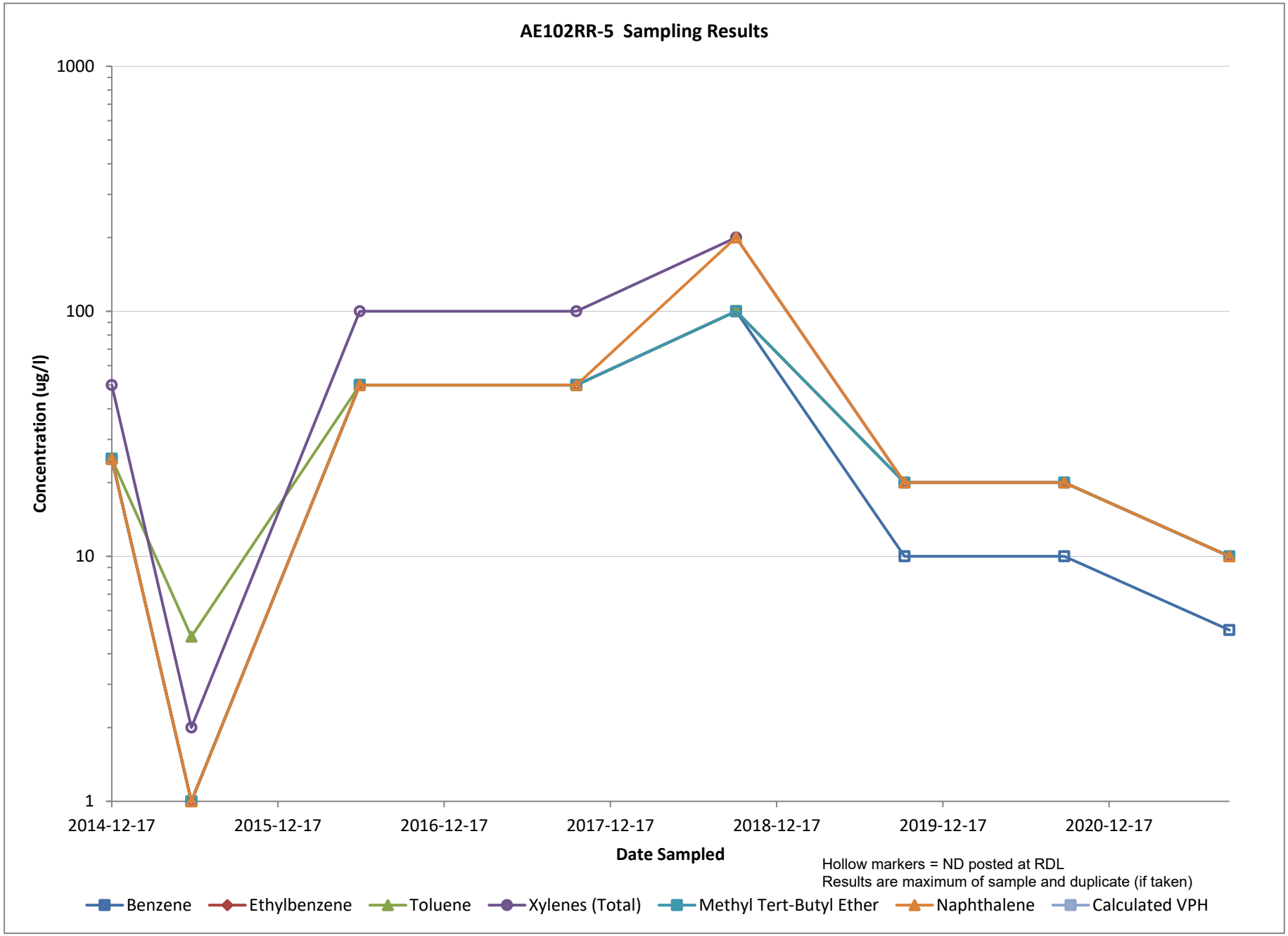

AE102M Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

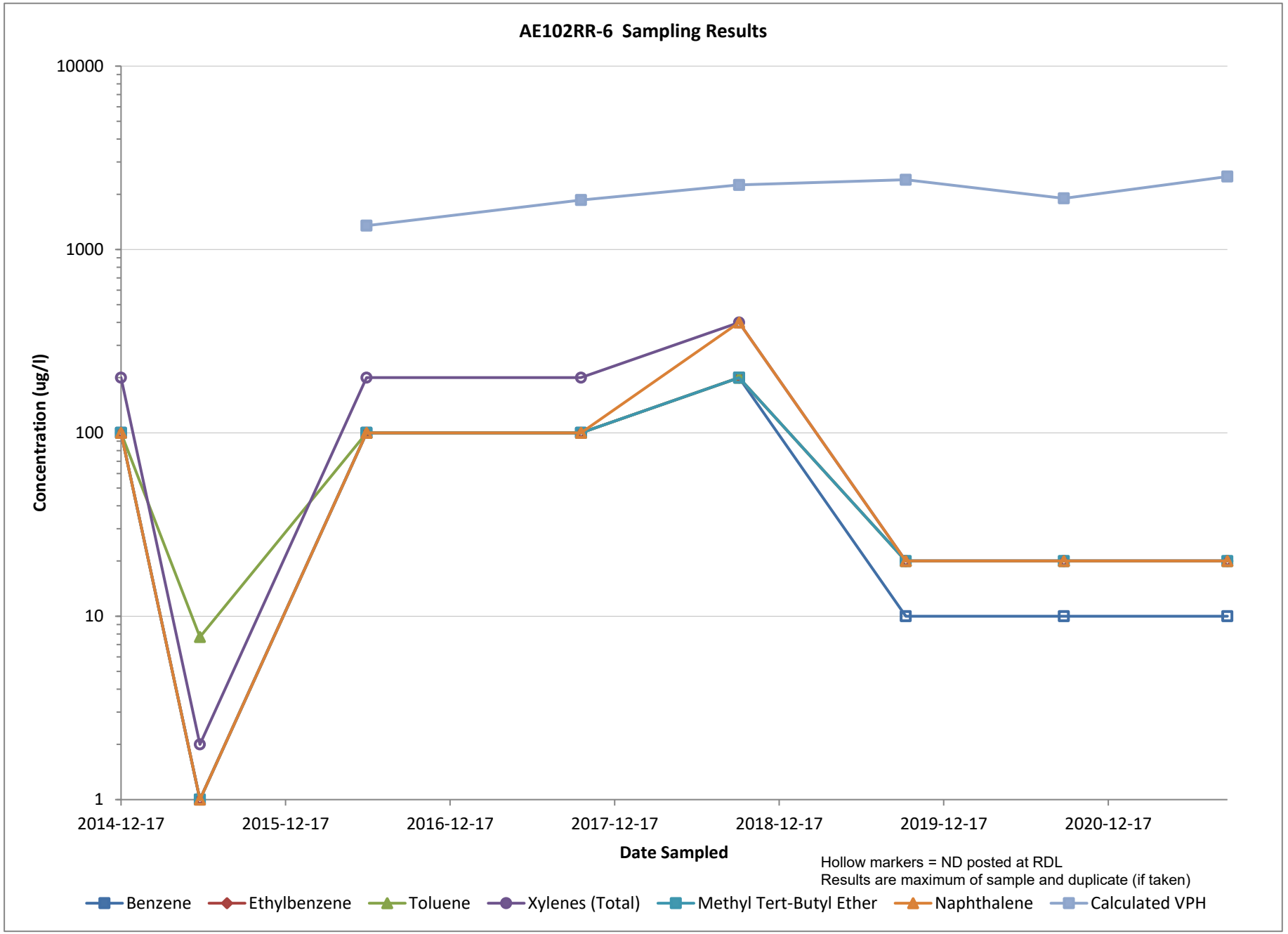

AE102RR-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

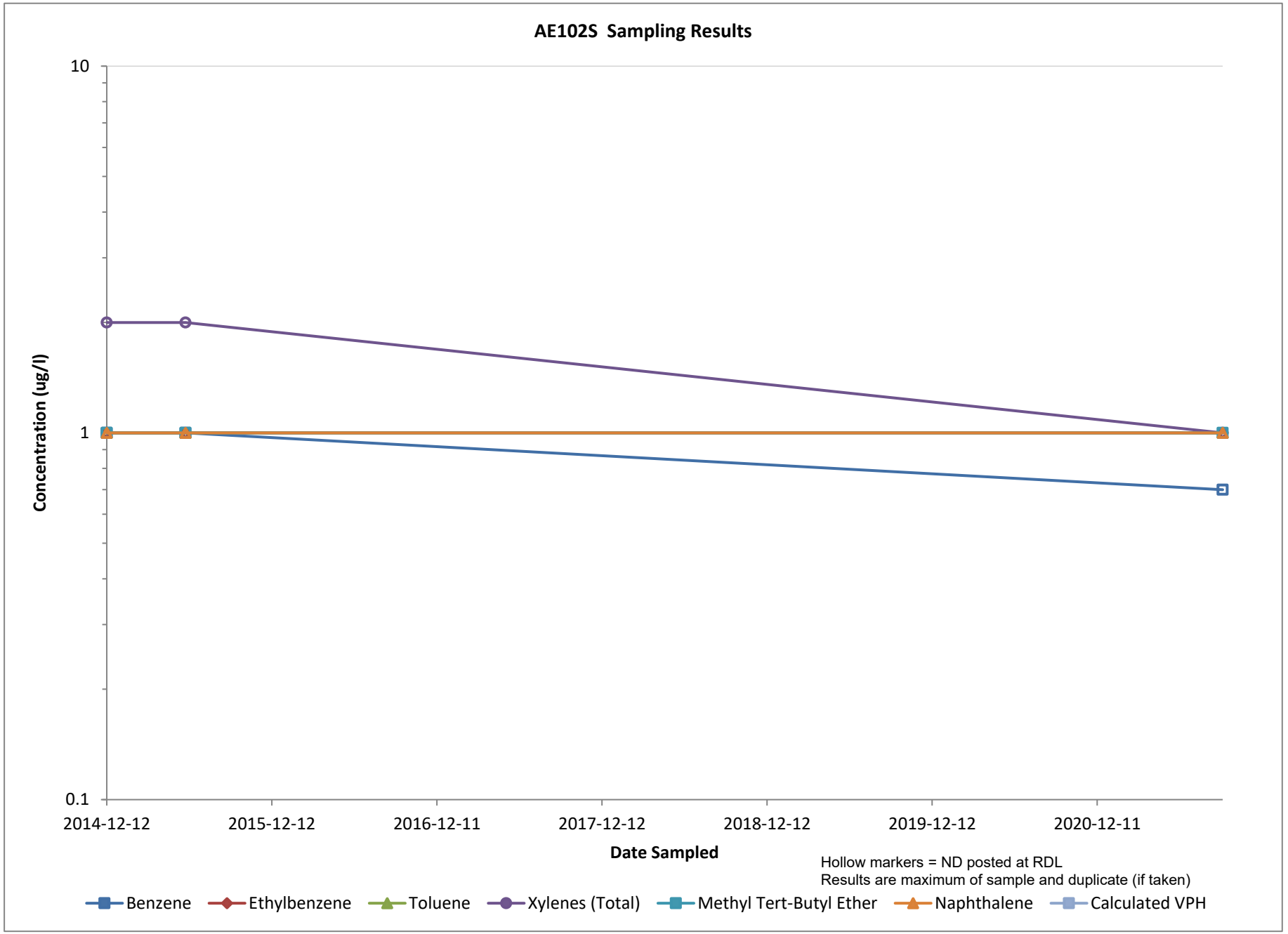

AE102RR-2 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

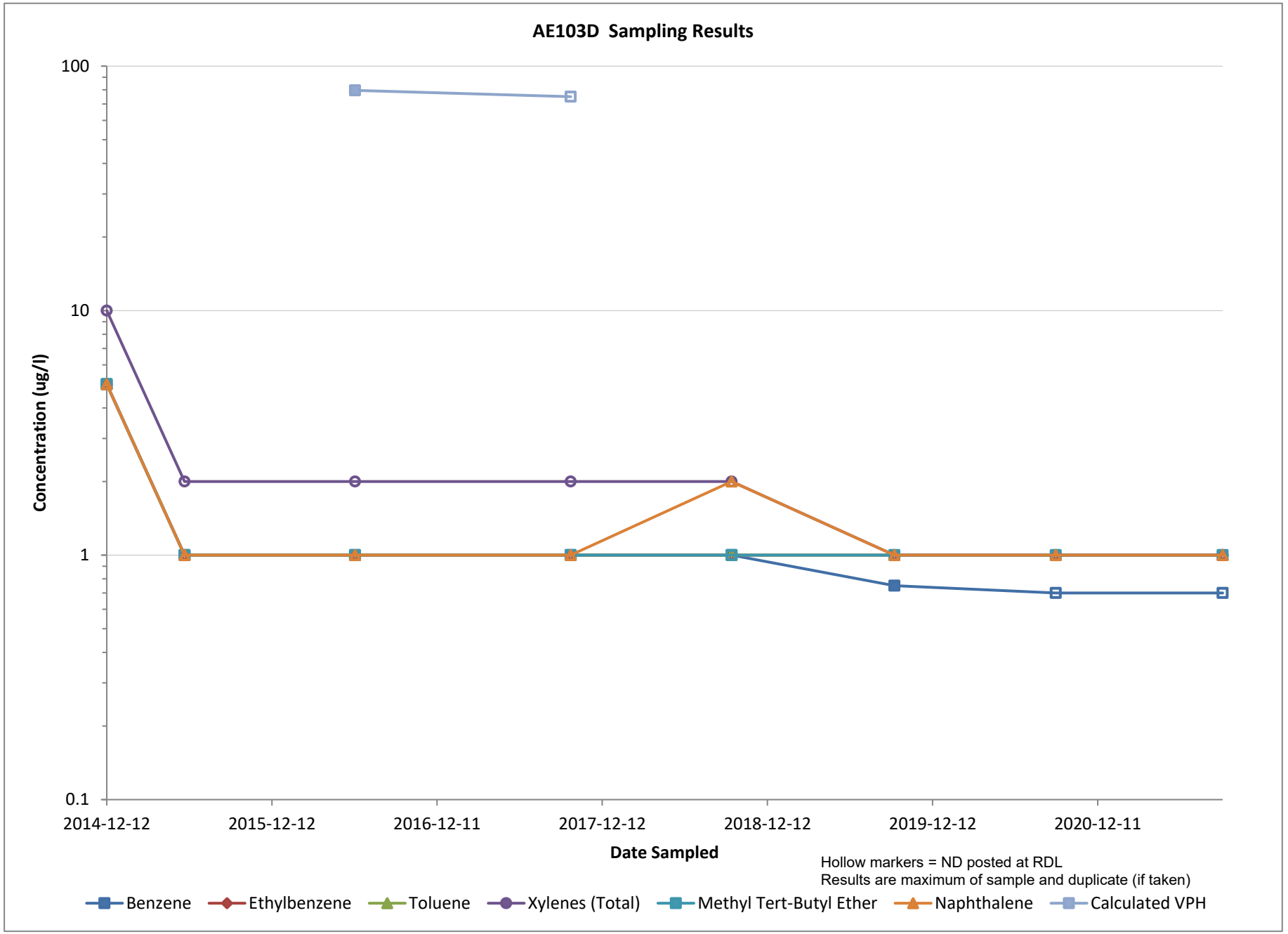

AE102RR-3 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

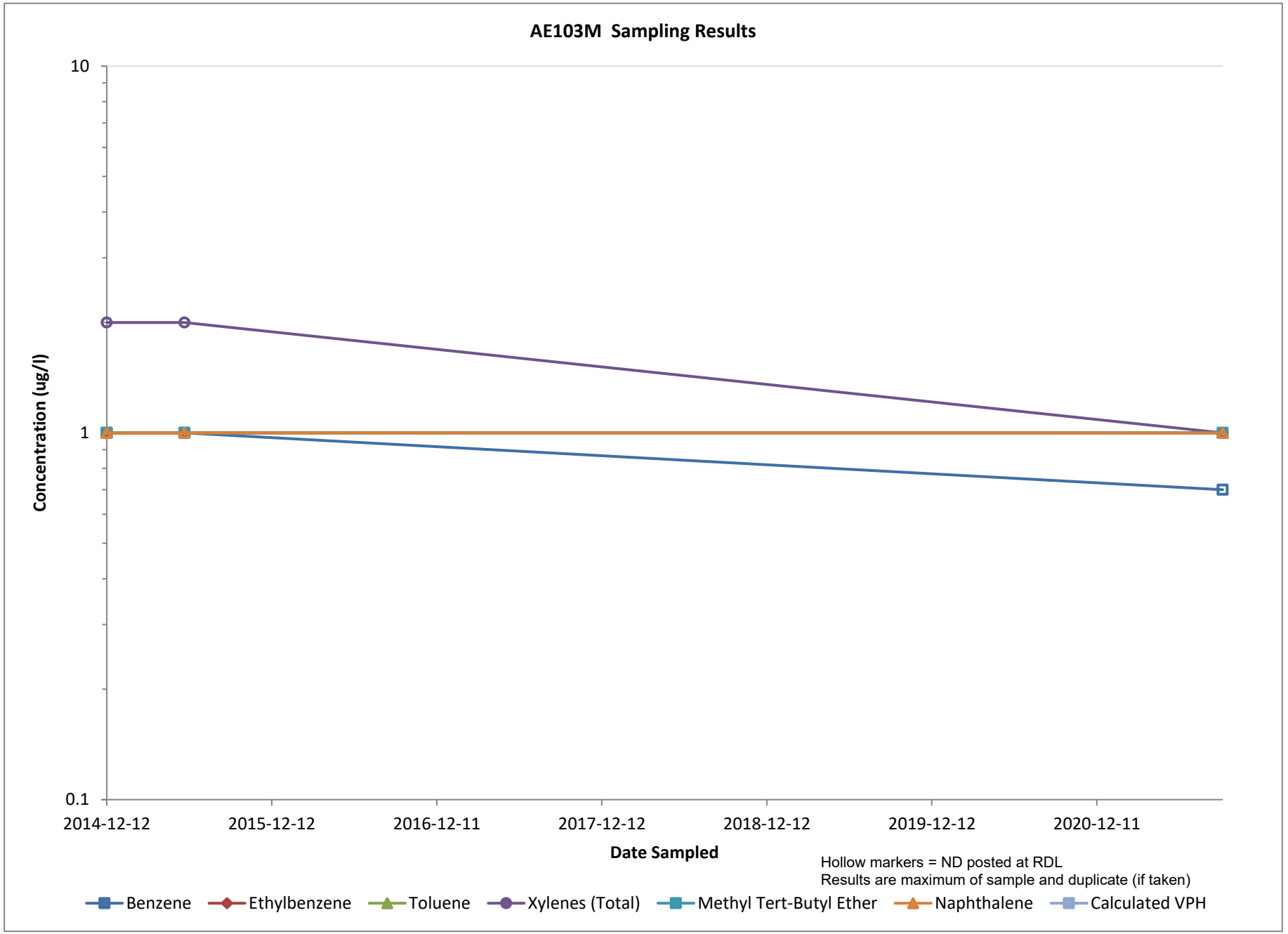

AE102RR-4 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

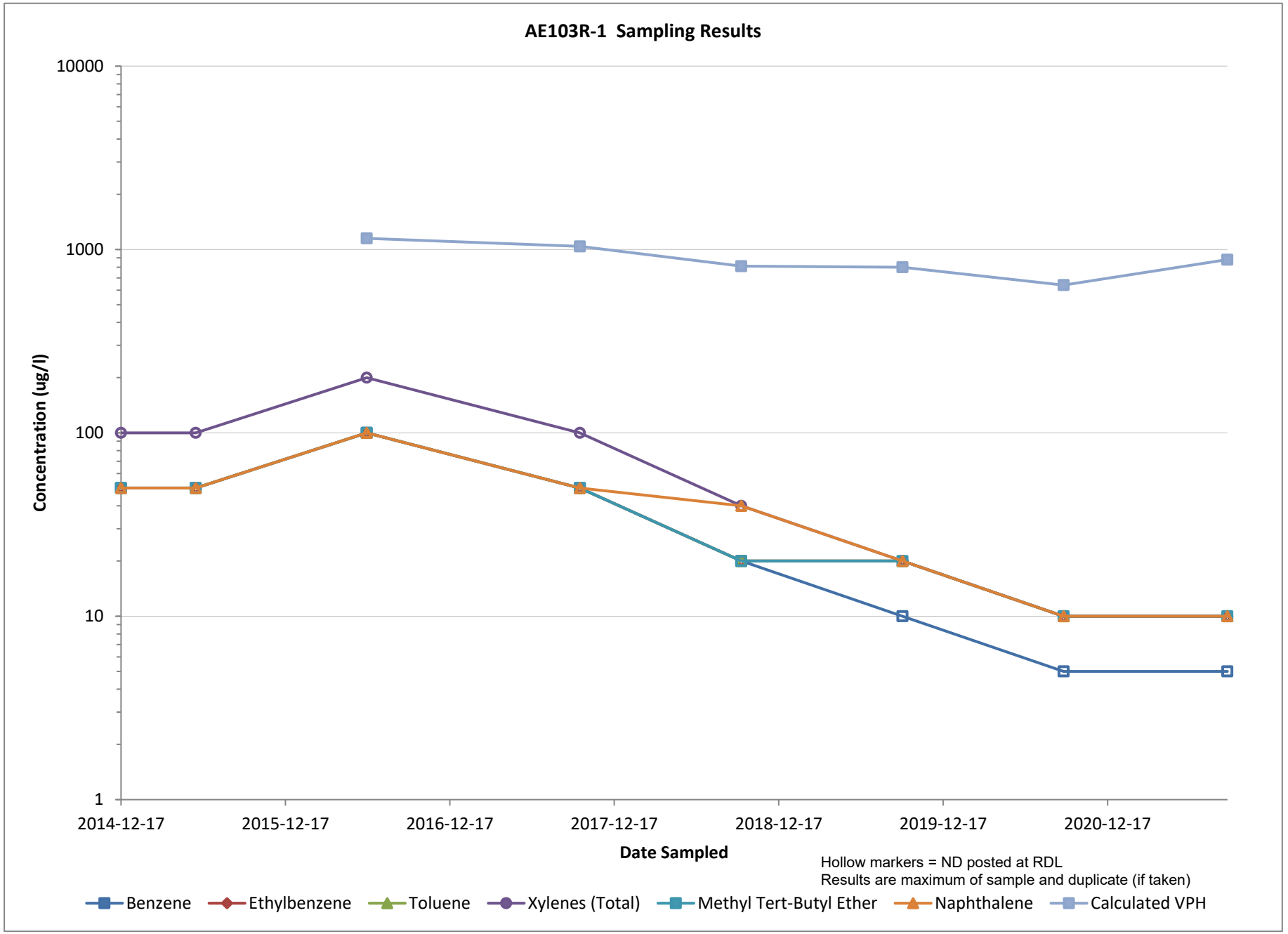

AE102RR-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

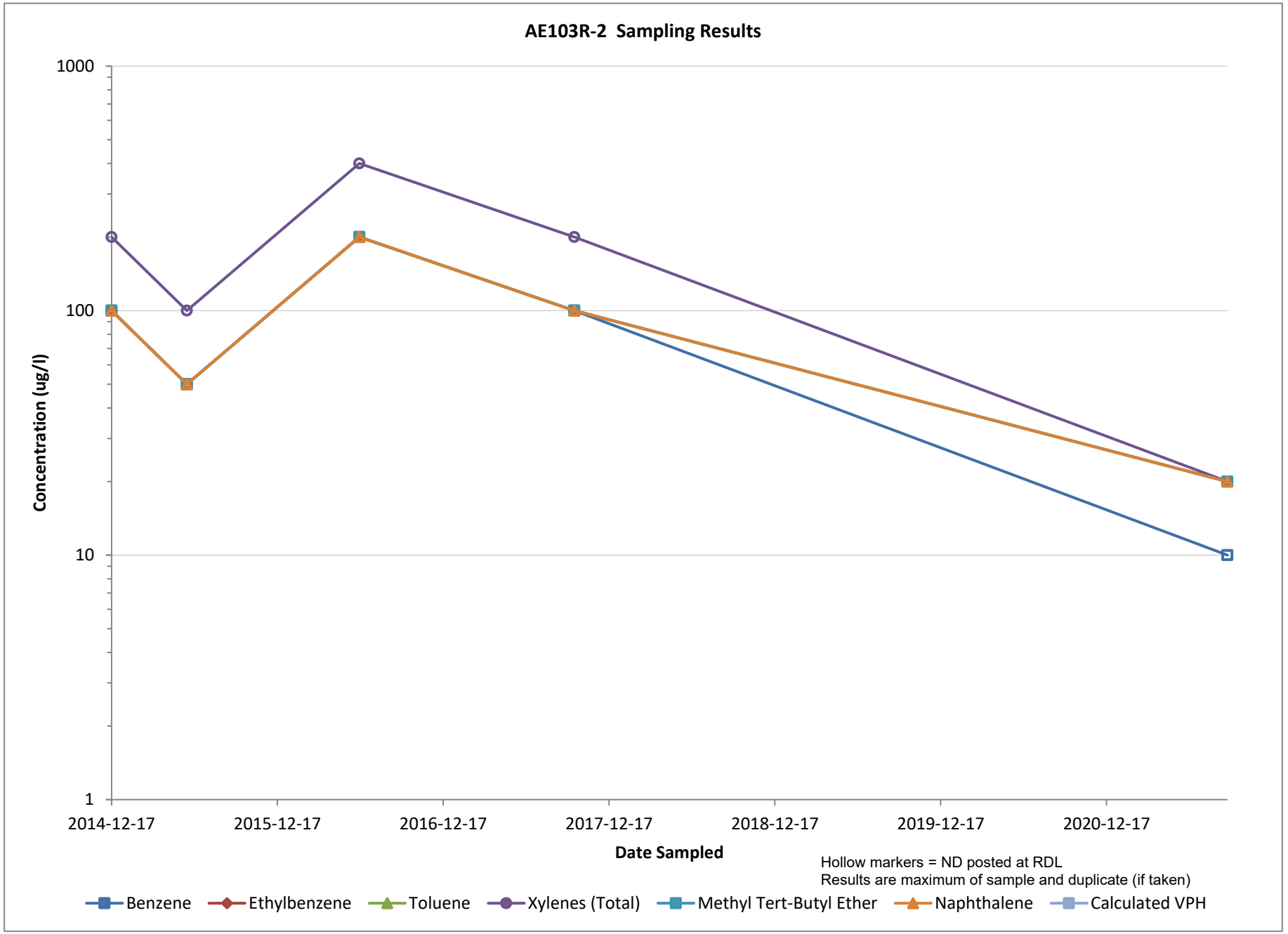

AE102RR-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

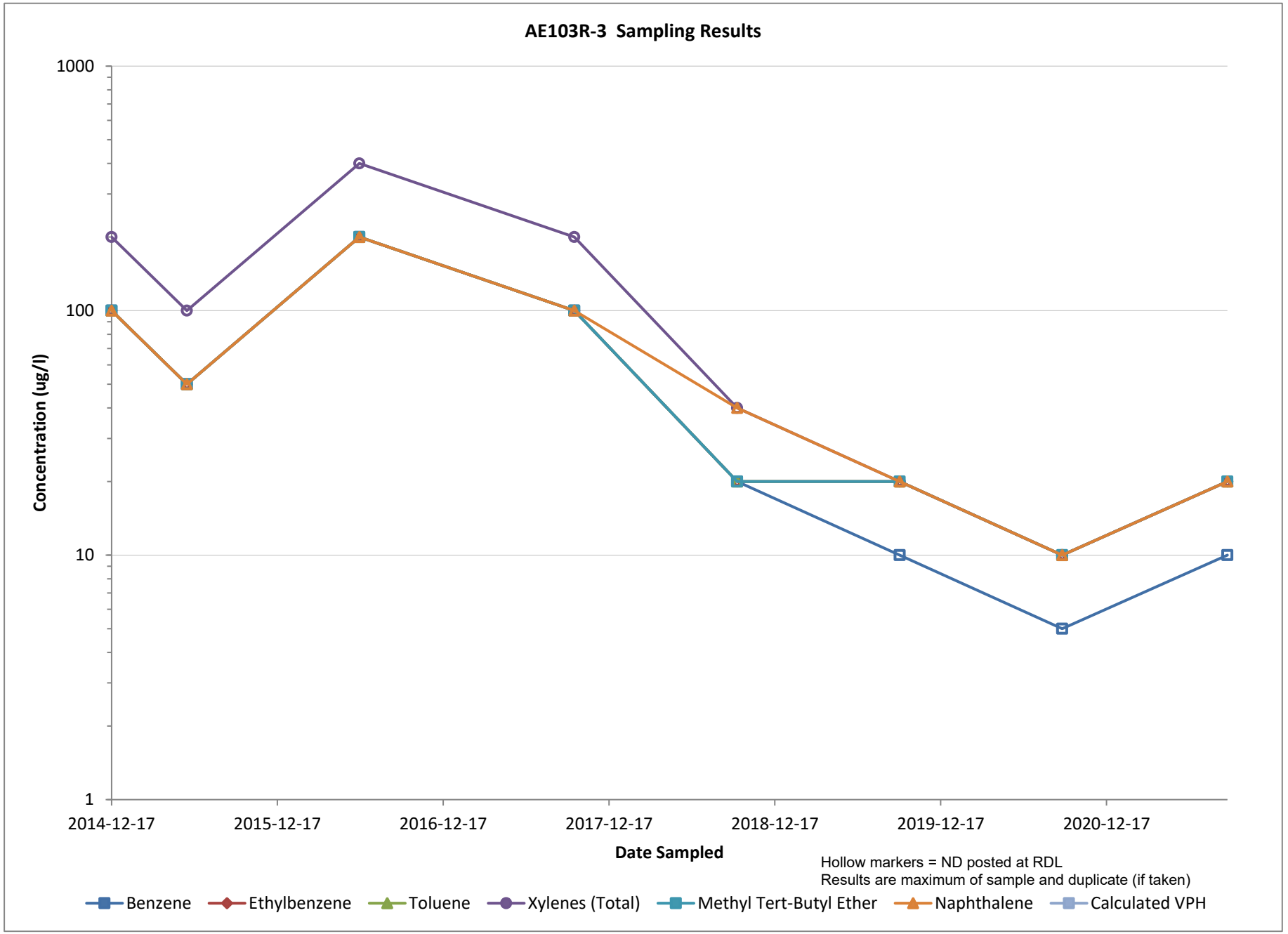

AE102S Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

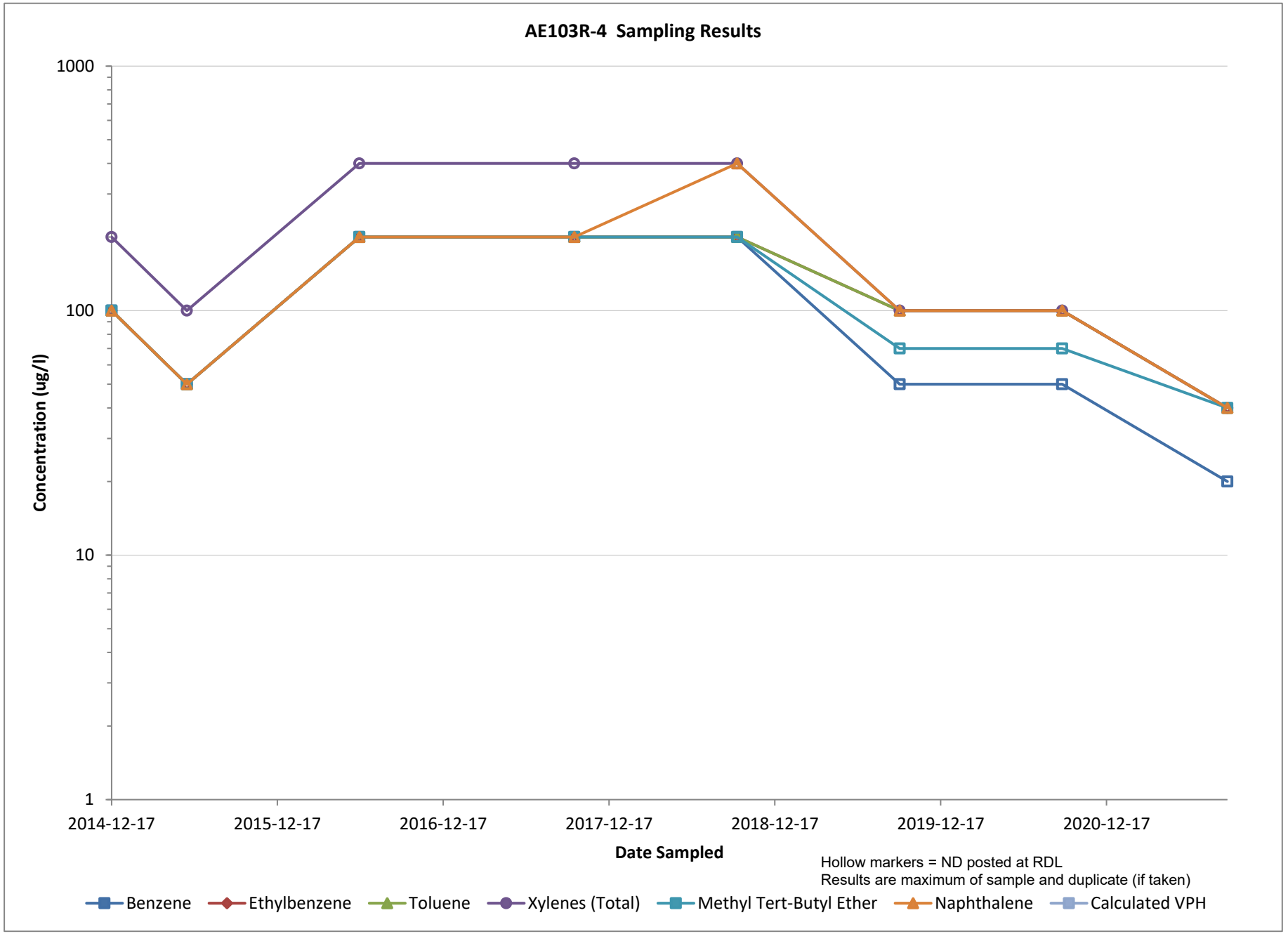

AE103D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

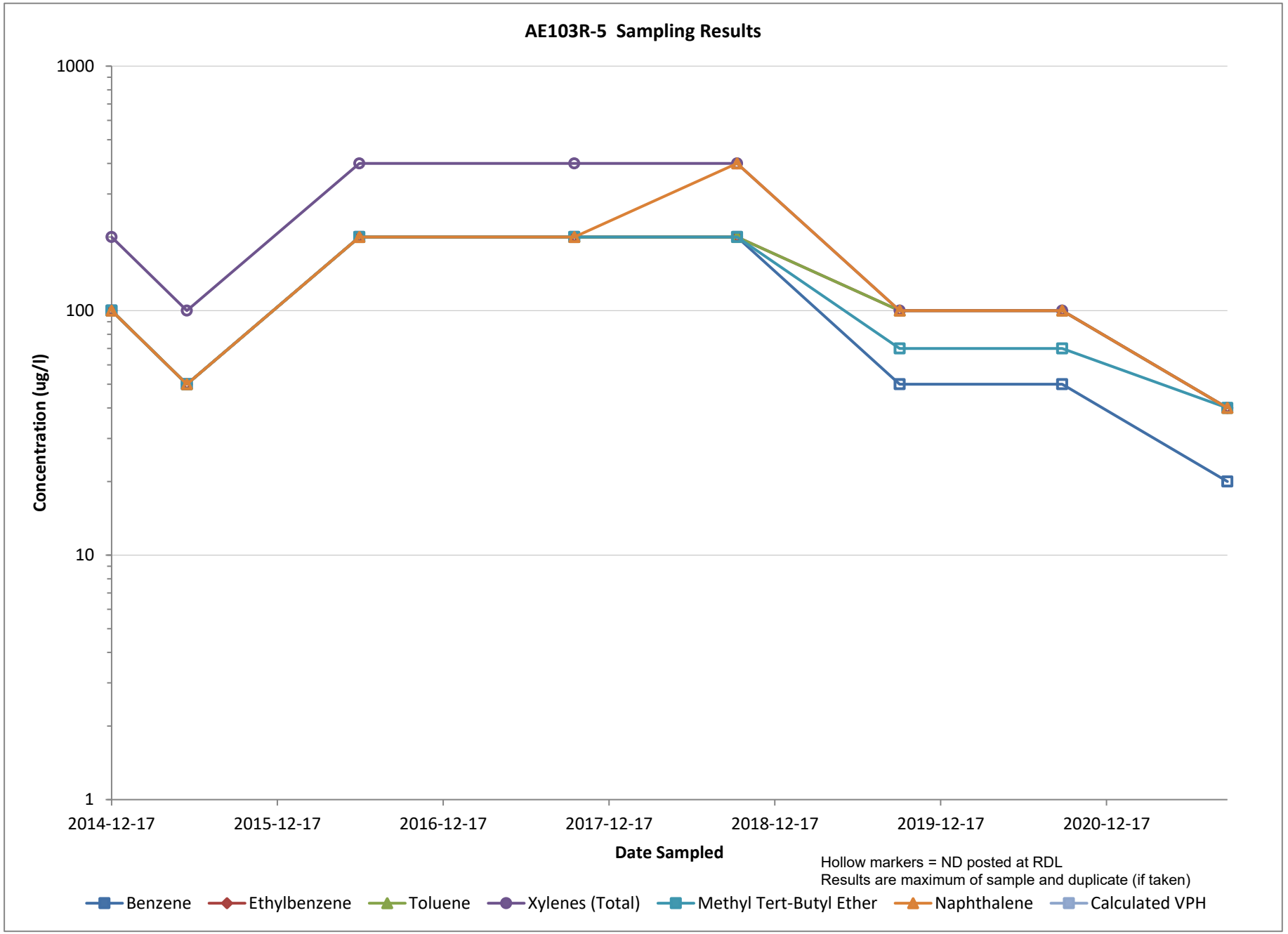

AE103M Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

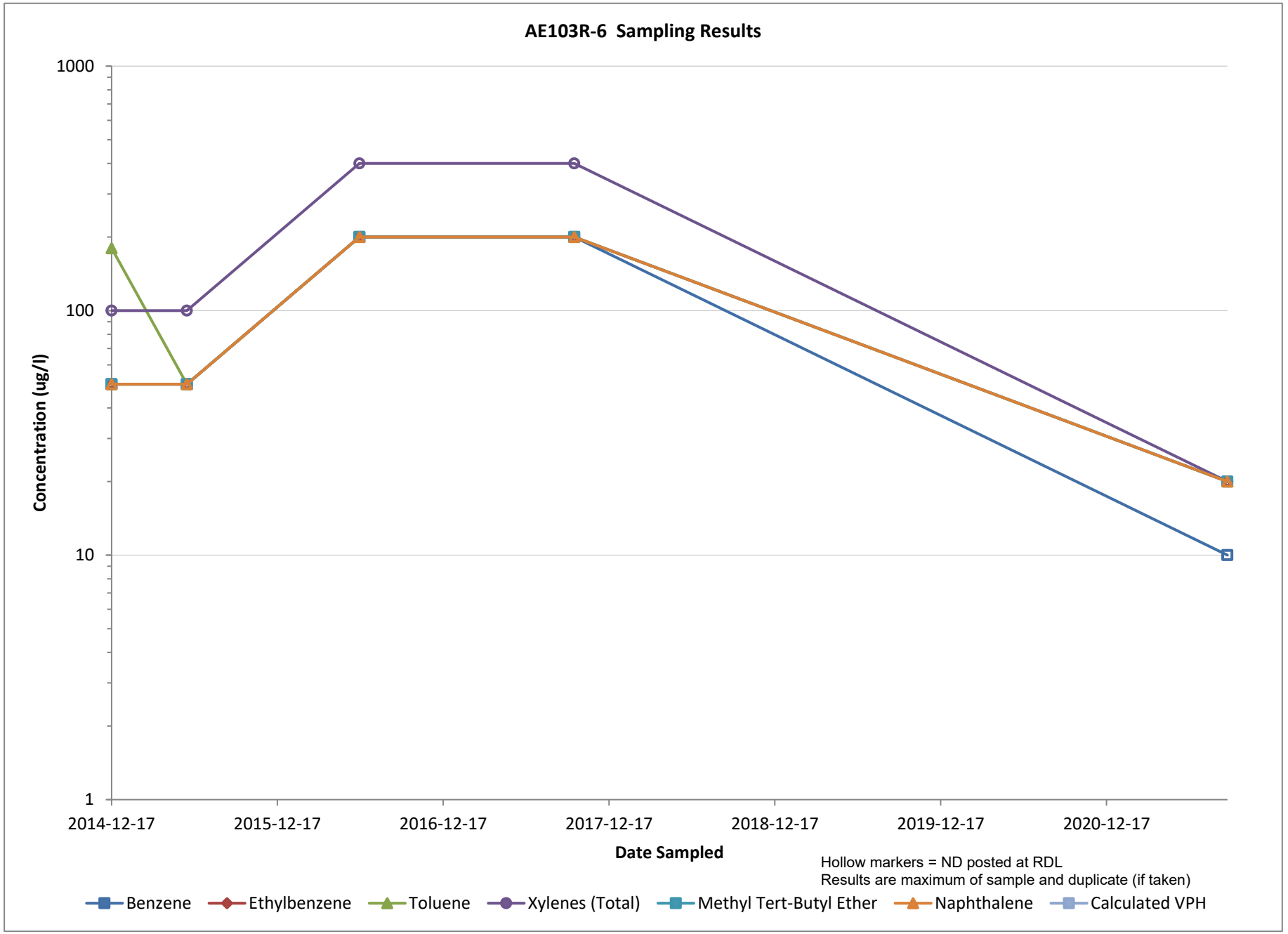

AE103R-1 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

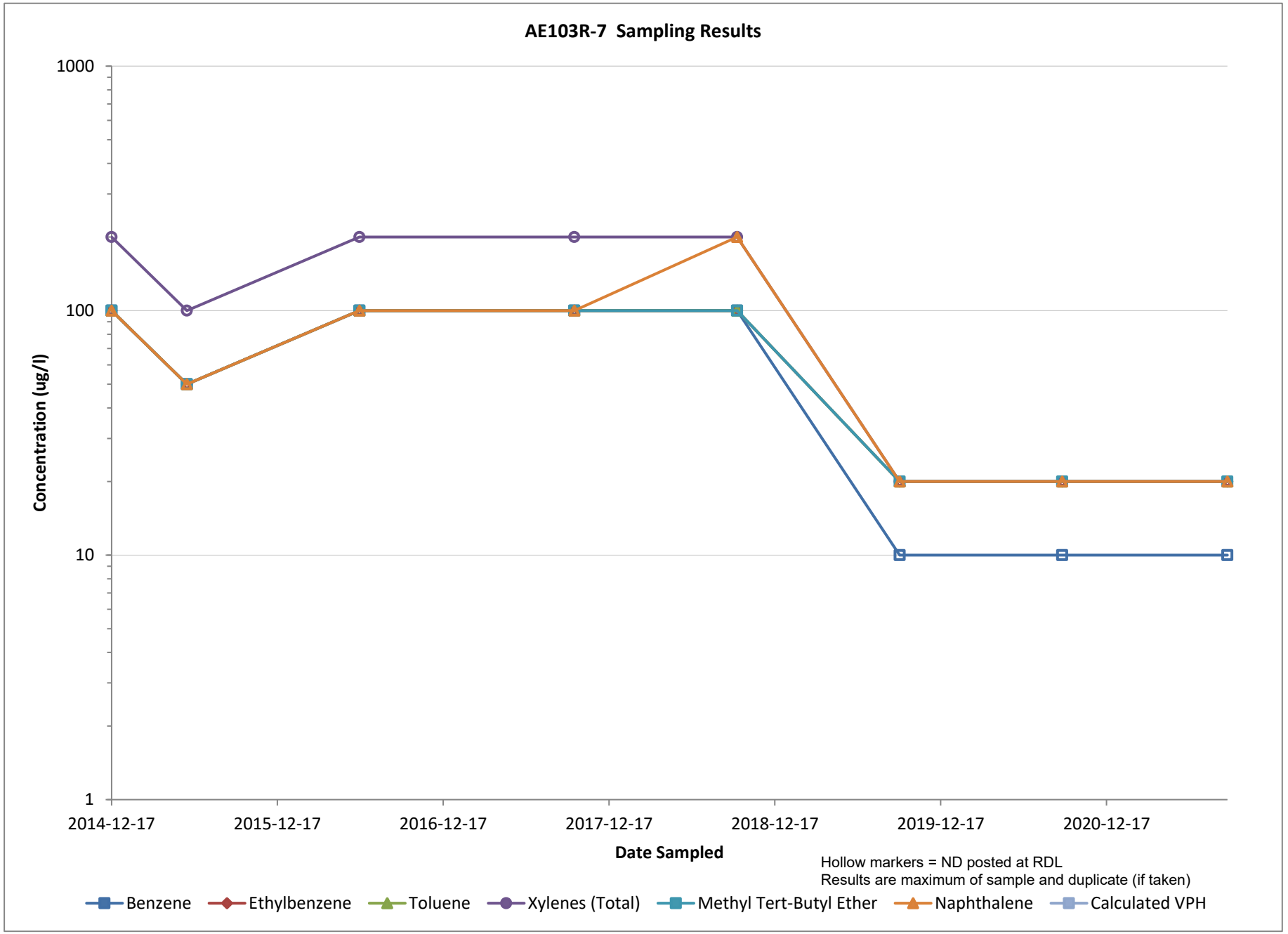

AE103R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

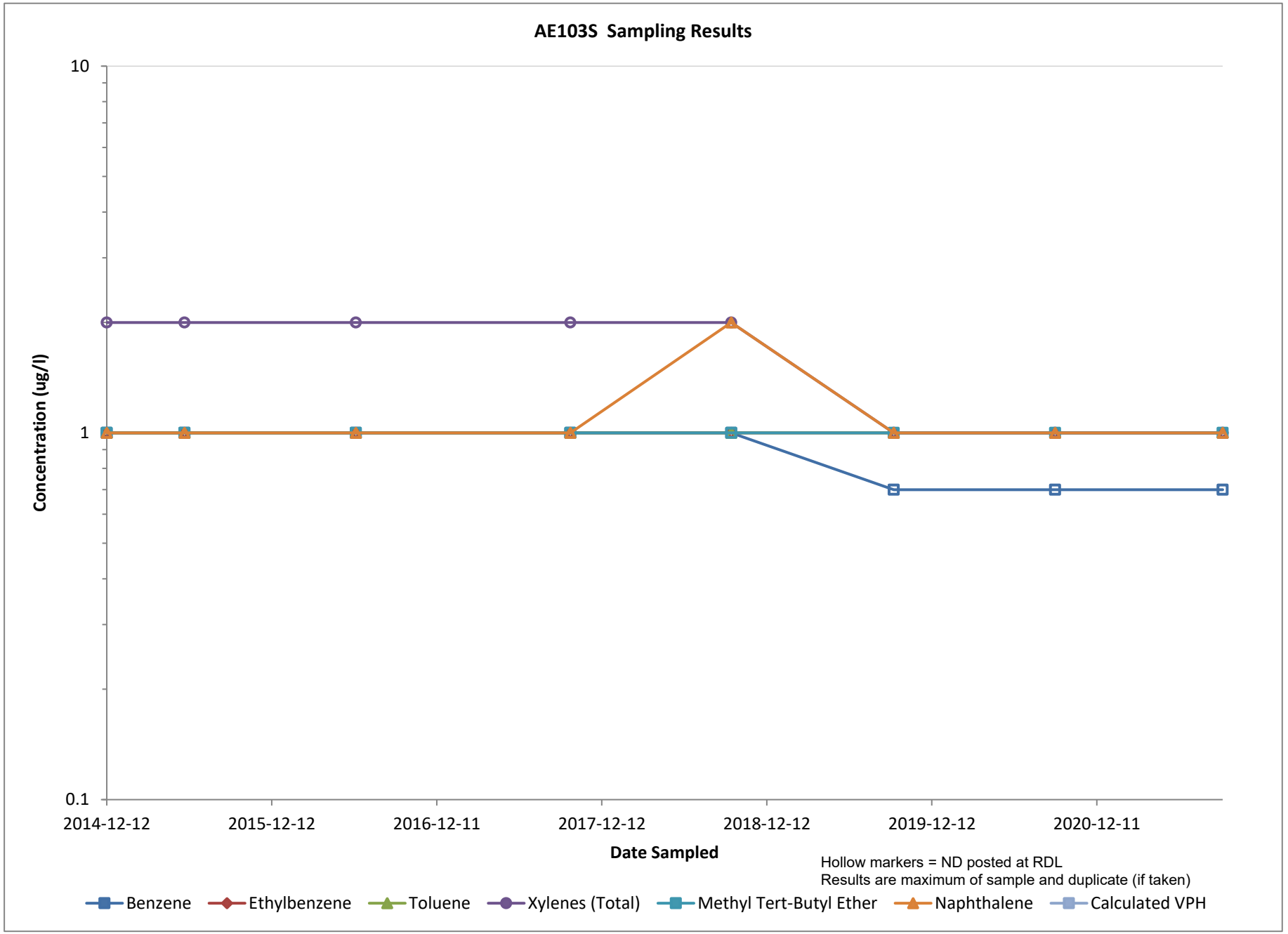

AE103R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

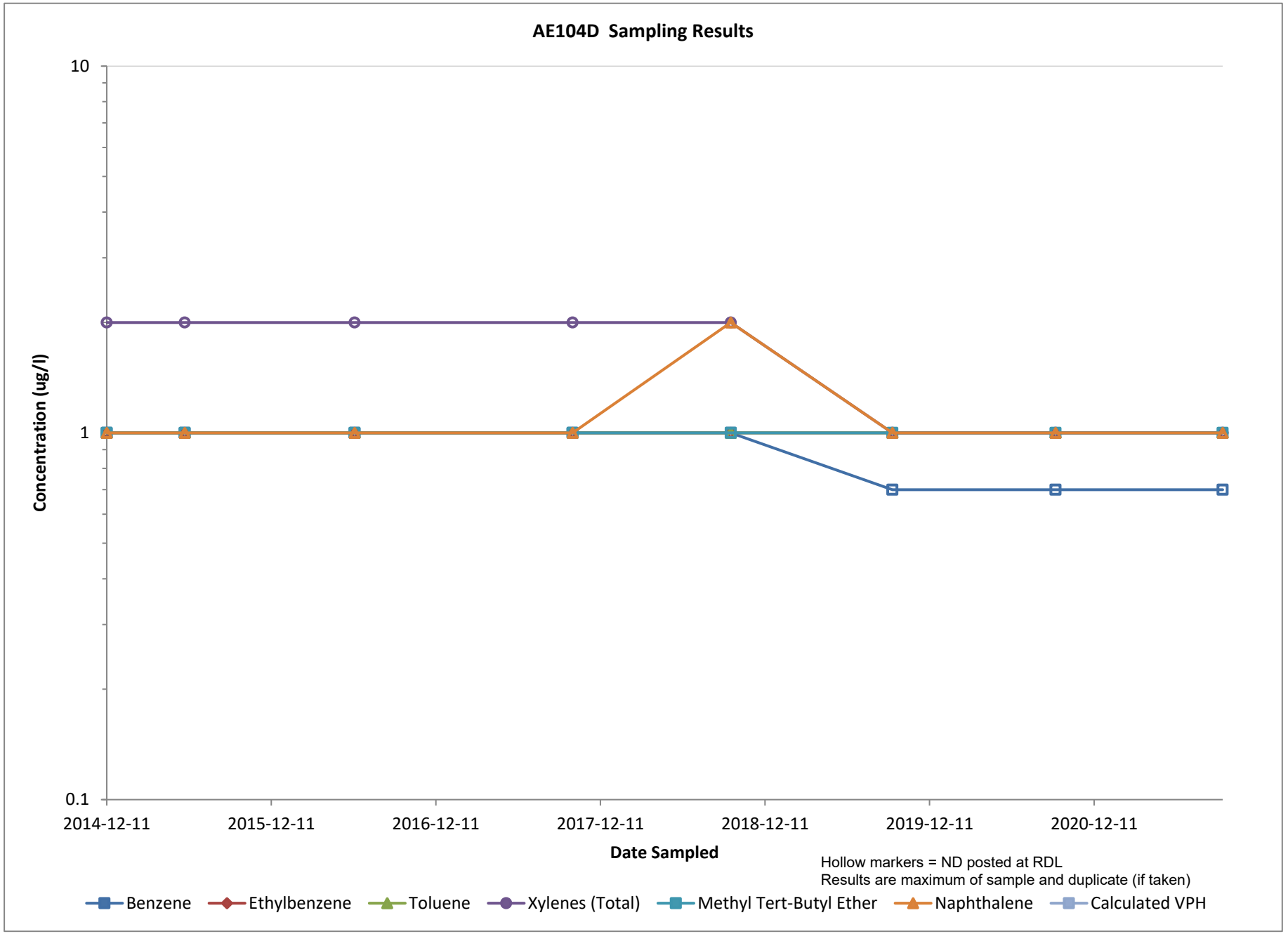

AE103R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

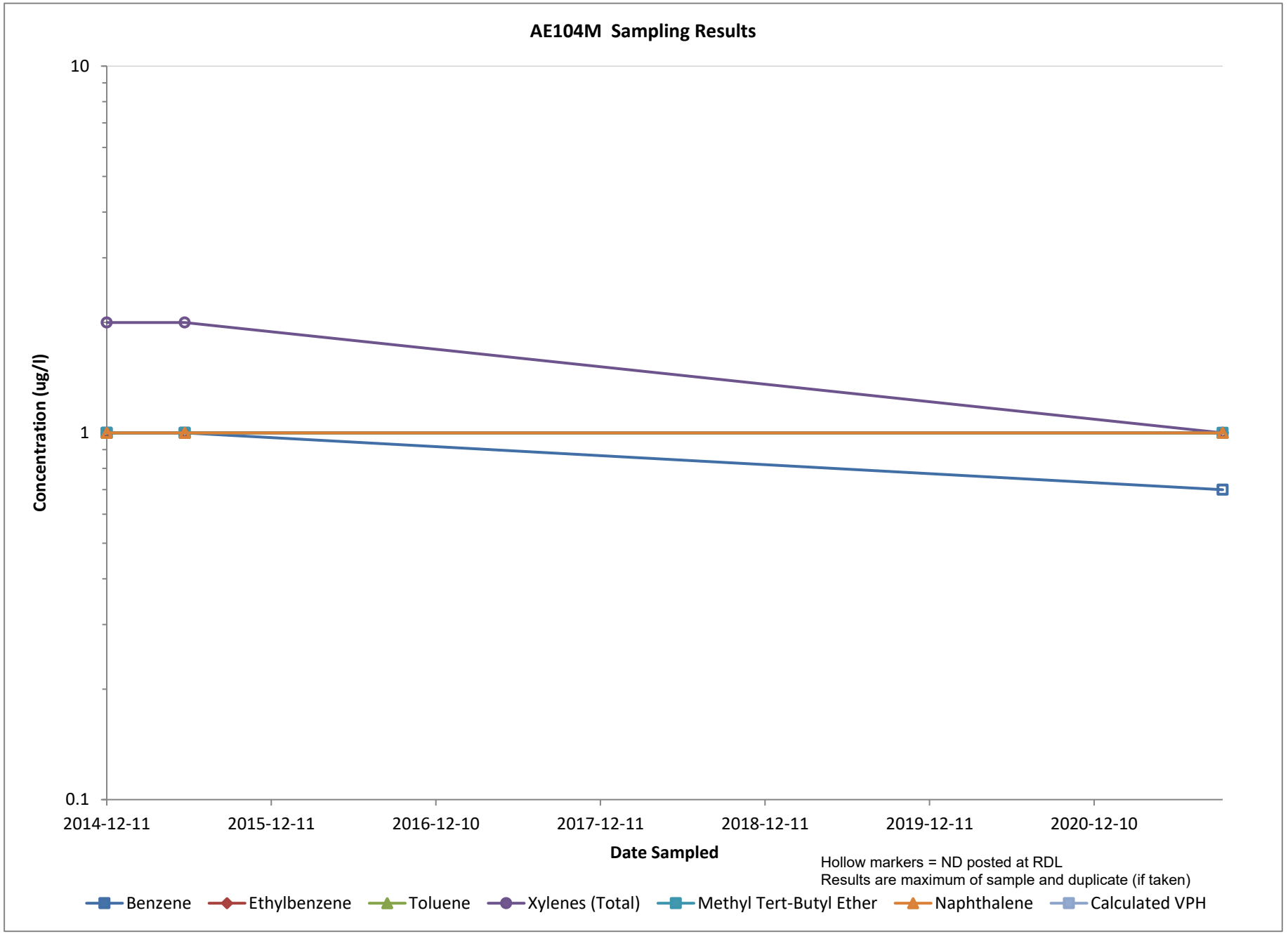

AE103R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

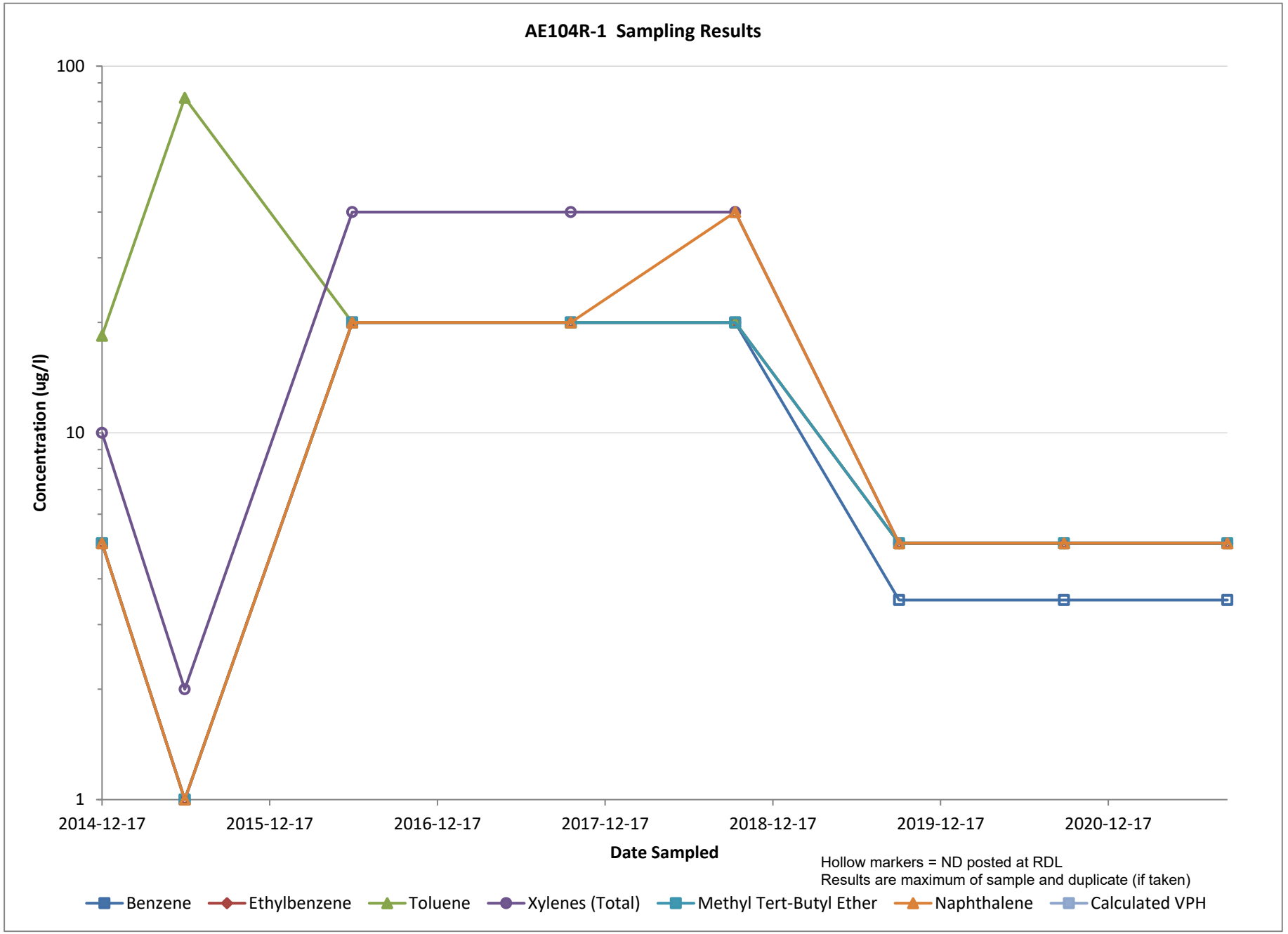

AE103R-6 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

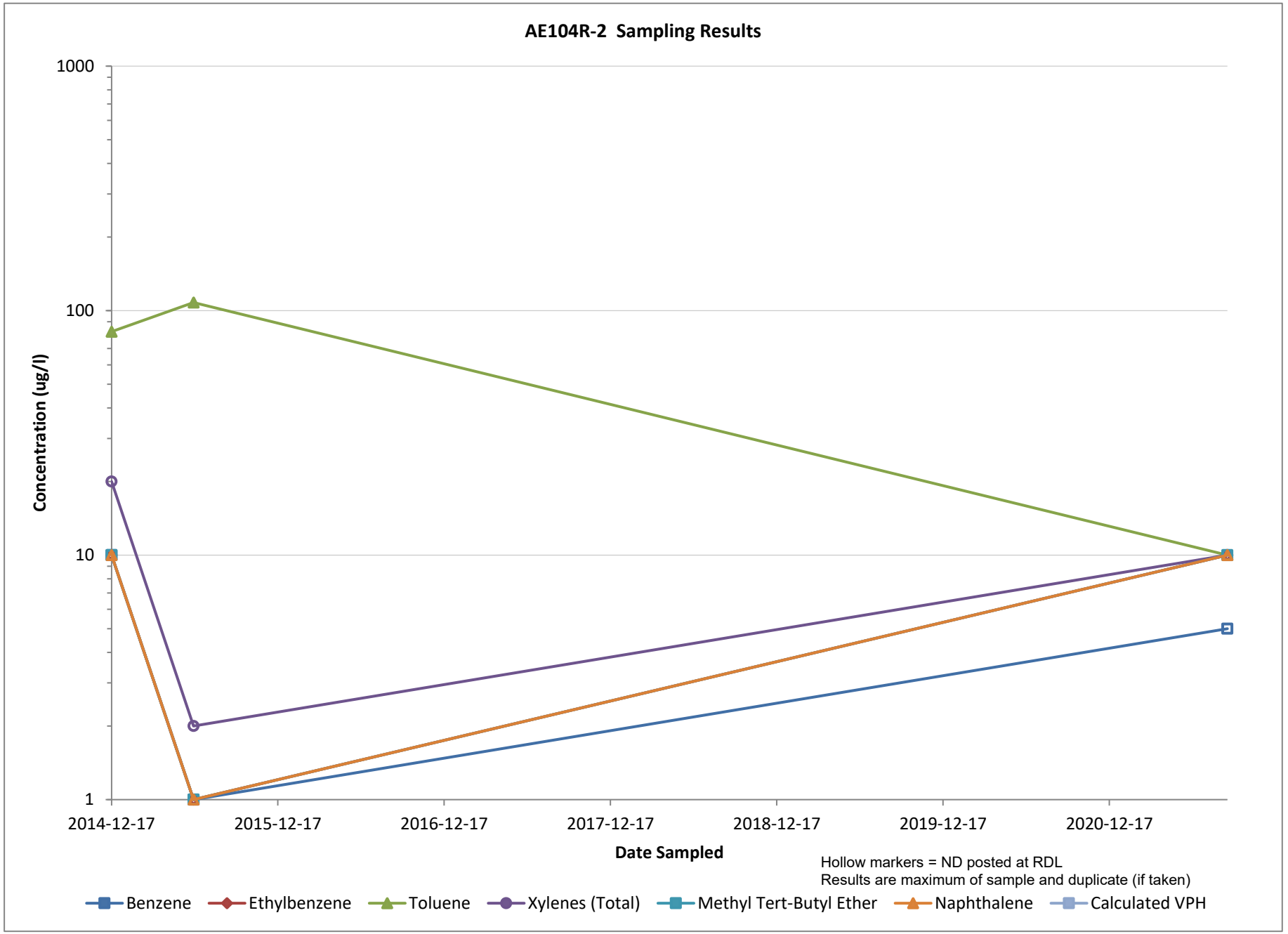

AE103R-7 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

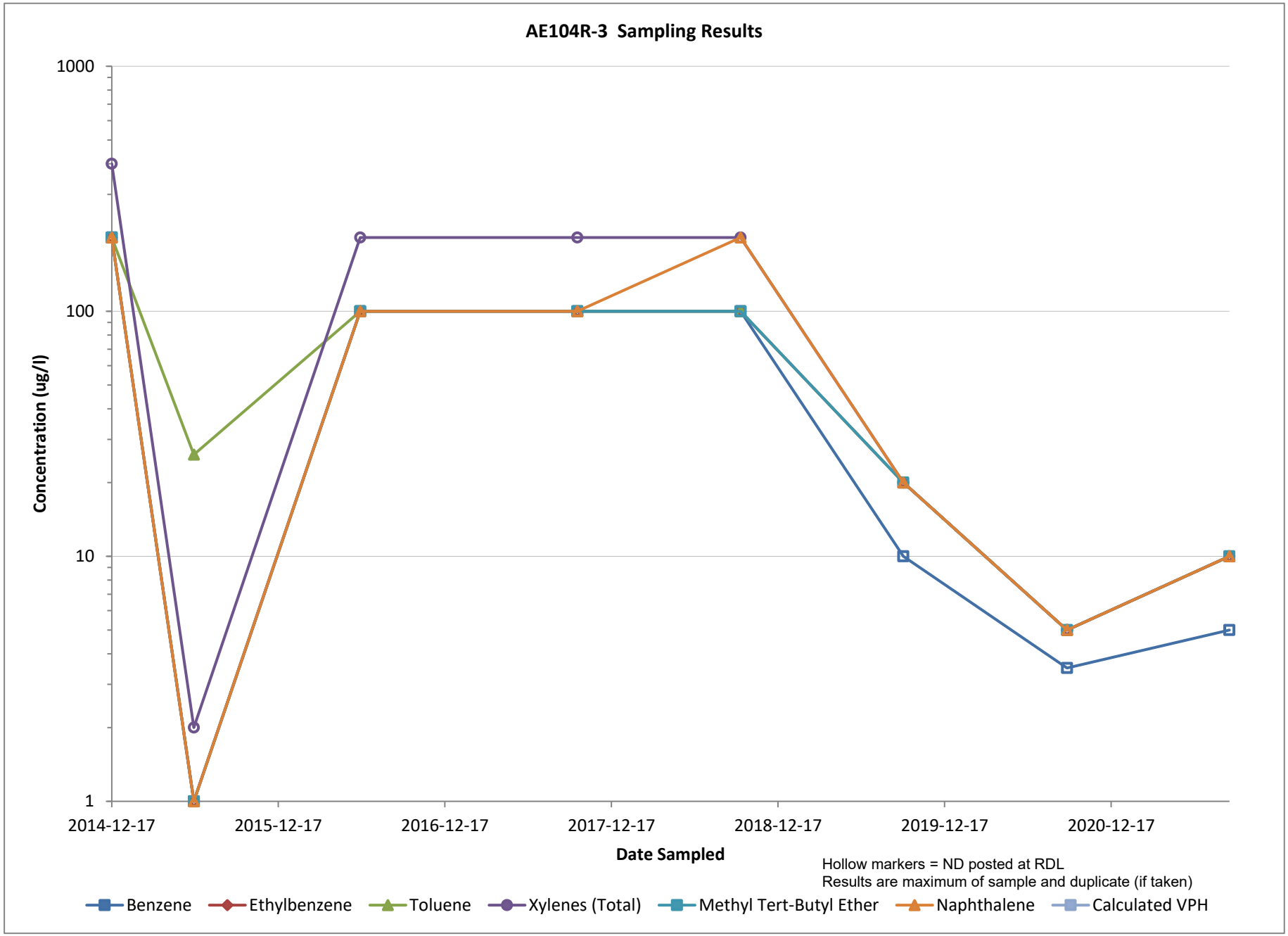

AE103S Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

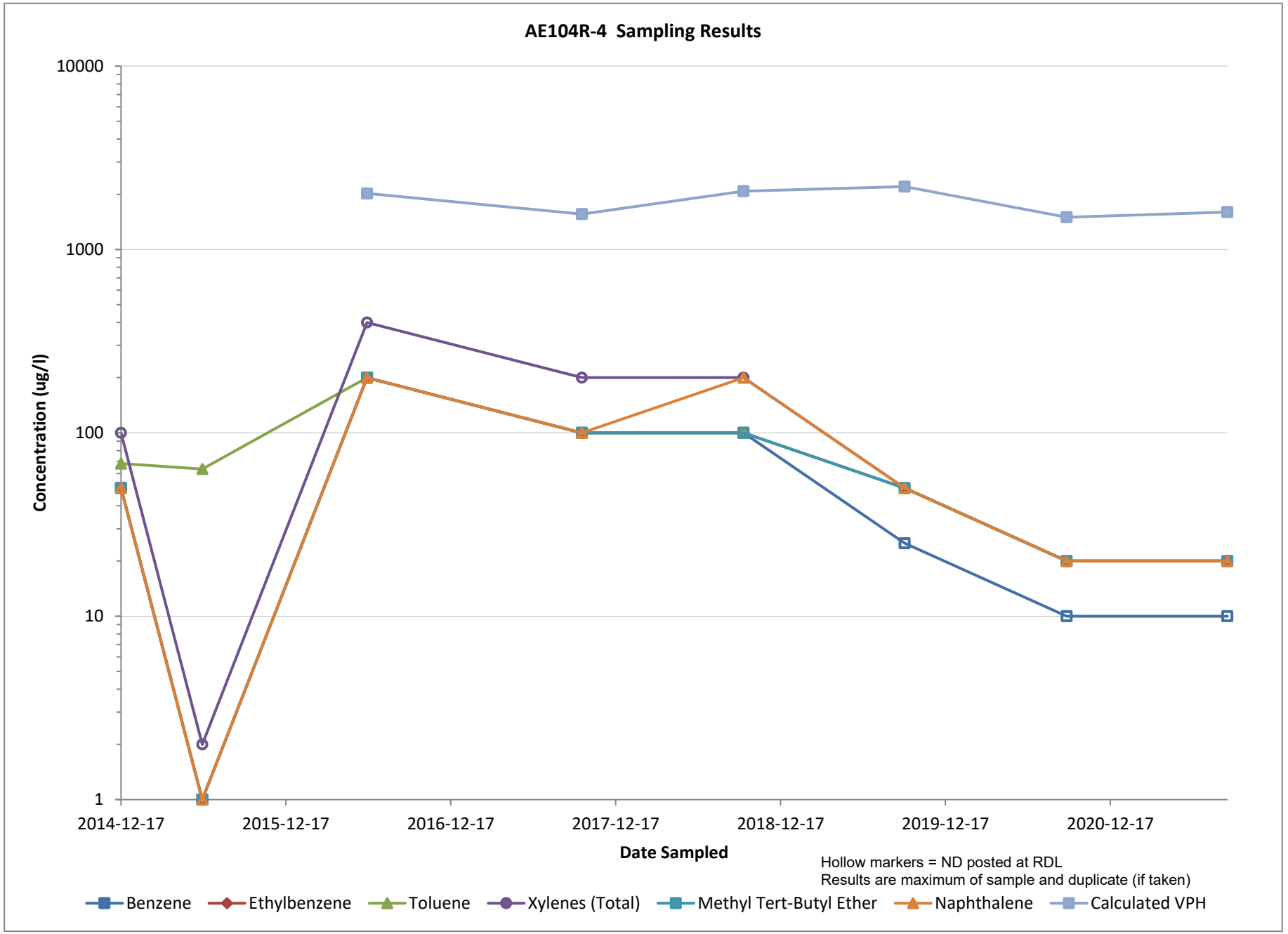

AE104D Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

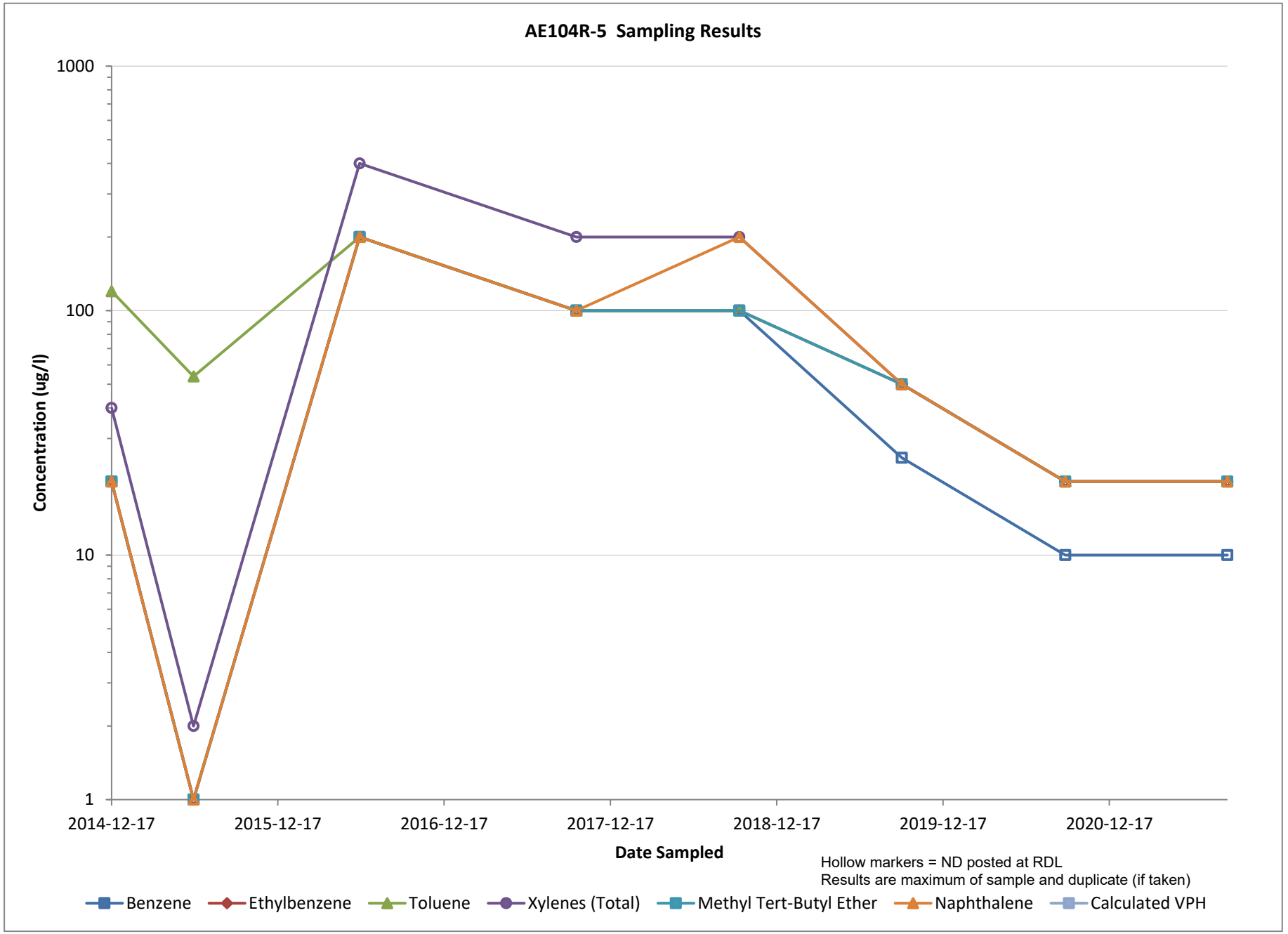

AE104M Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-10
2017-12-11
2018-12-11
2019-12-11
2020-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

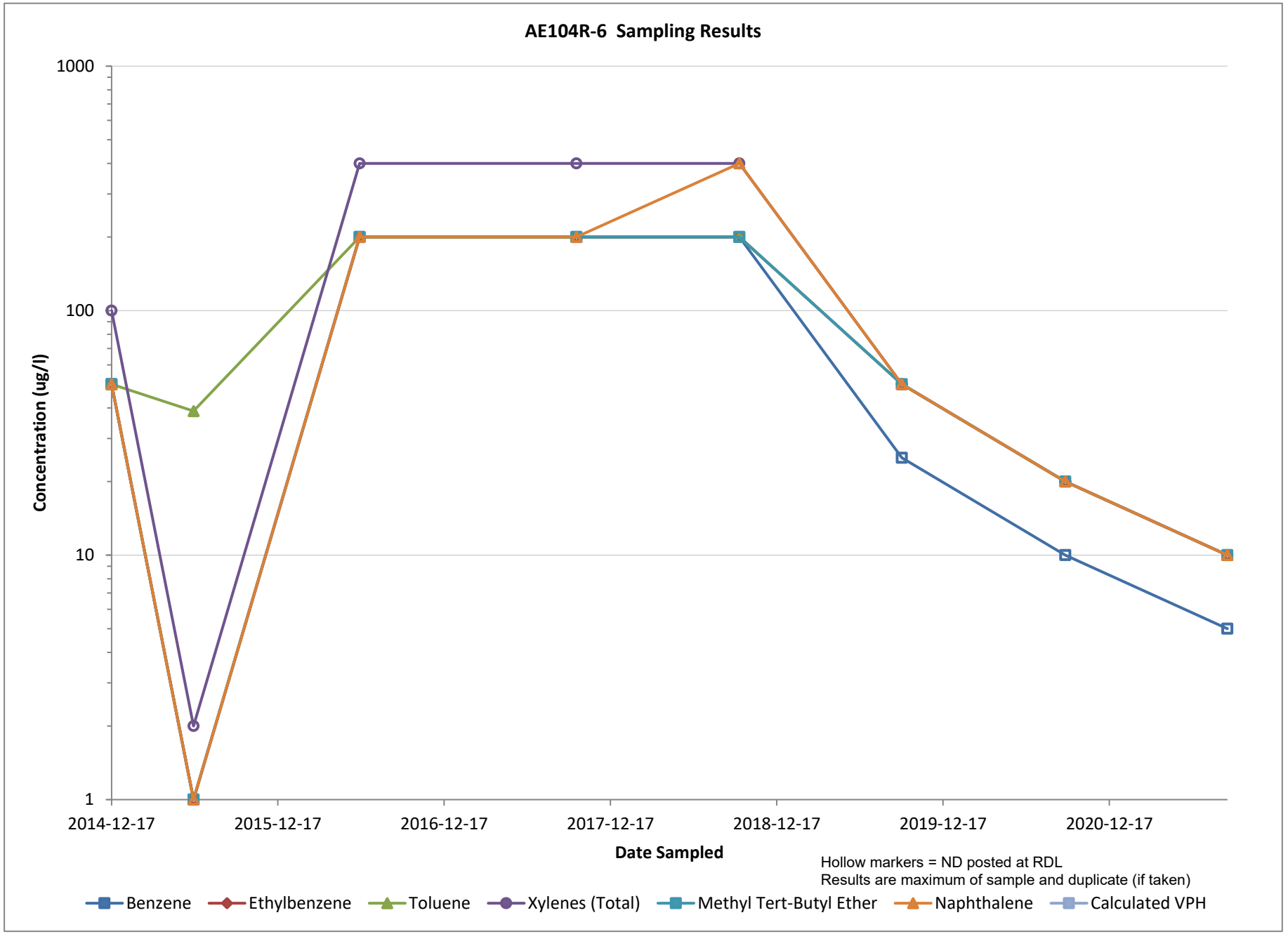

AE104R-1 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

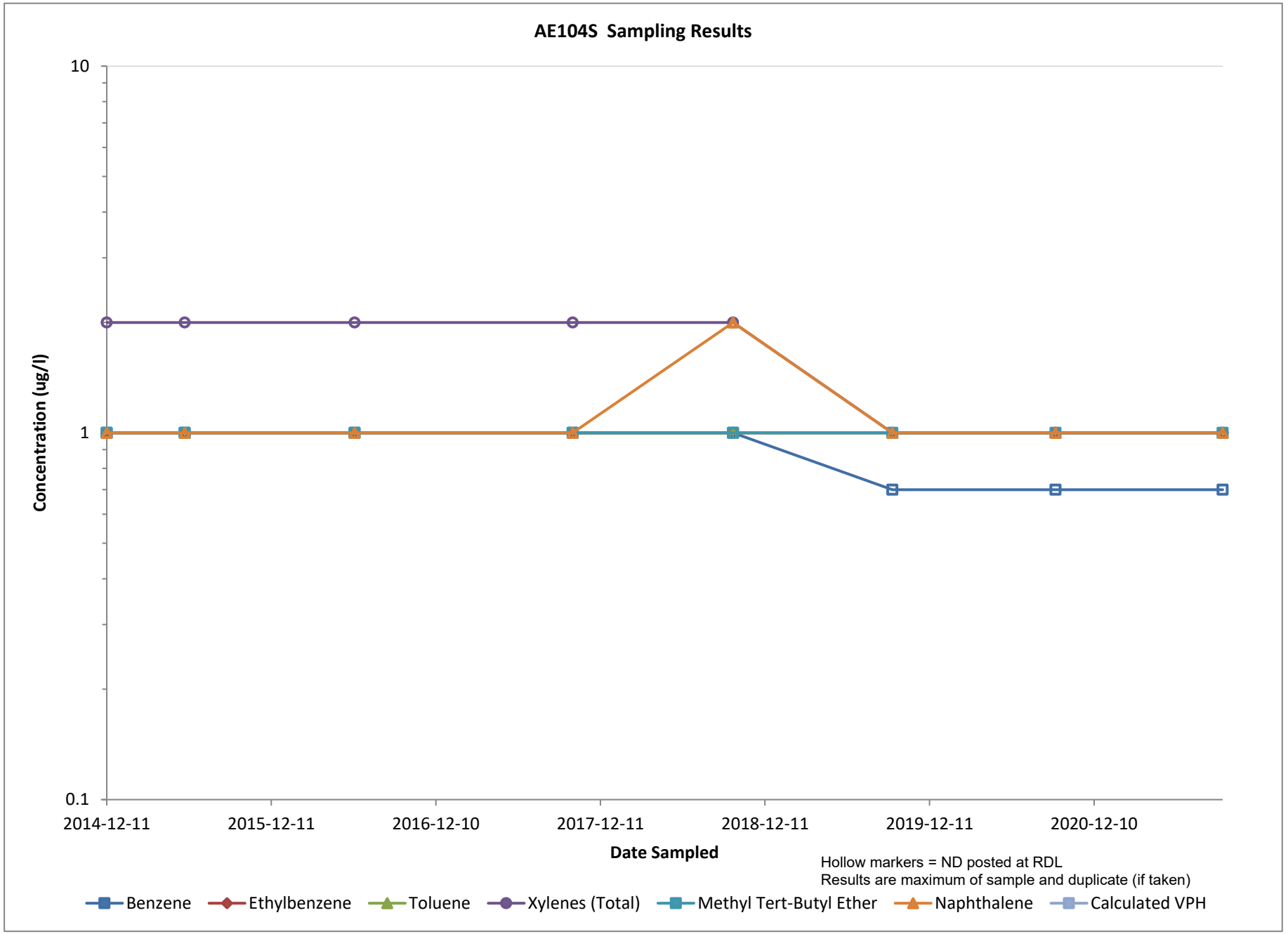

AE104R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

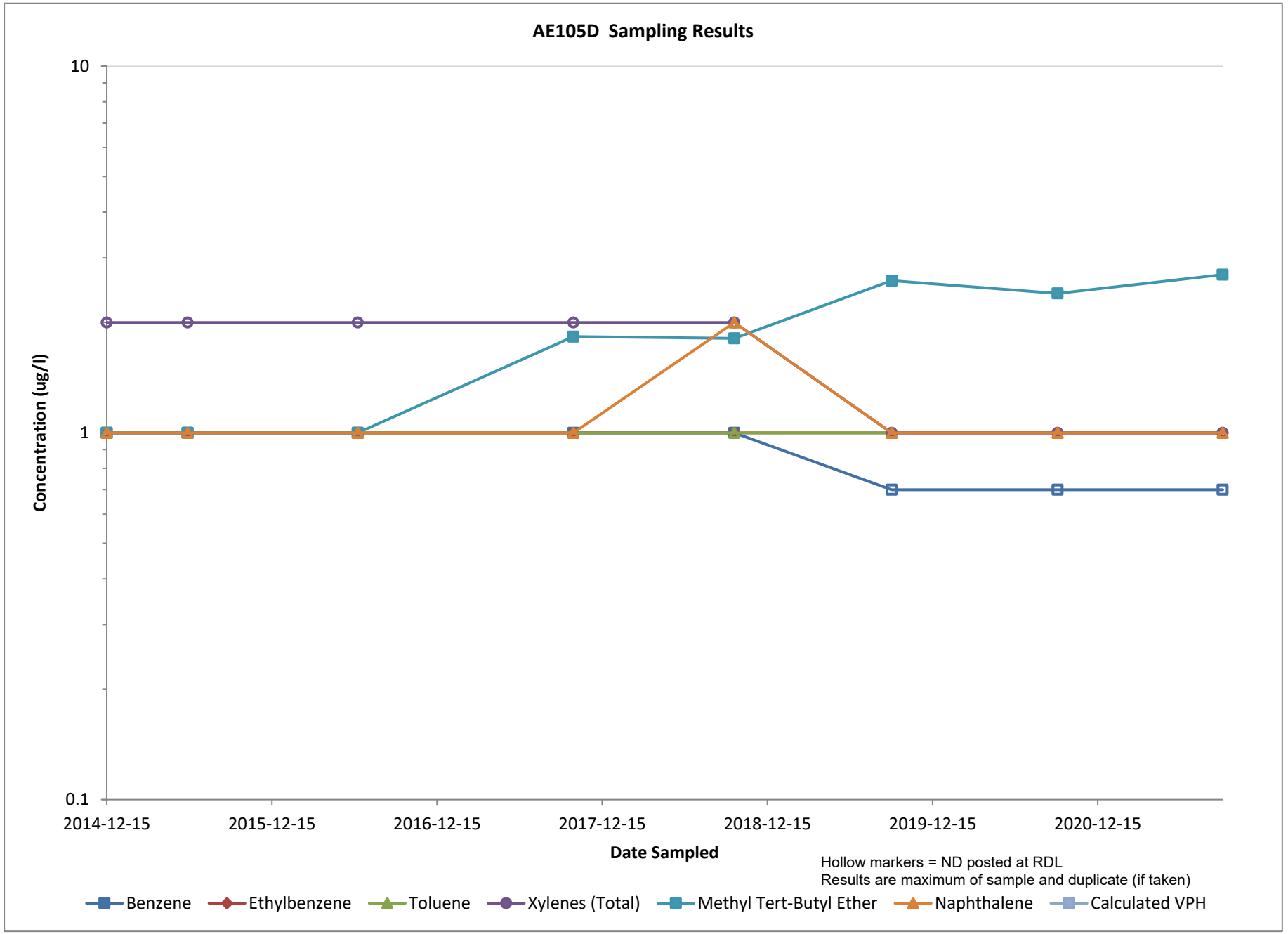

AE104R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

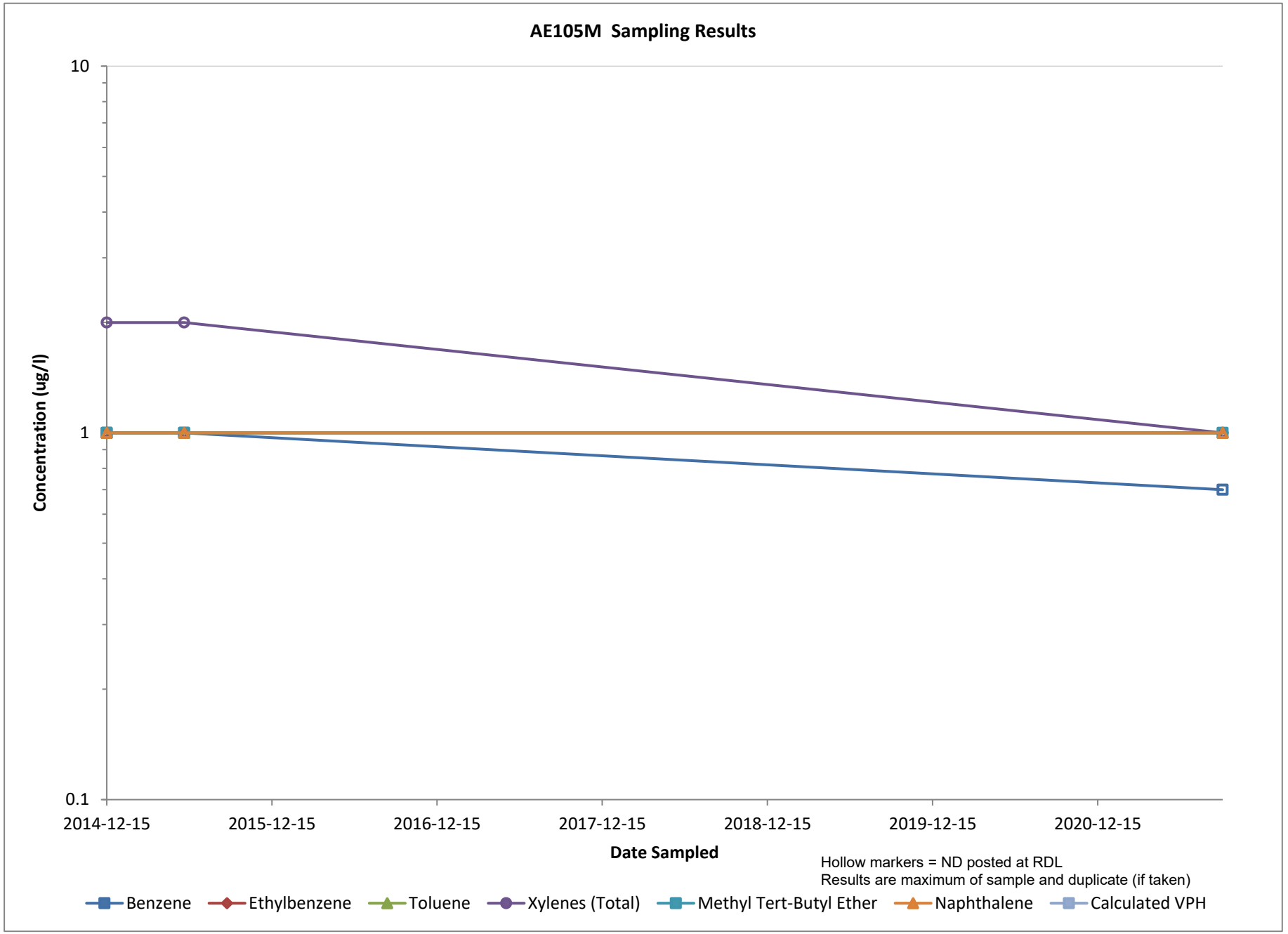

AE104R-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

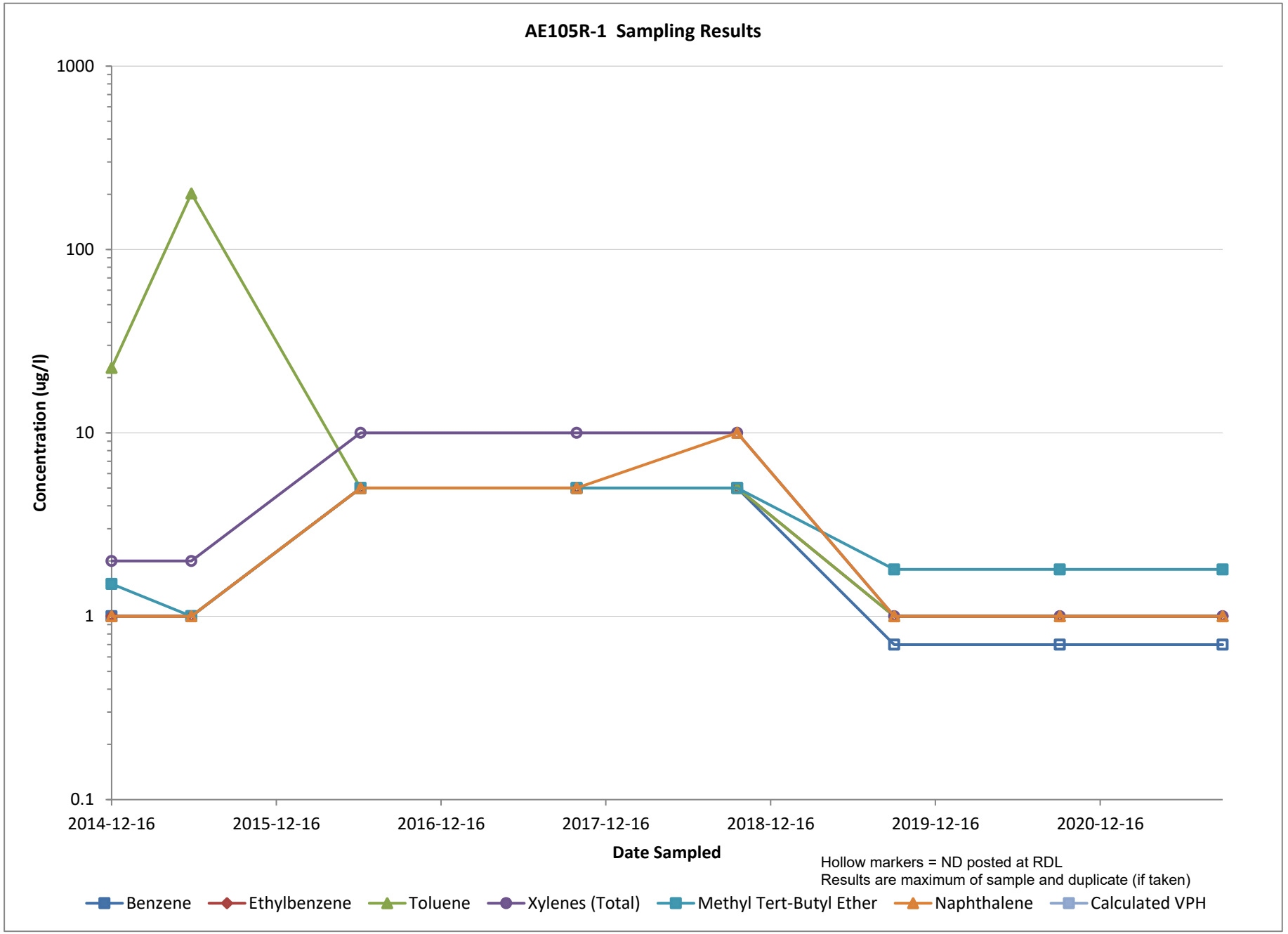

AE104R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

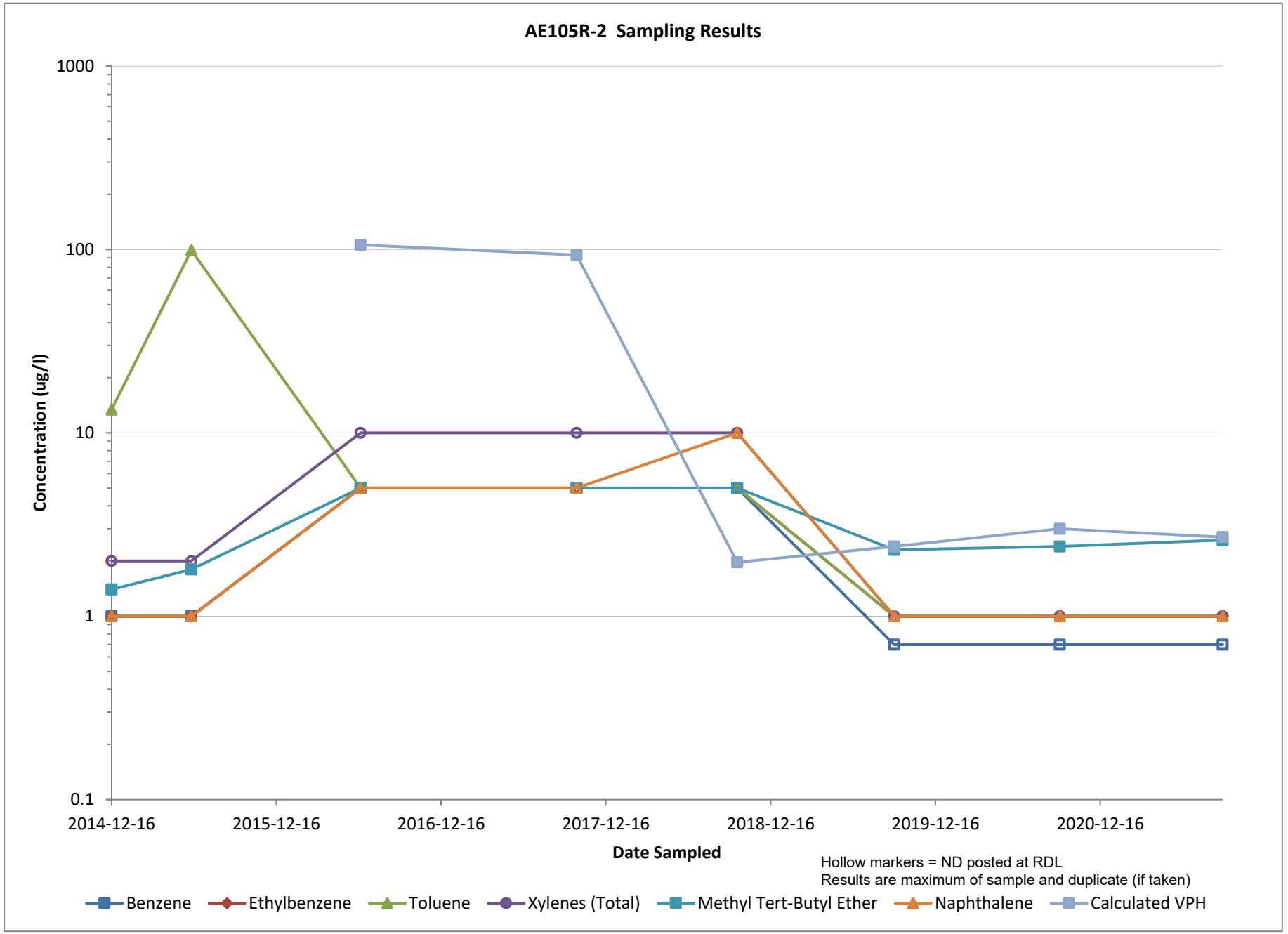

AE104R-6 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

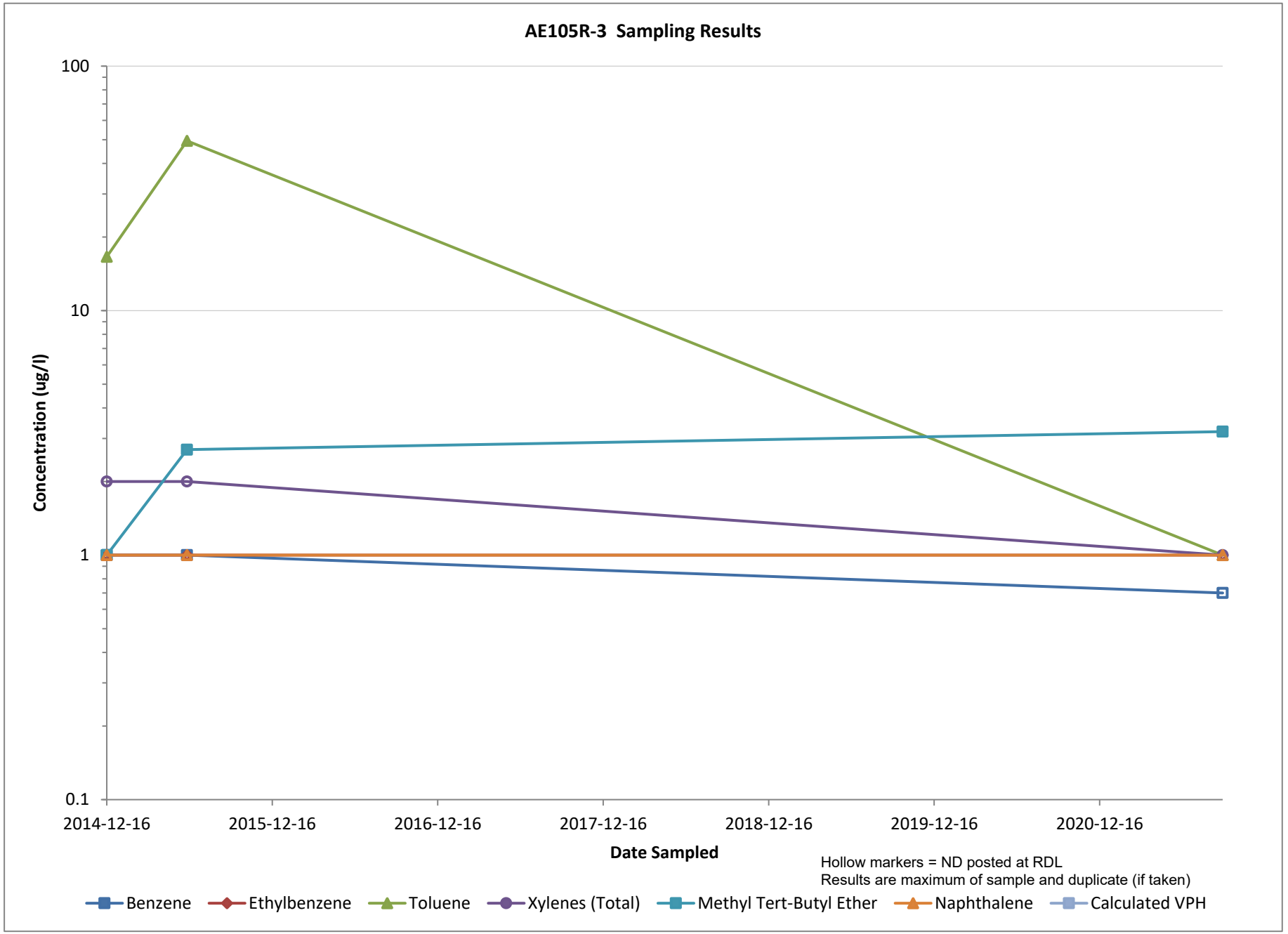

AE104S Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-10
2017-12-11
2018-12-11
2019-12-11
2020-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

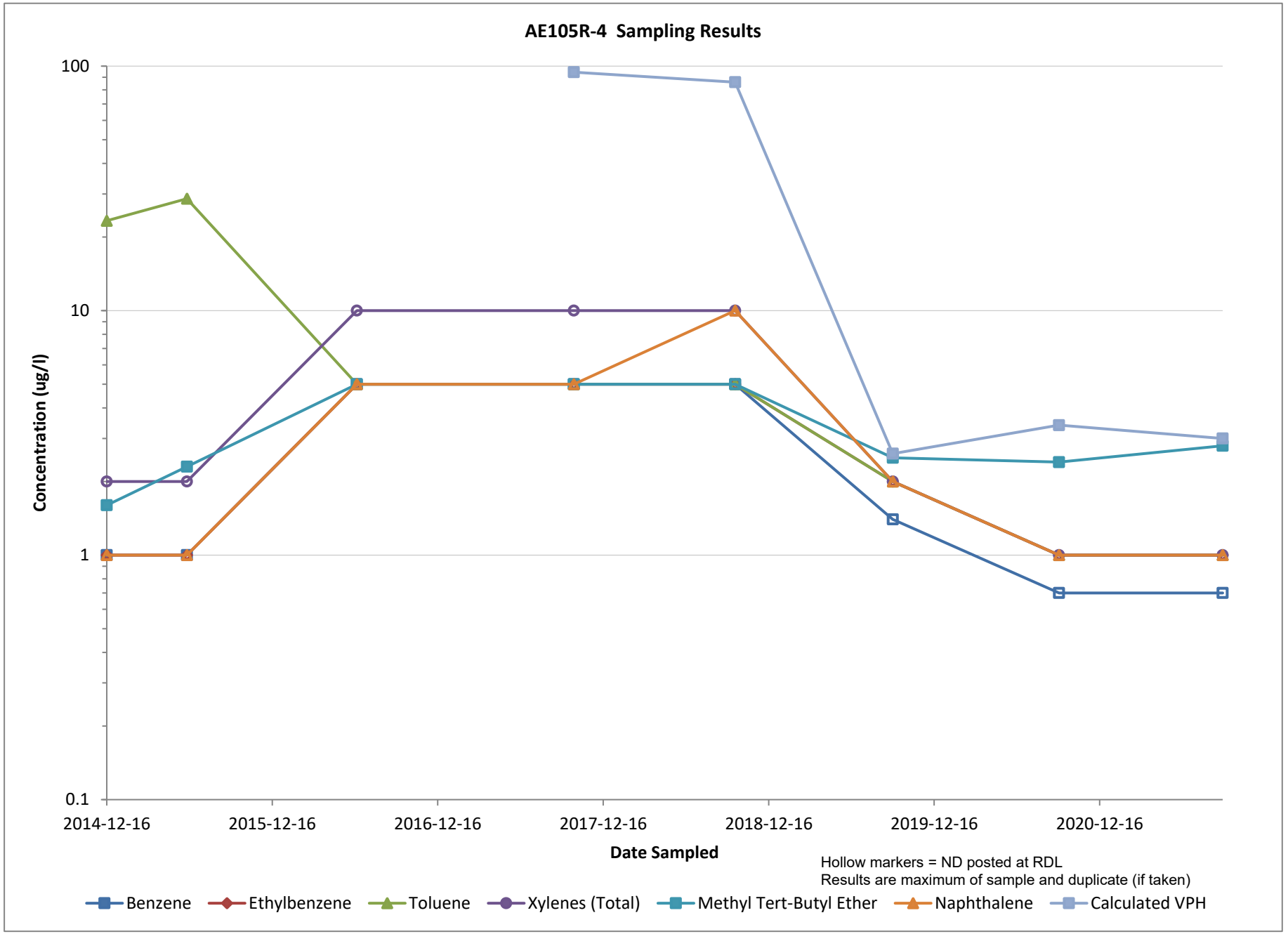

AE105D Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

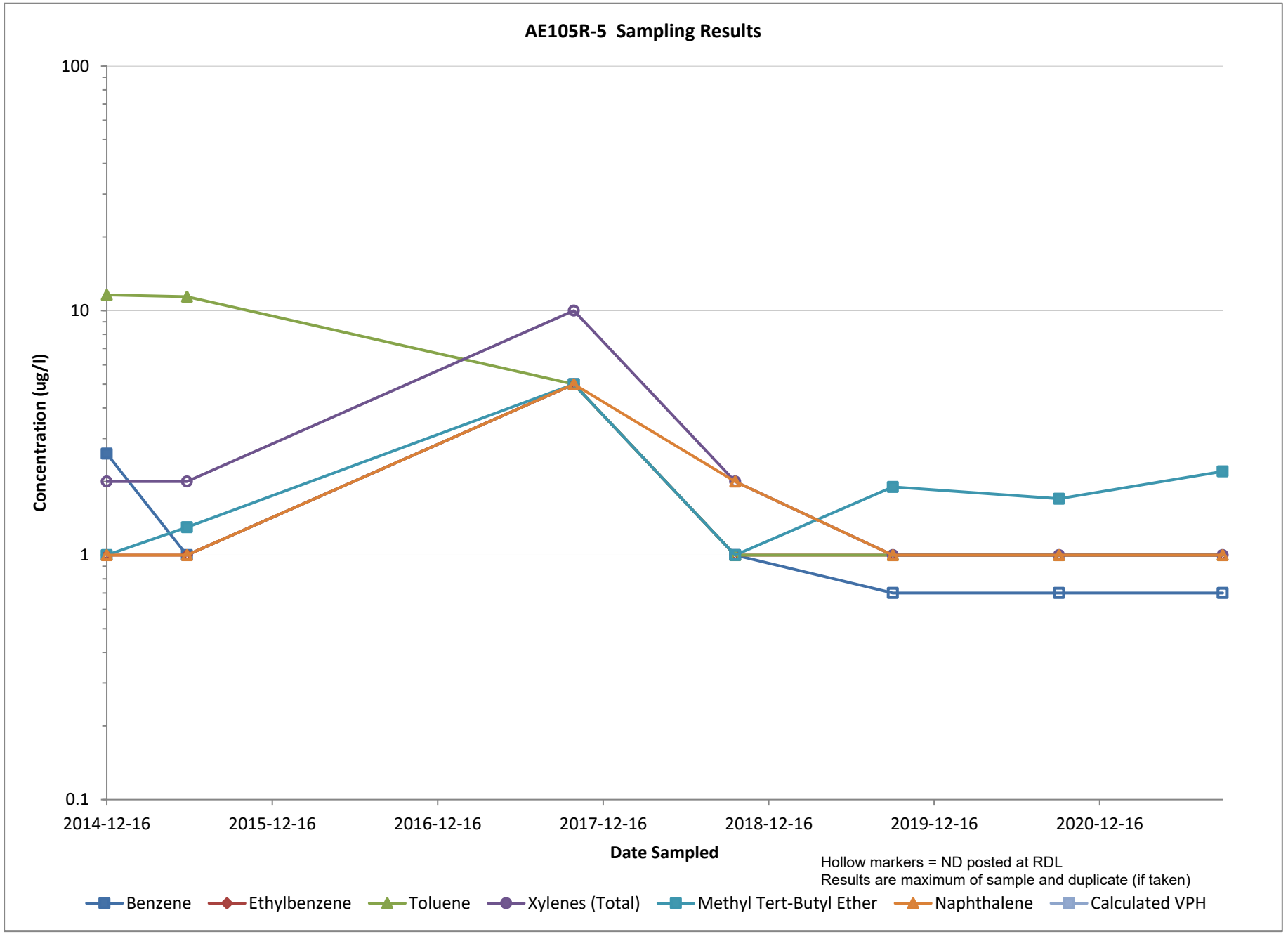

AE105M Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

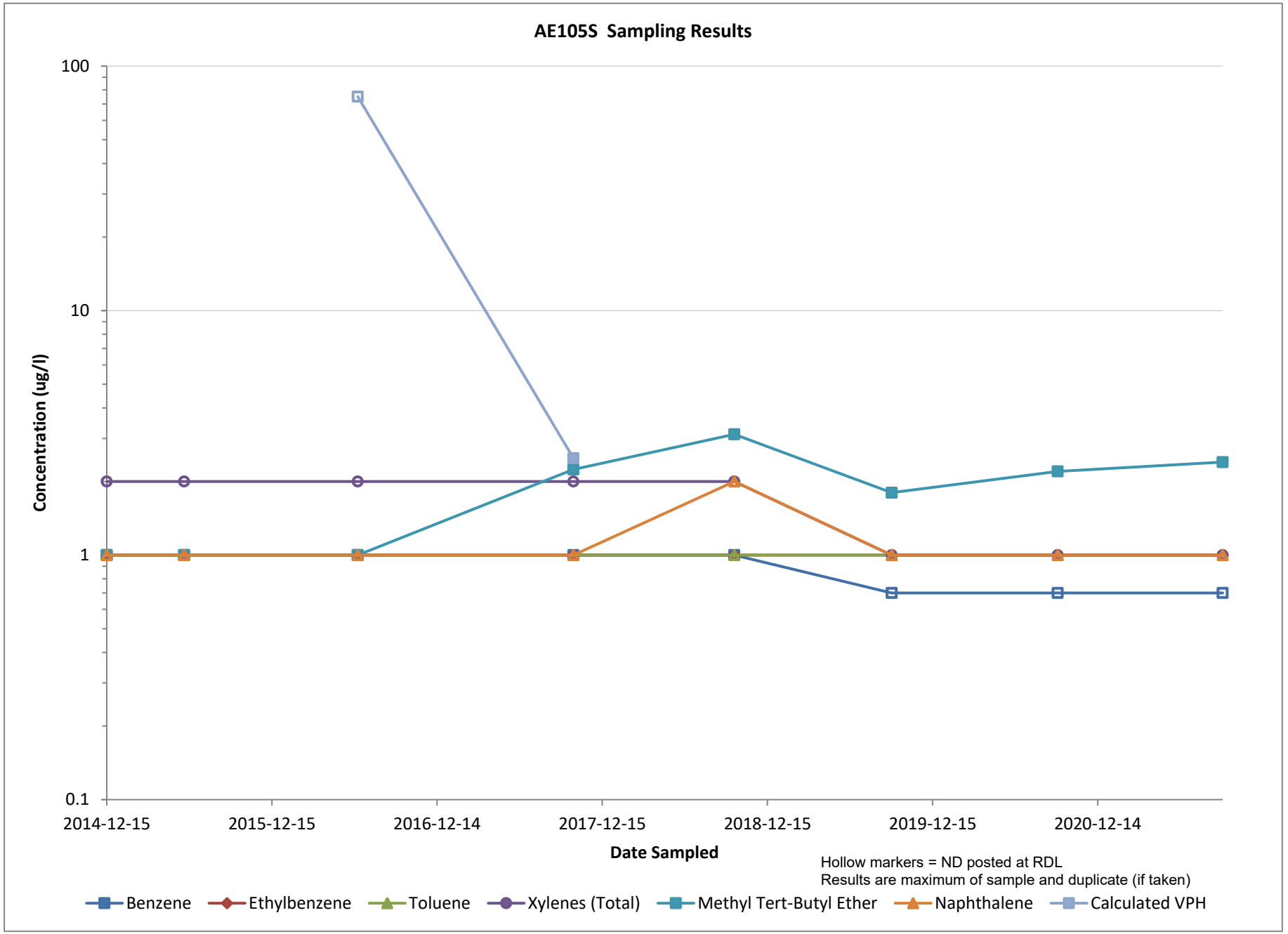

AE105R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

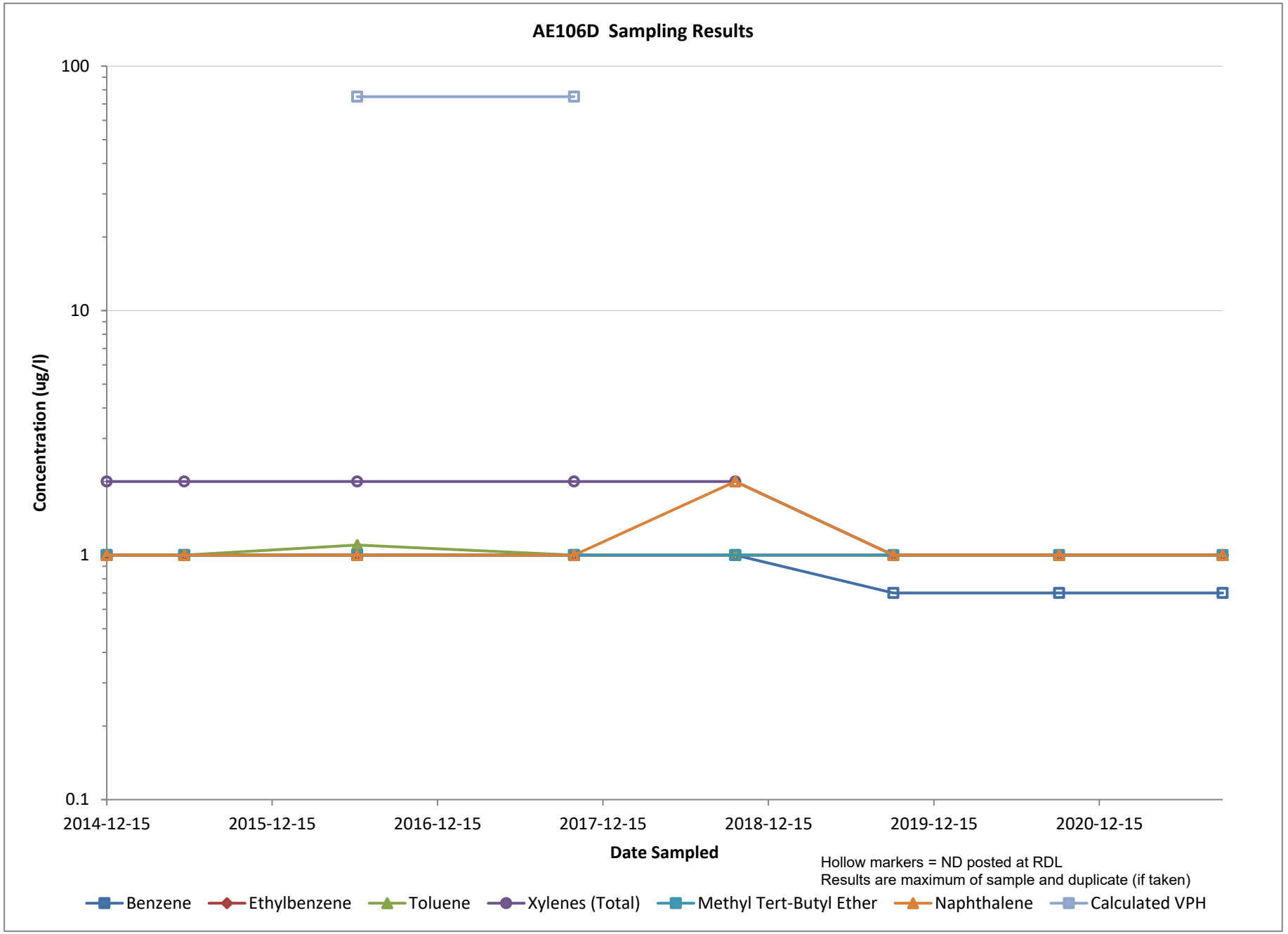

AE105R-2 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

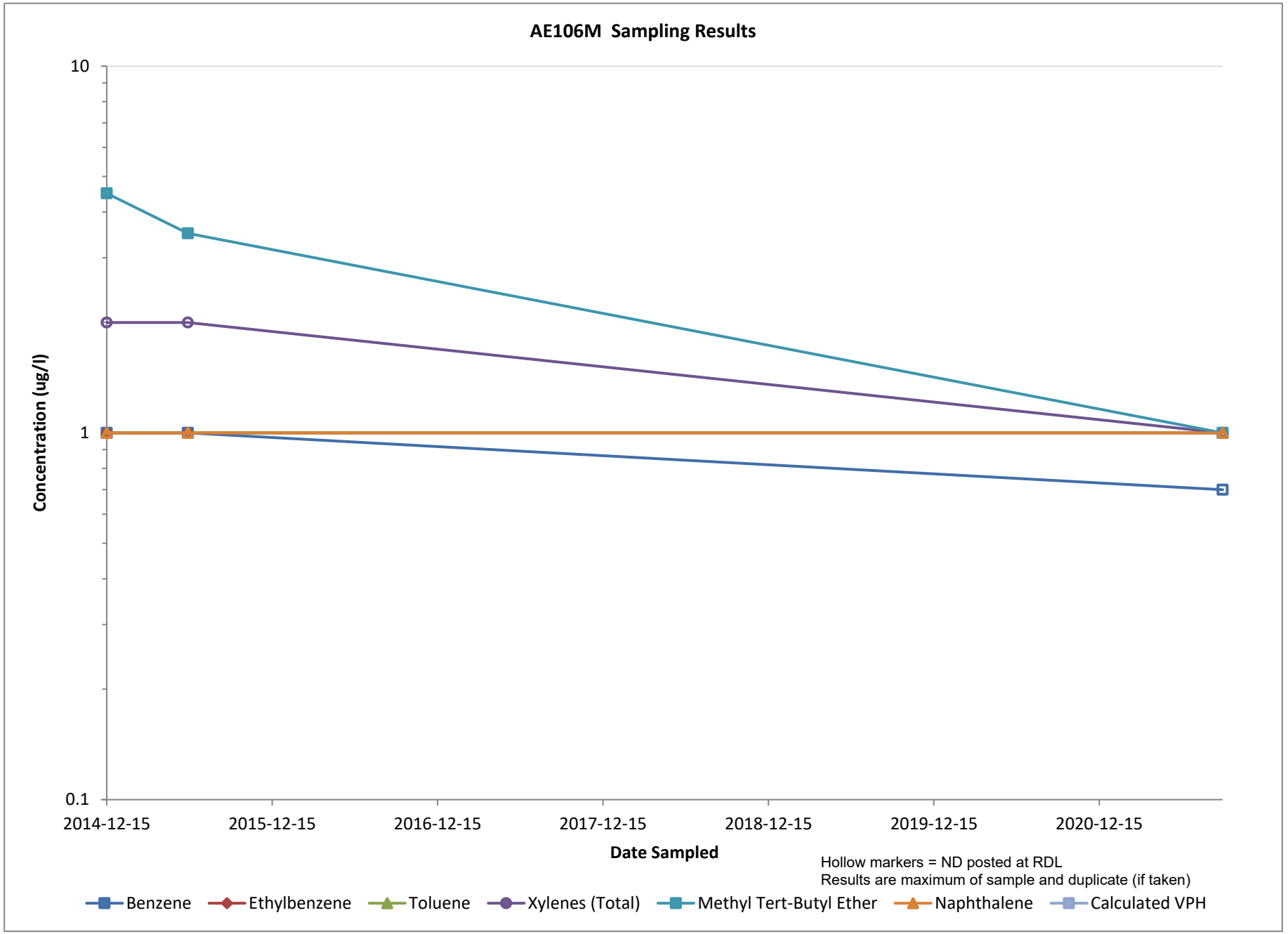

AE105R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

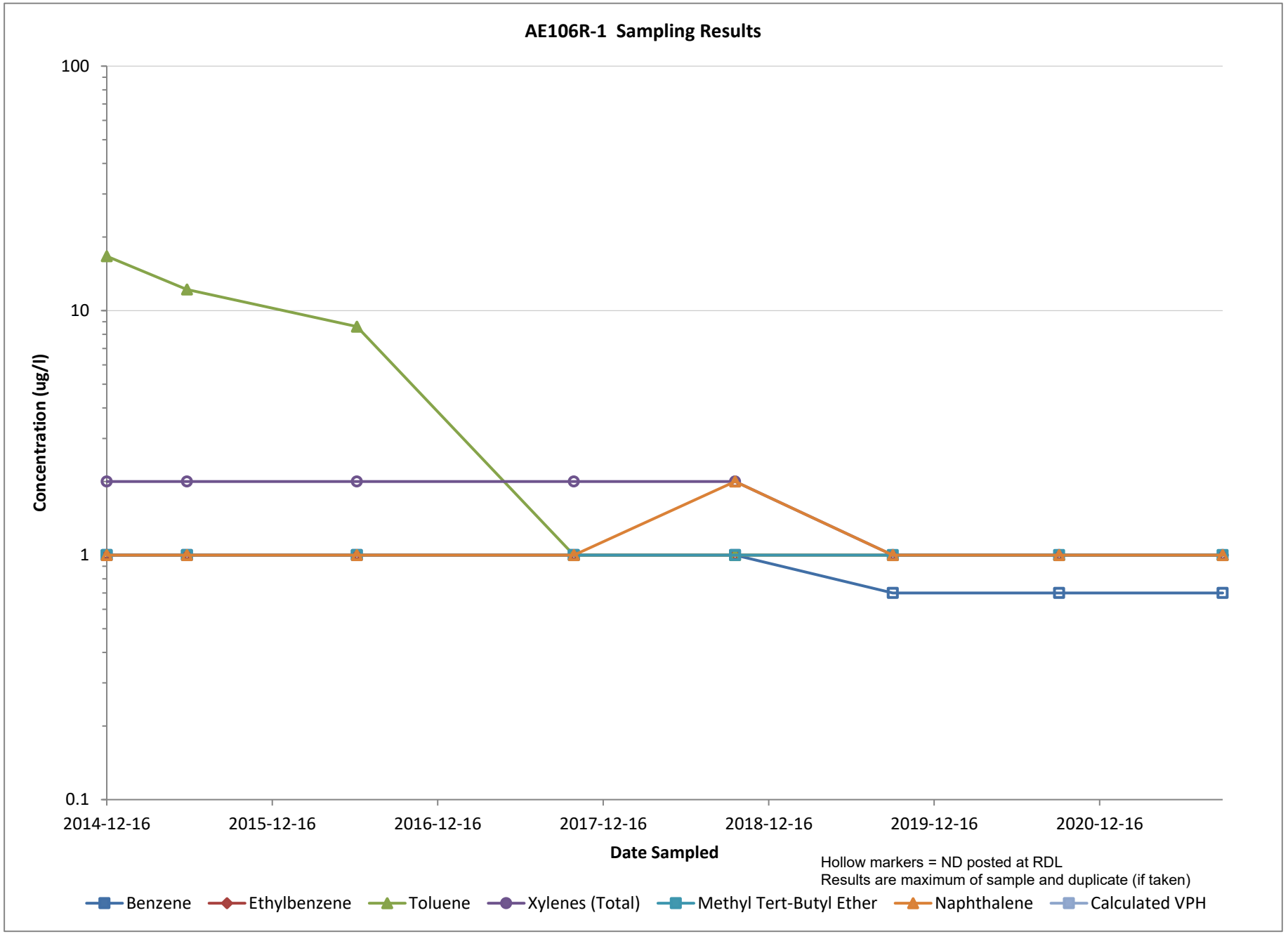

AE105R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

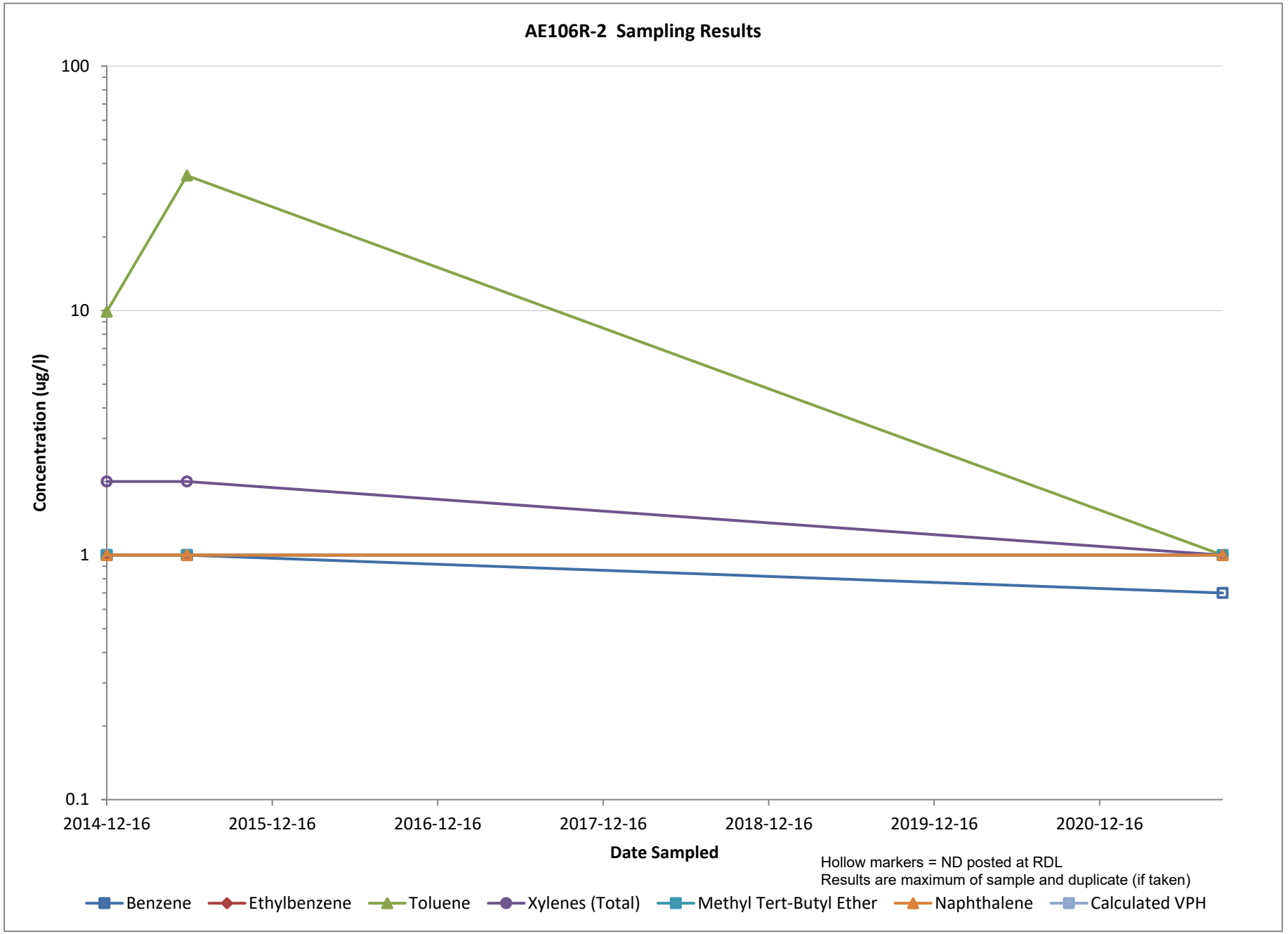

AE105R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

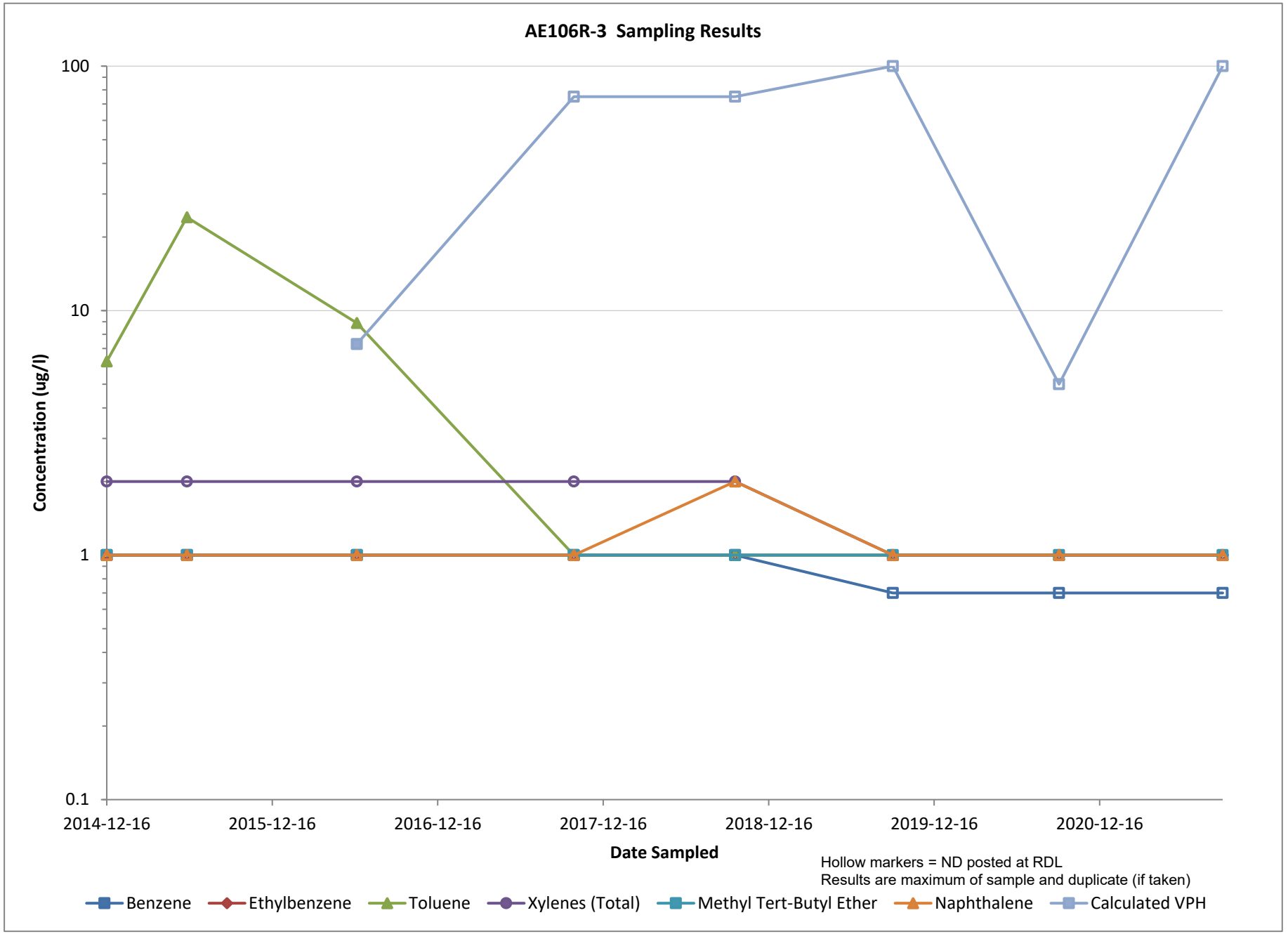

AE105S Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-14
2017-12-15
2018-12-15
2019-12-15
2020-12-14
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

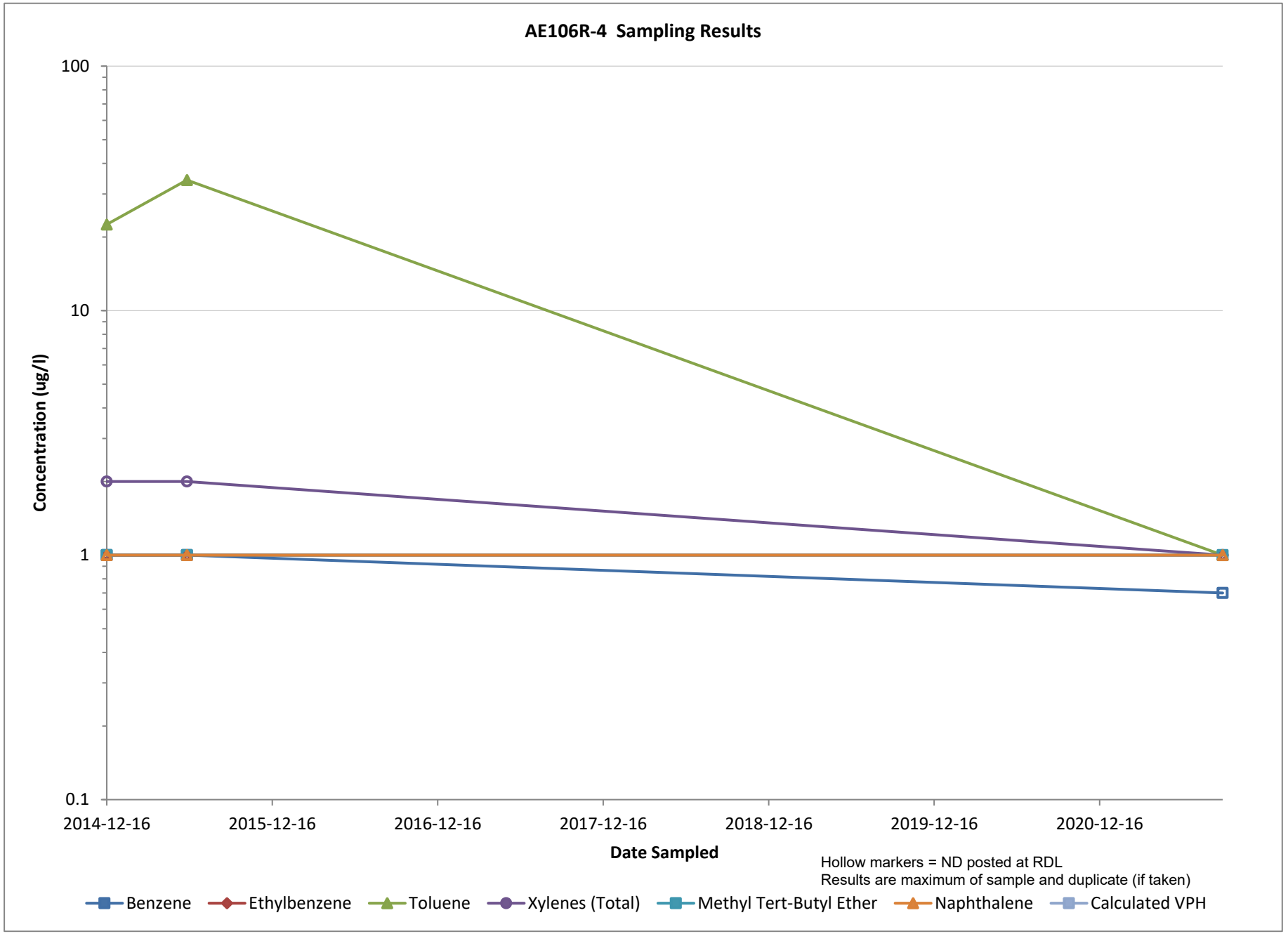

AE106D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

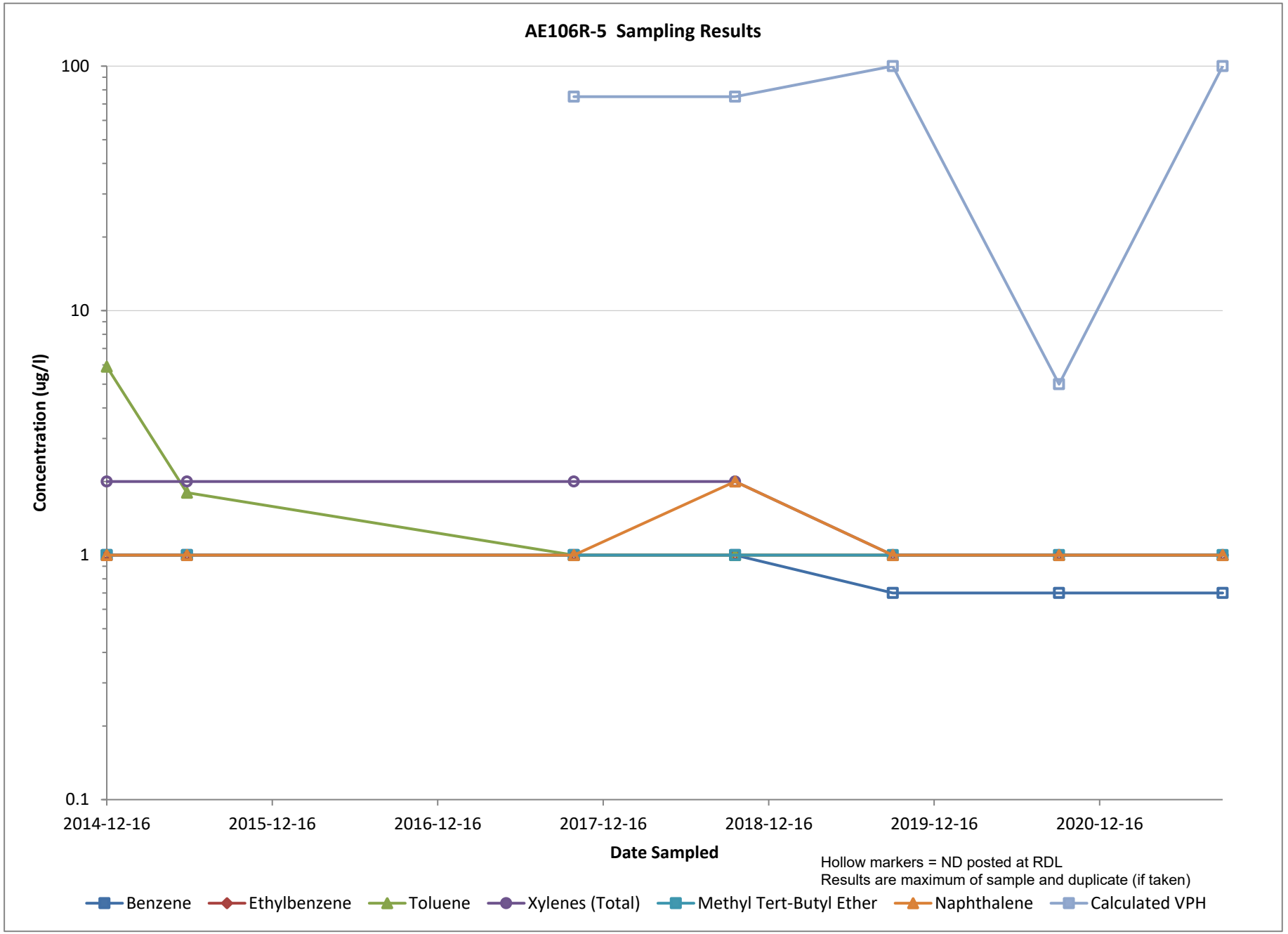

AE106M Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

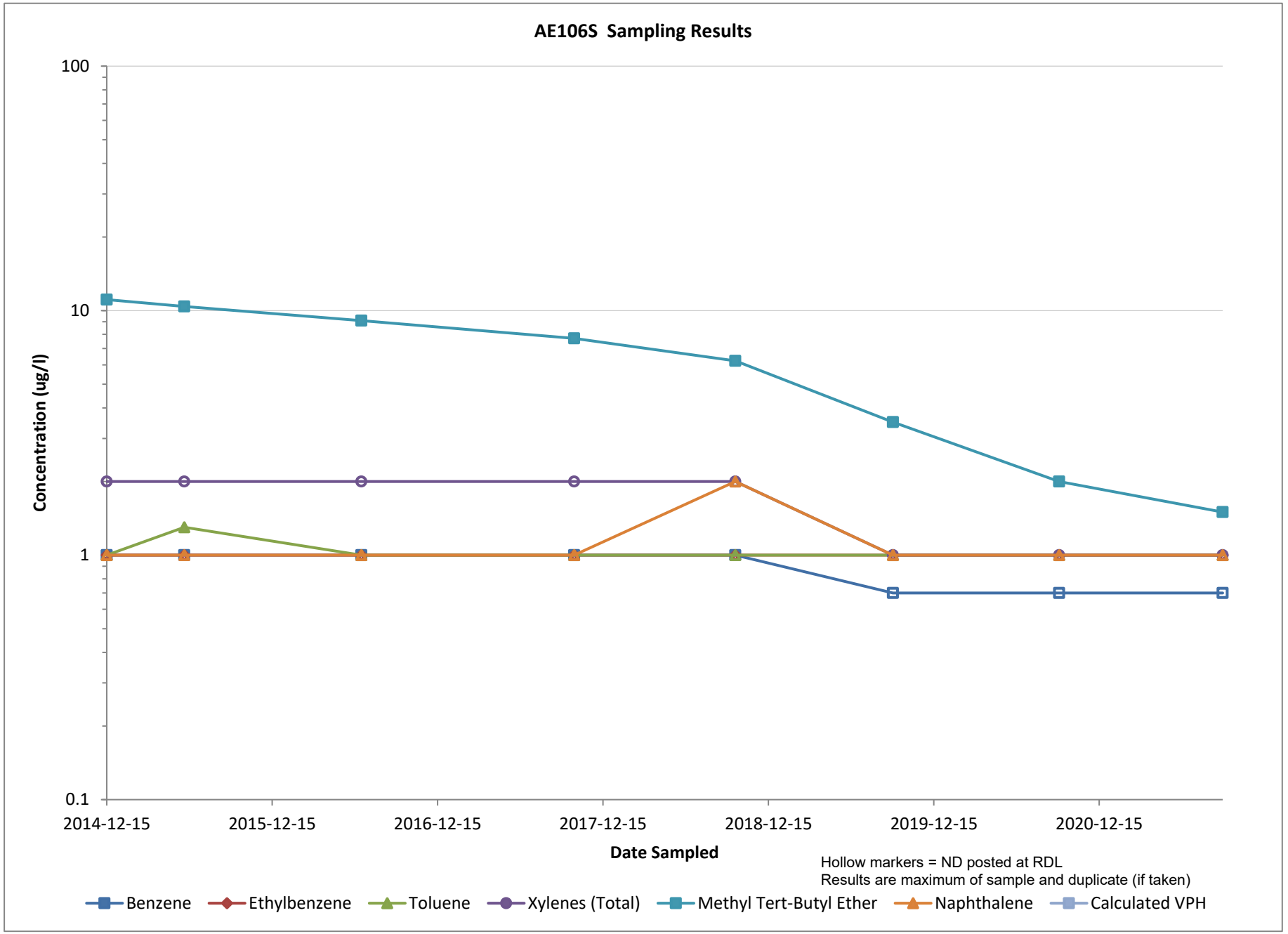

AE106R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

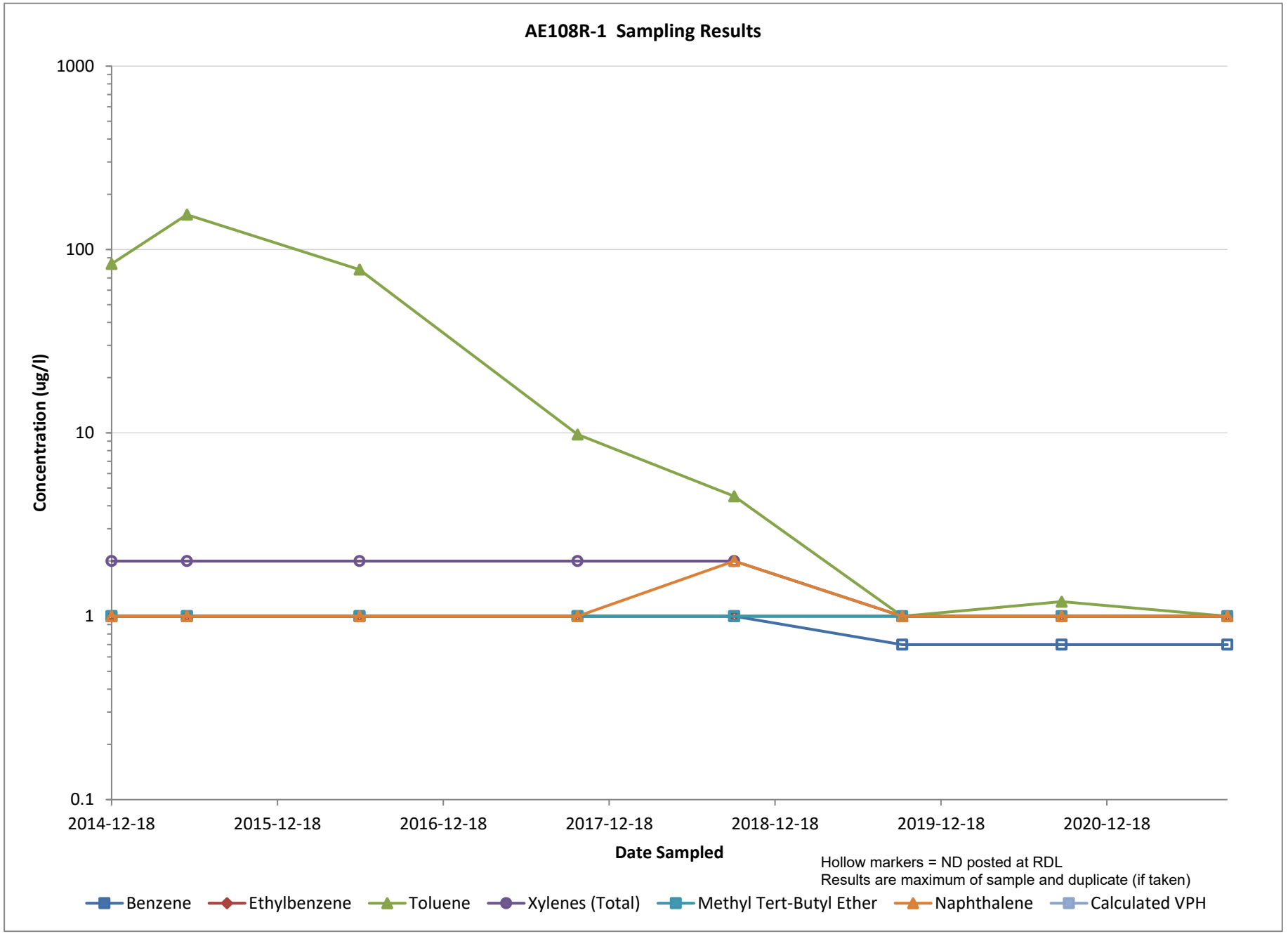

AE106R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

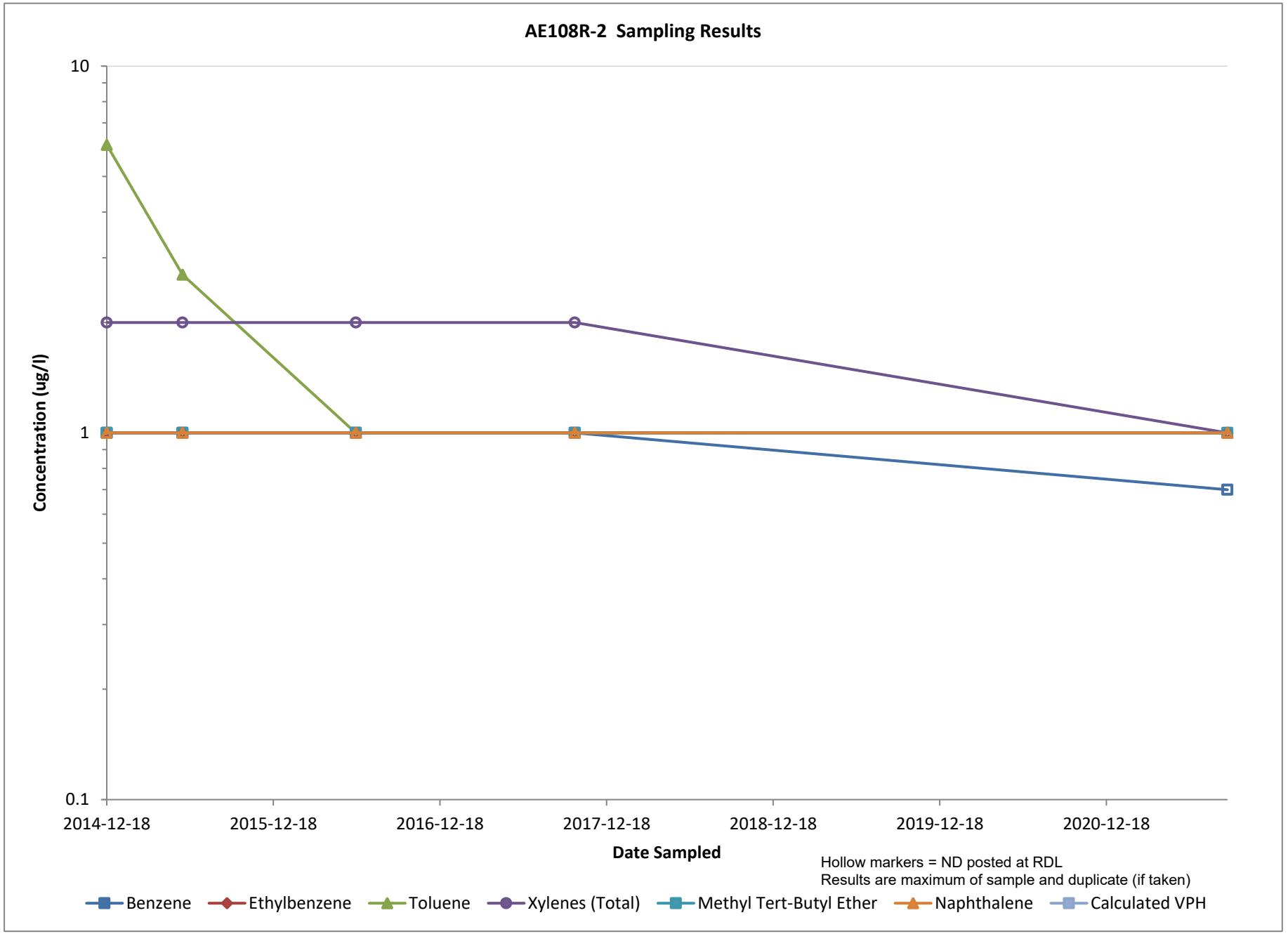

AE106R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

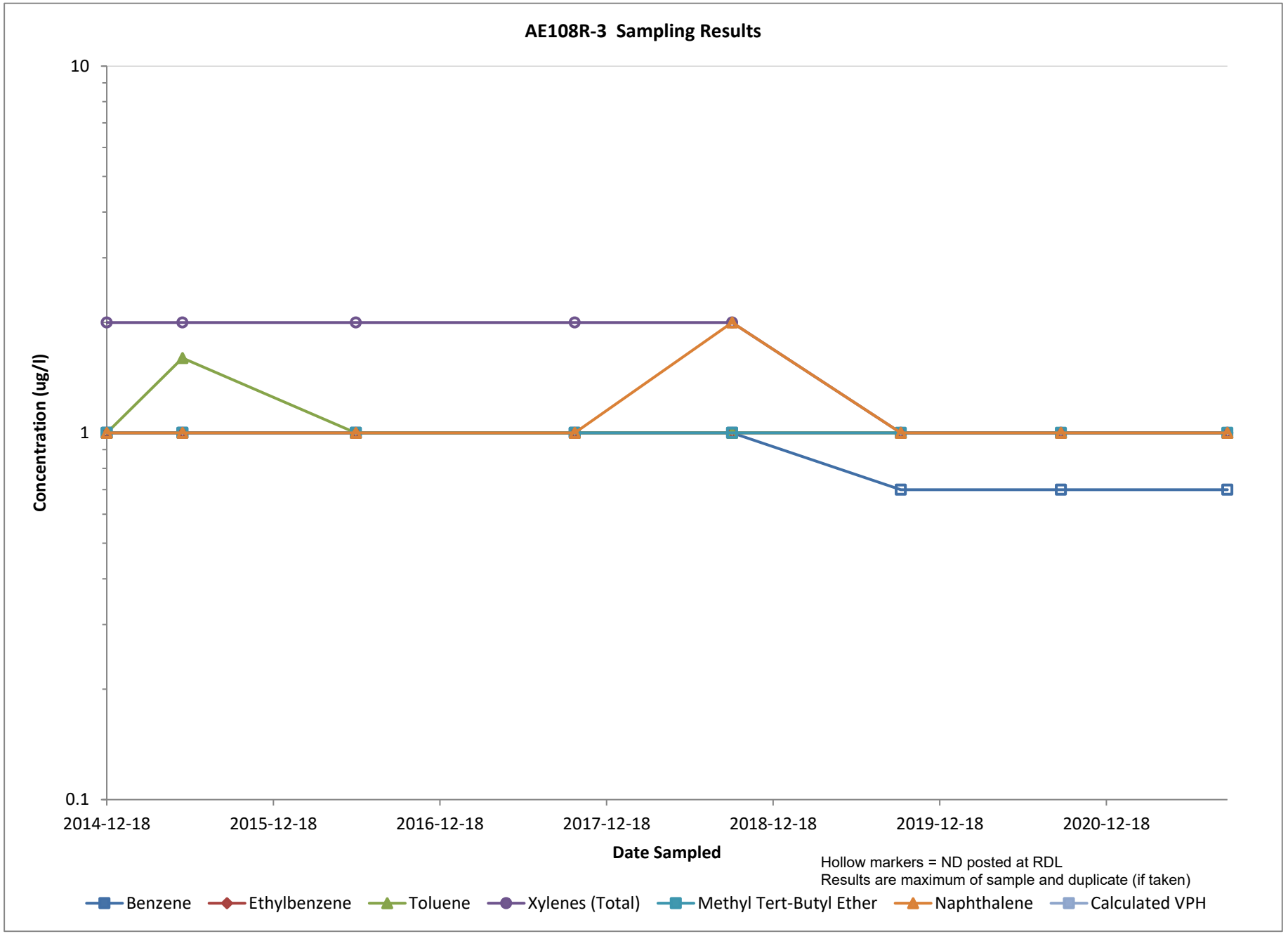

AE106R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

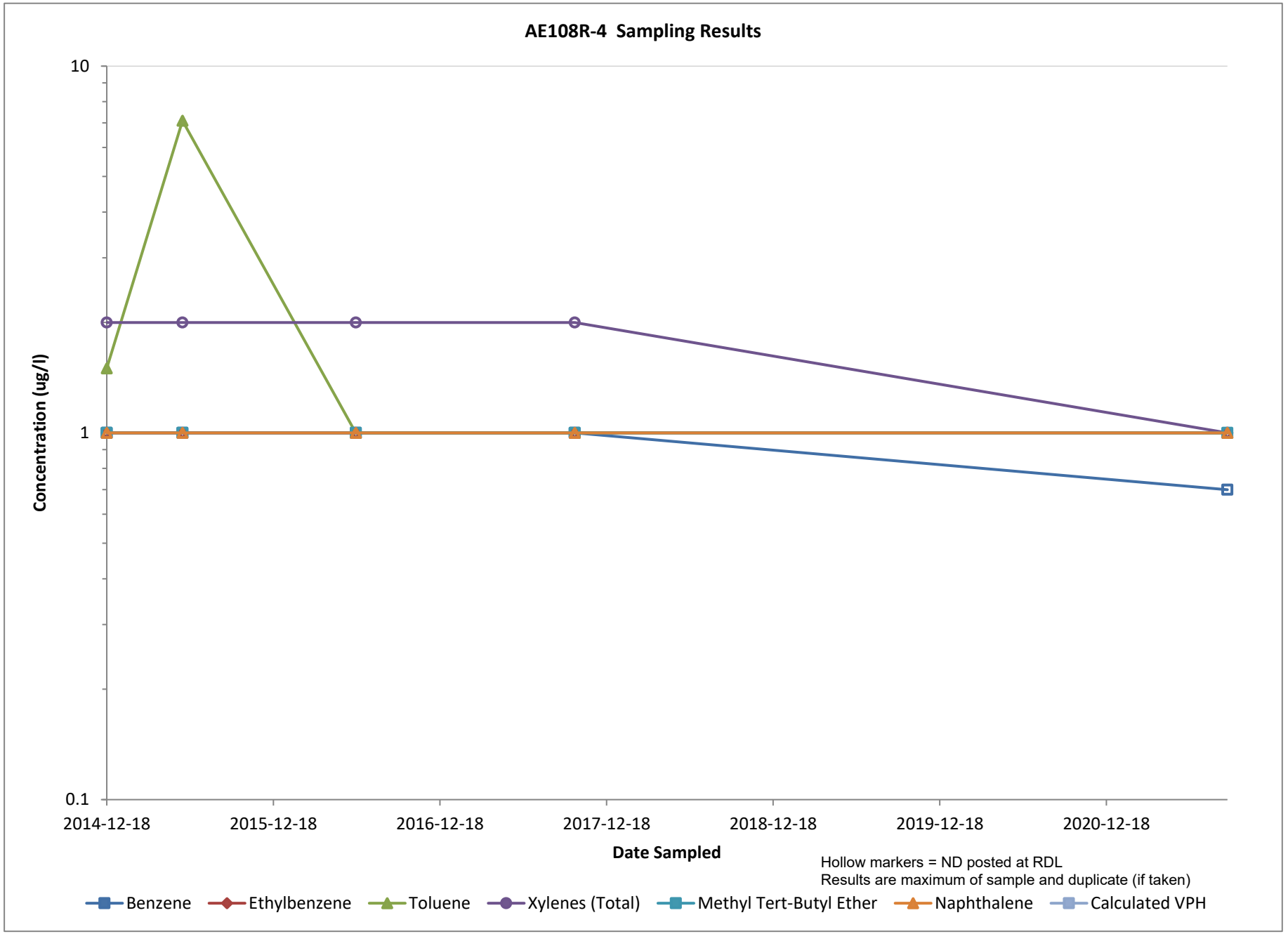

AE106R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

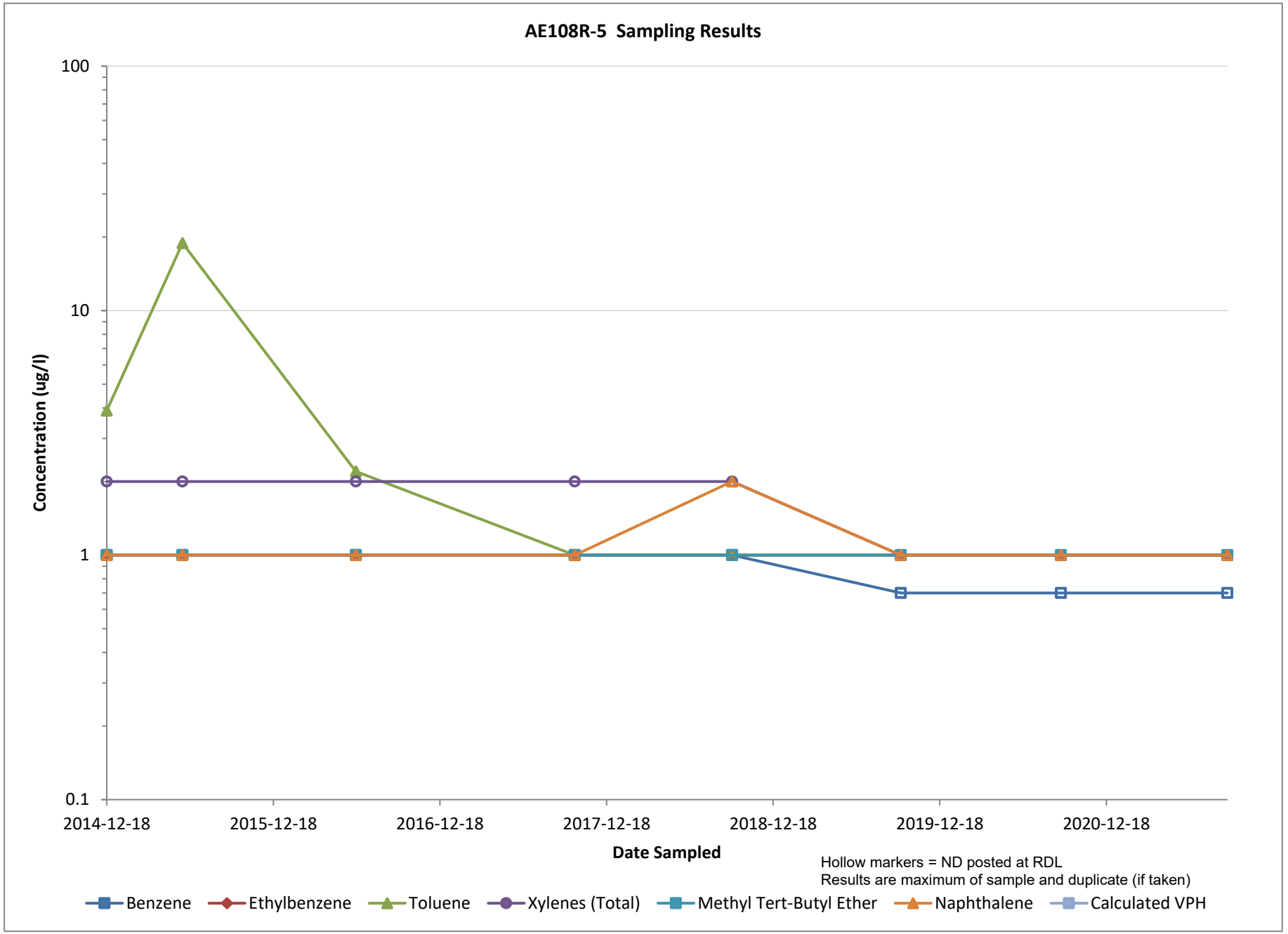

AE106S Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

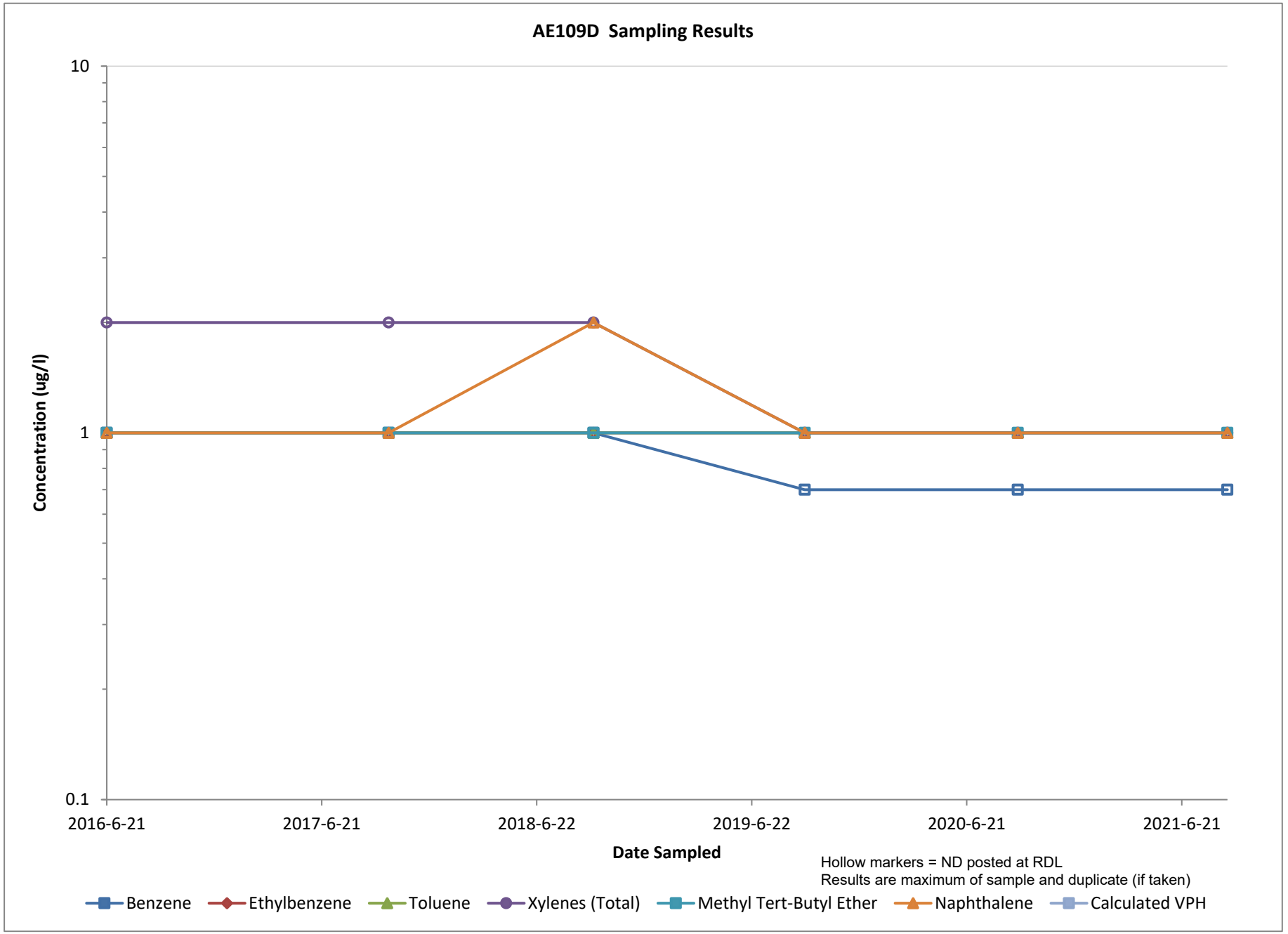

AE108R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

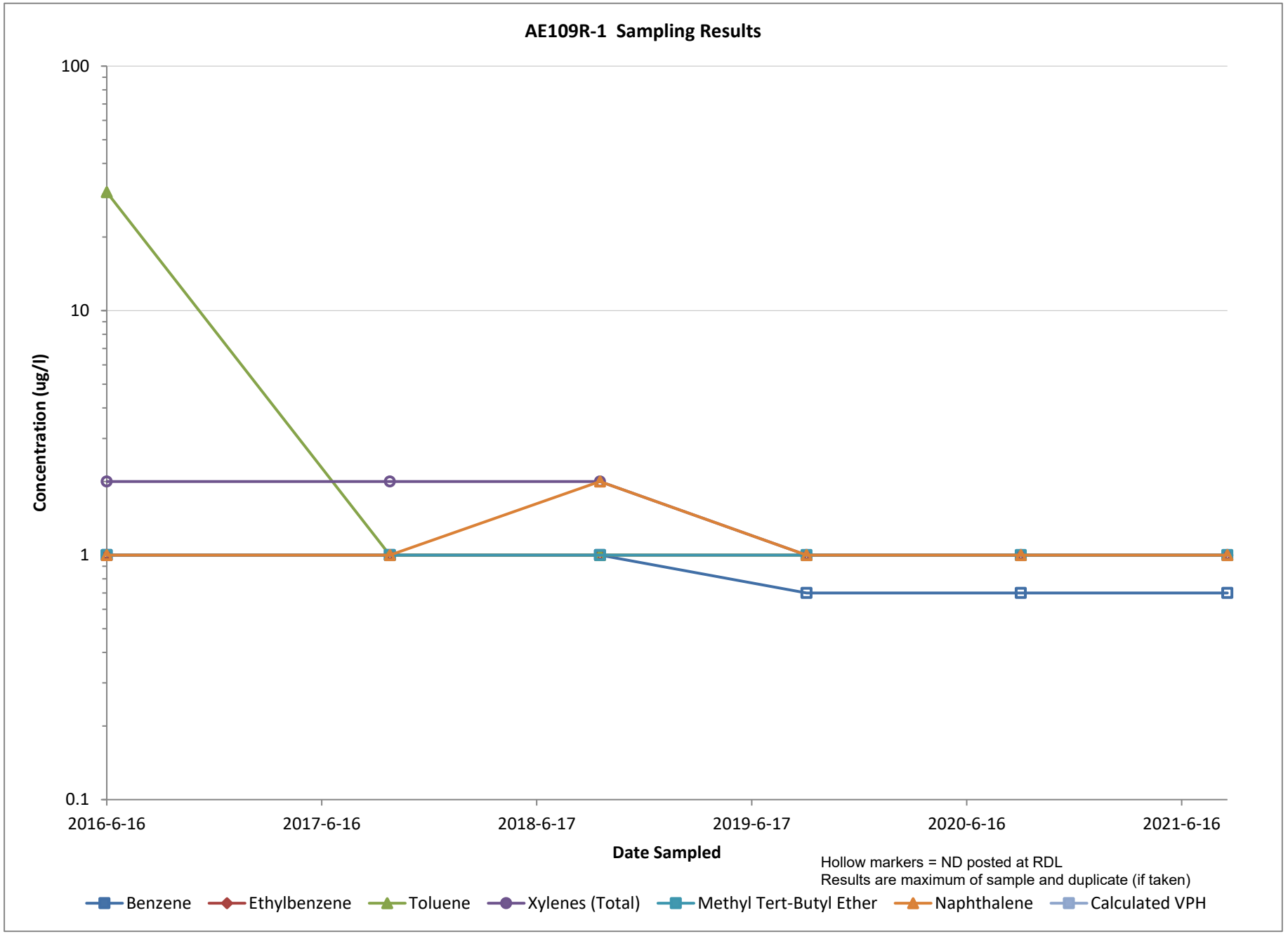

AE108R-2 Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

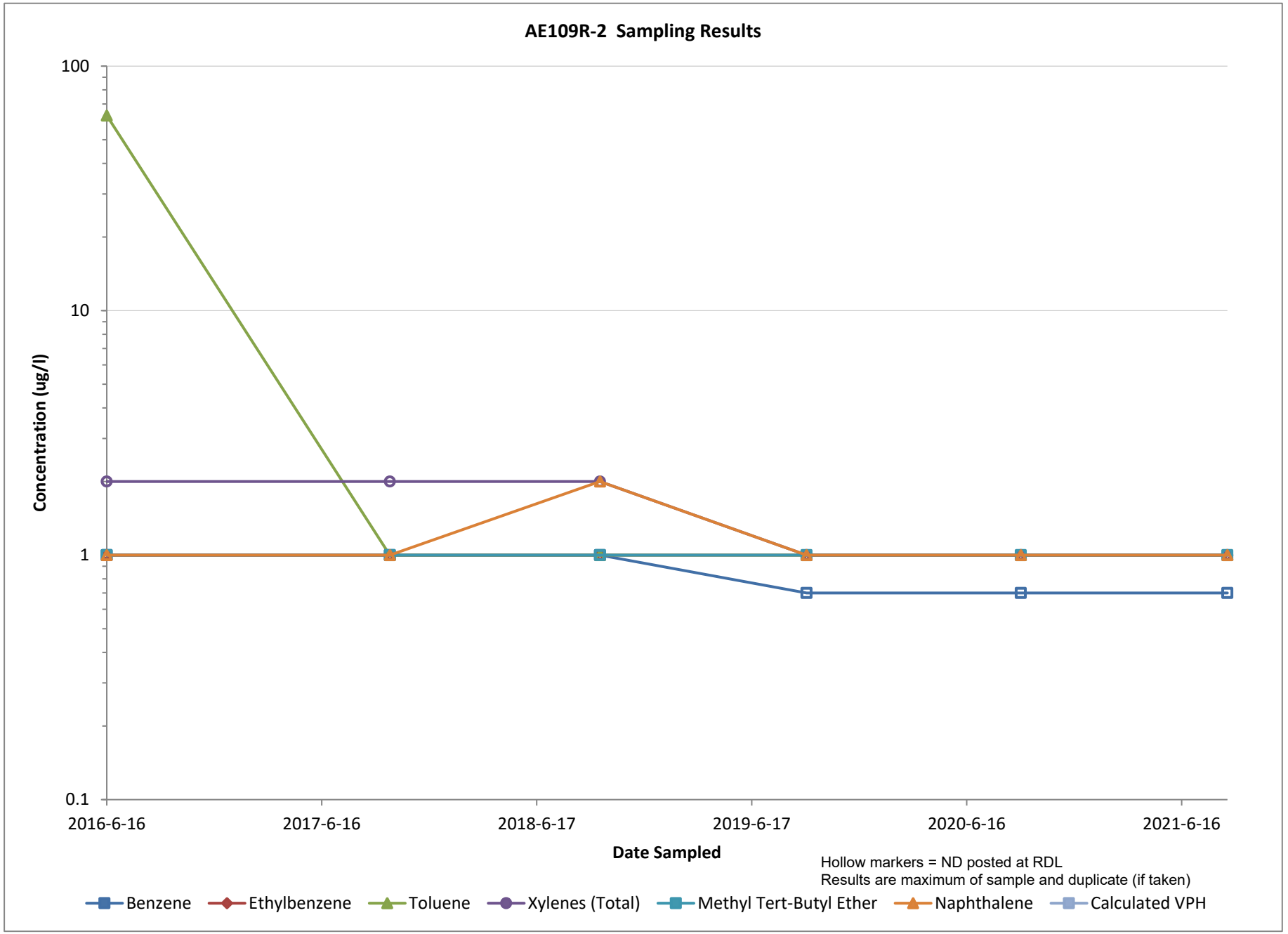

AE108R-3 Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

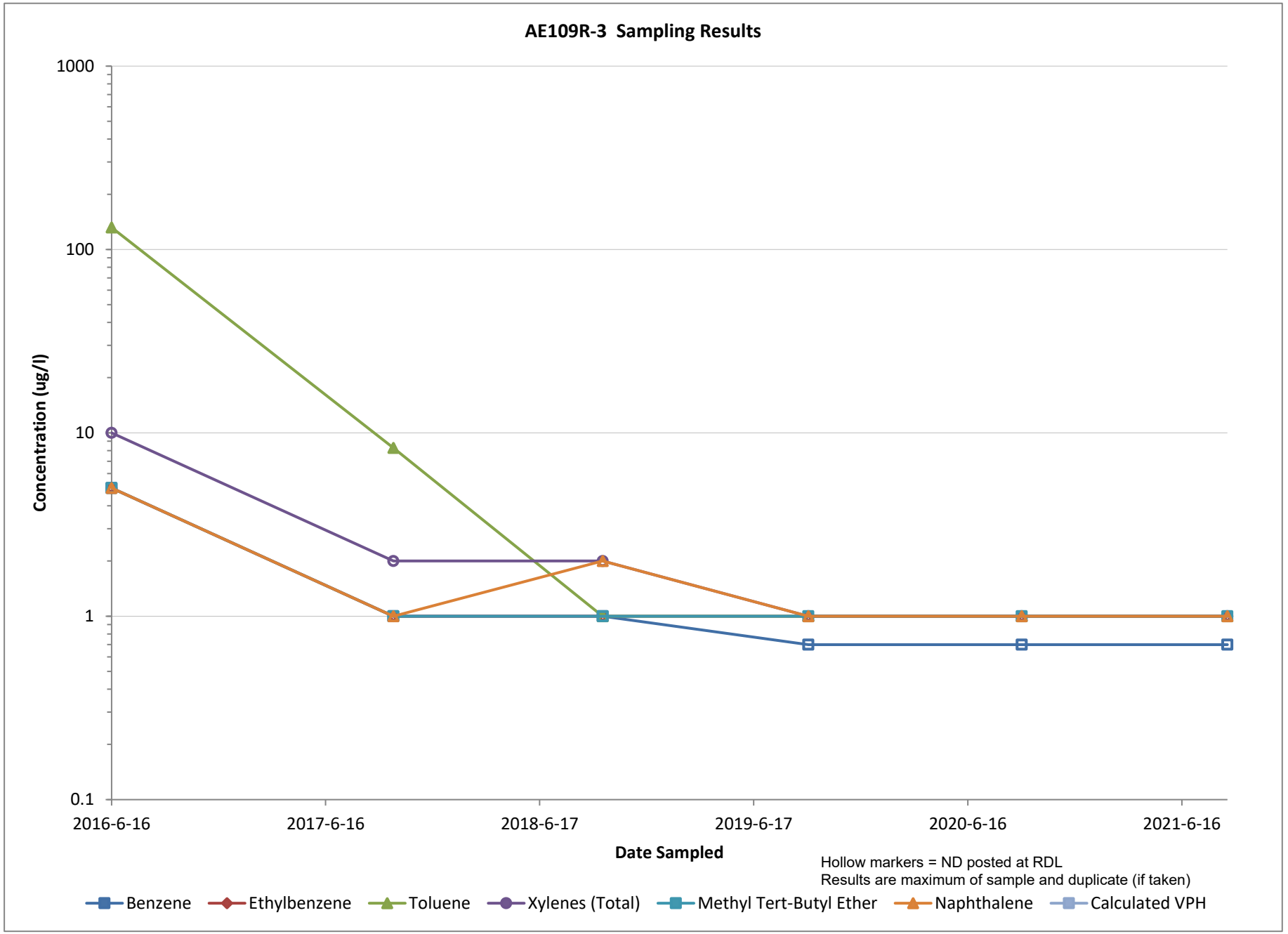

AE108R-4 Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

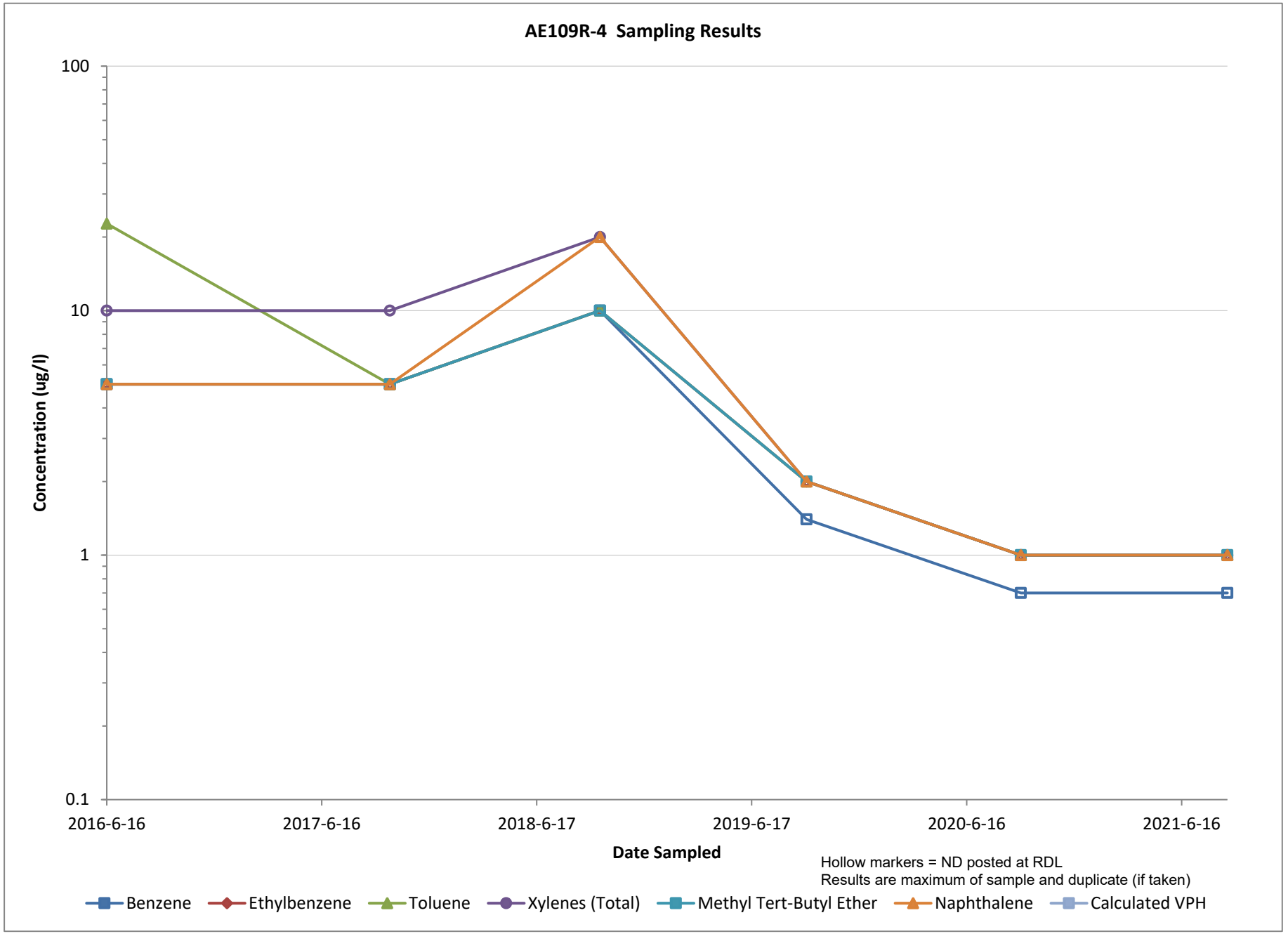

AE108R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

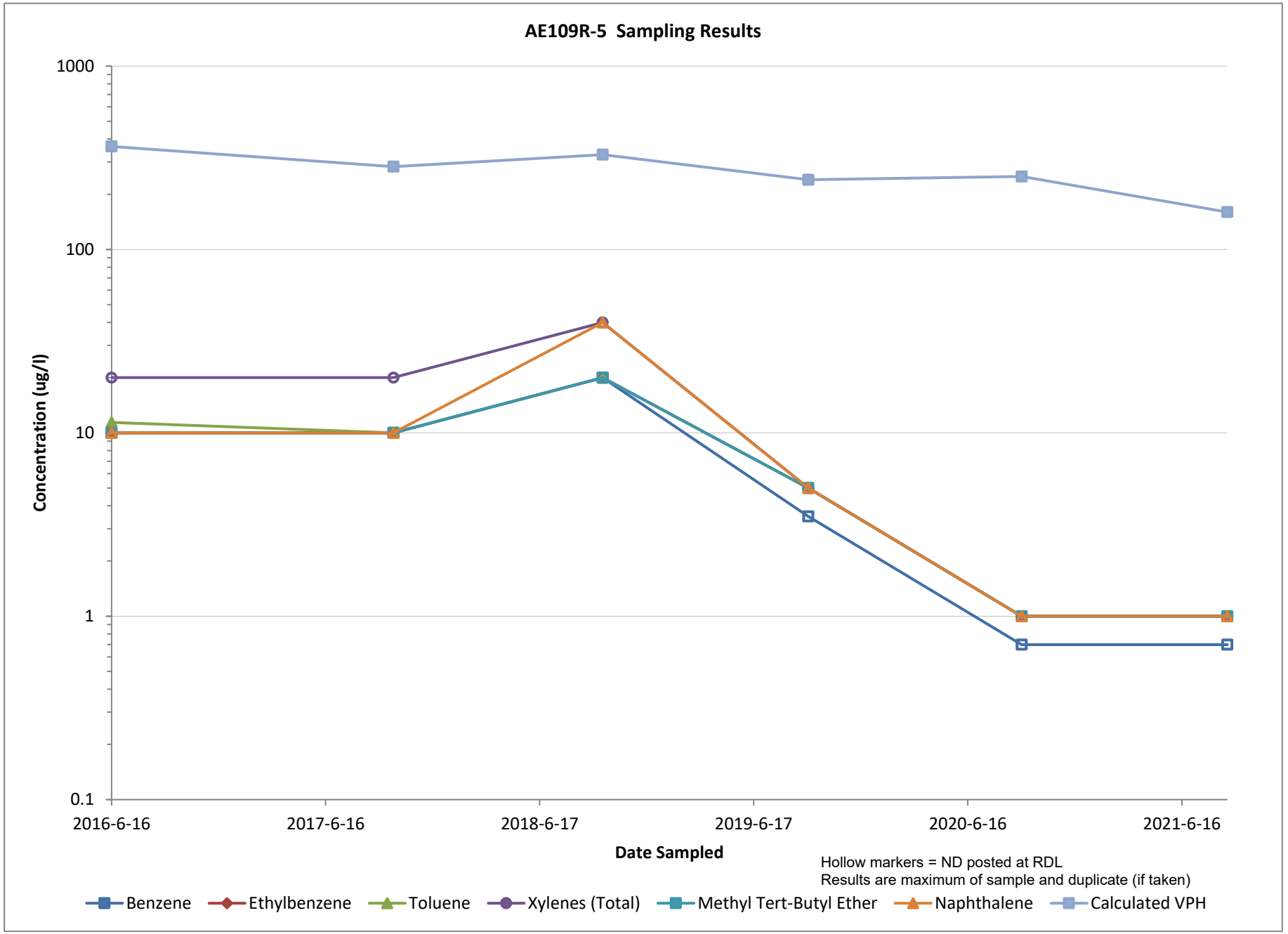

AE109D Sampling Results
10
1
0.1
Concentration (ug/l)
2016-6-21
2017-6-21
2018-6-22
2019-6-22
2020-6-21
2021-6-21
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

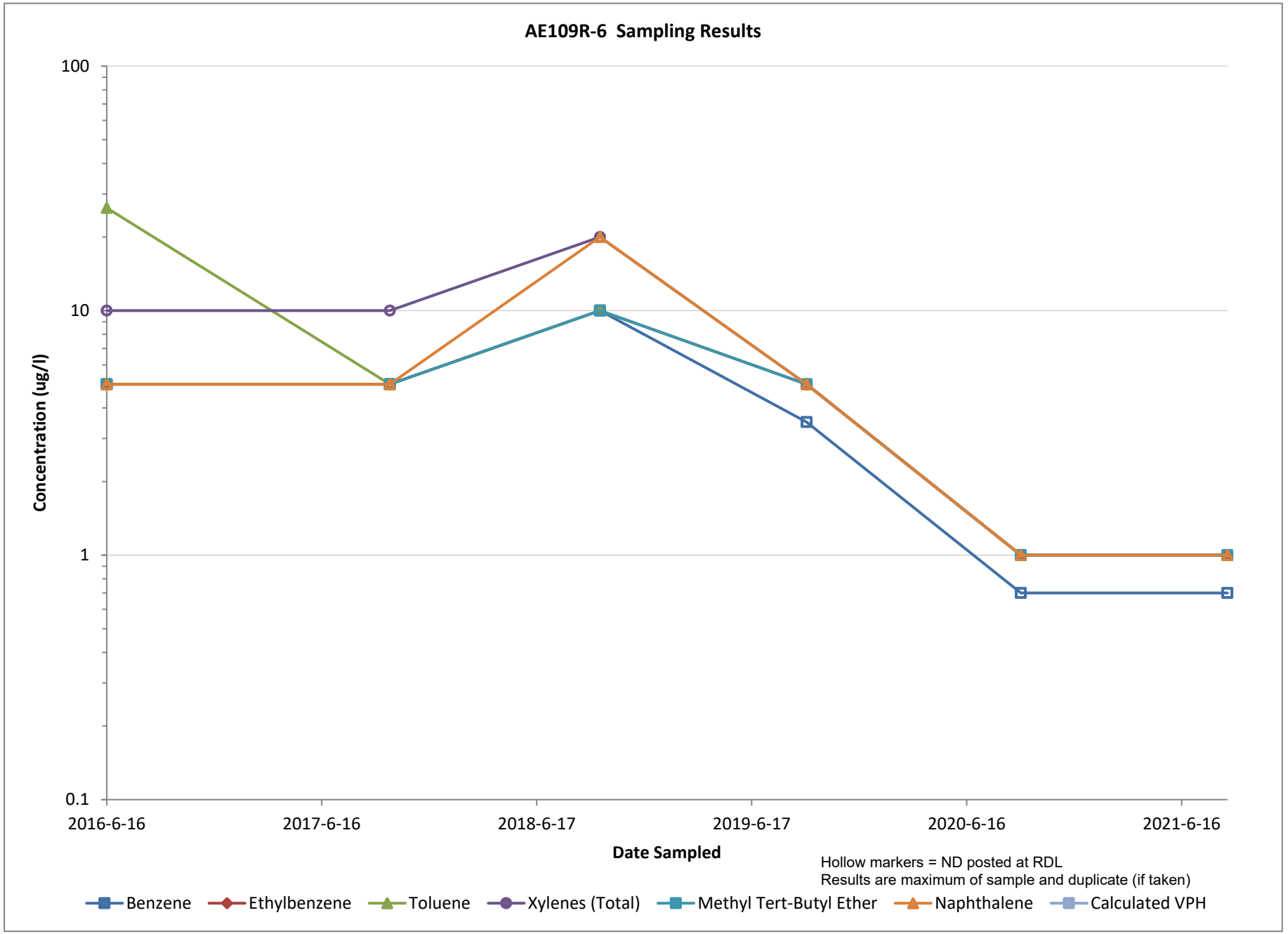

AE109R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

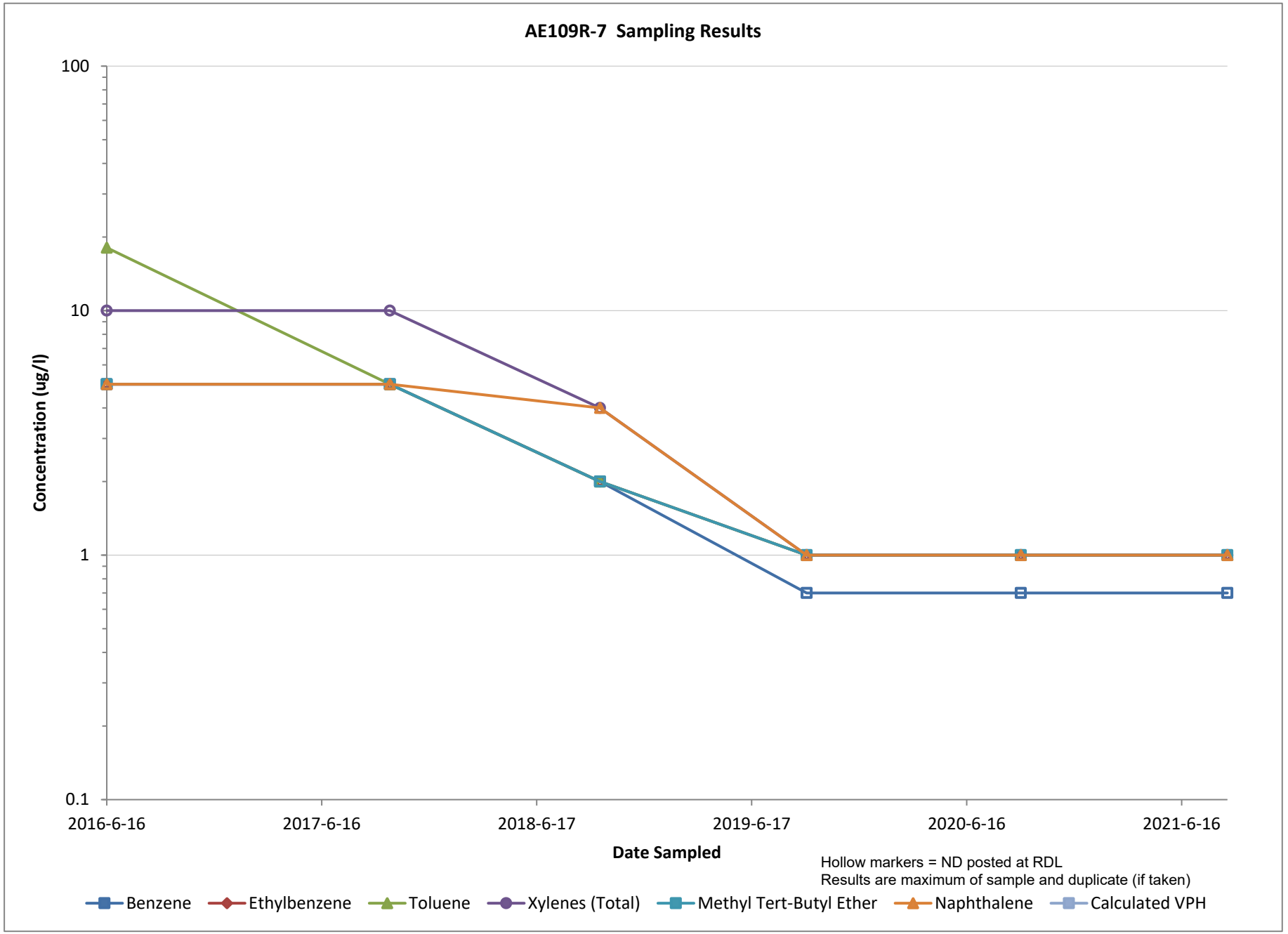

AE109R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

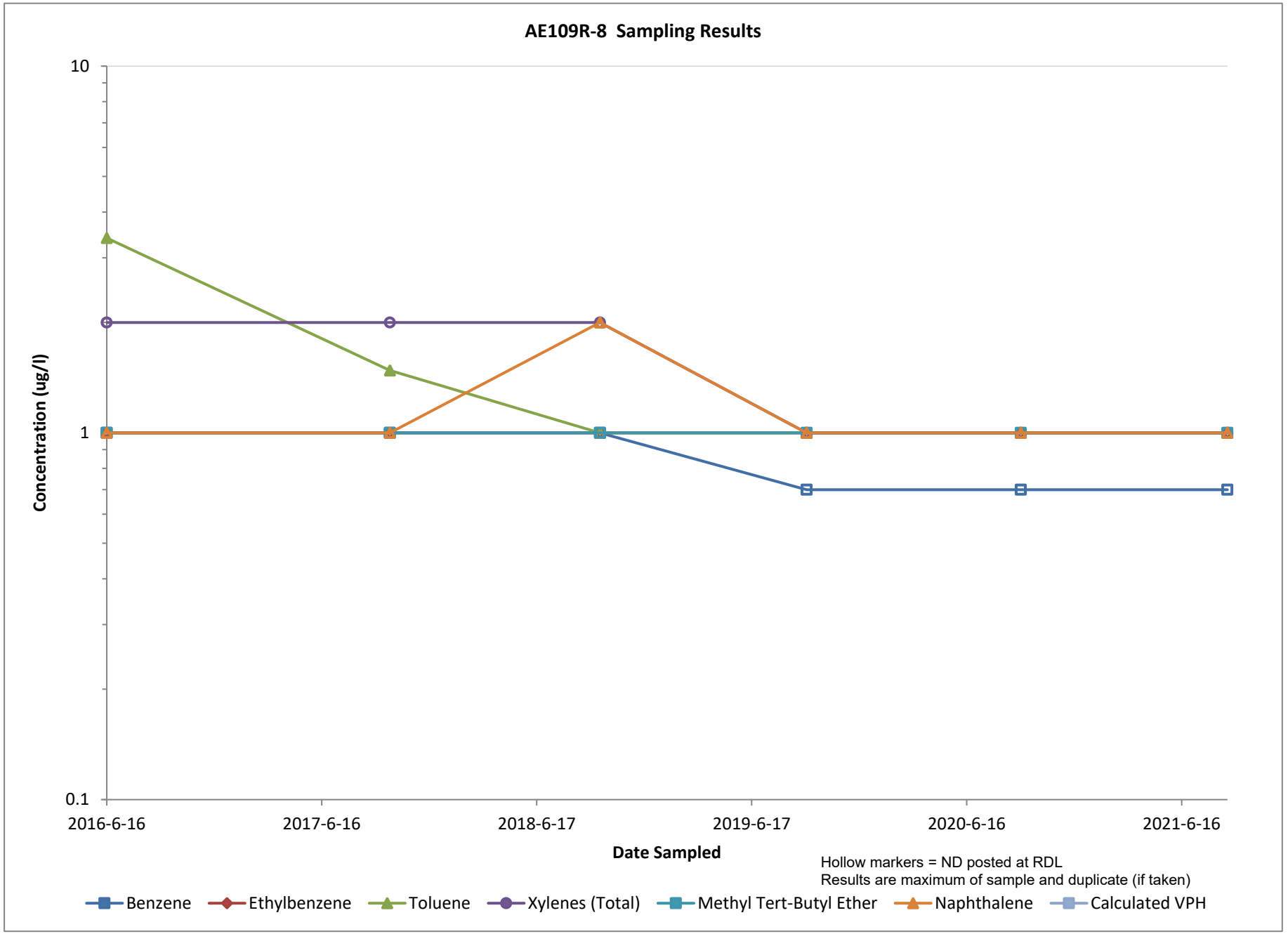

AE109R-3 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

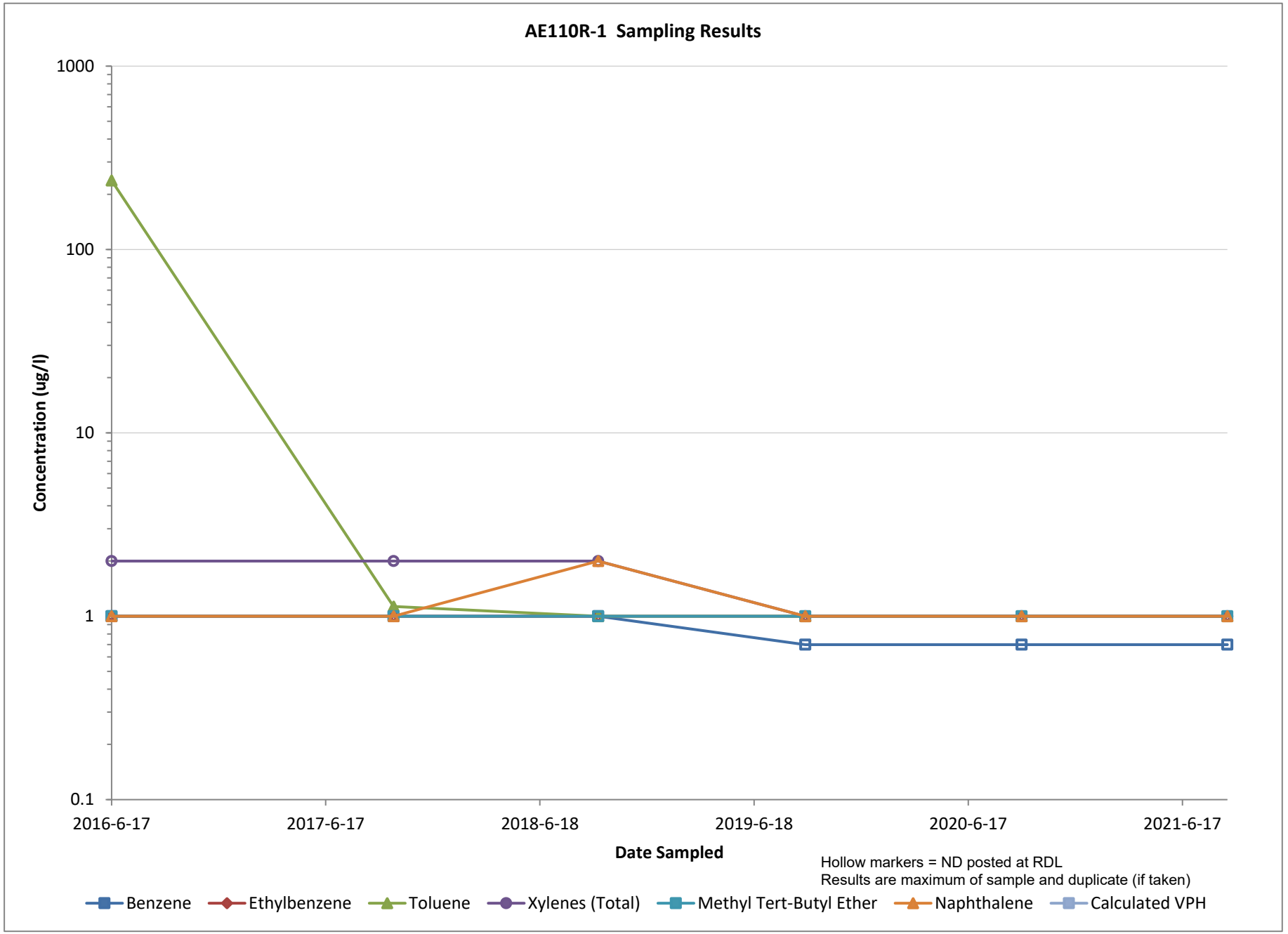

AE109R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

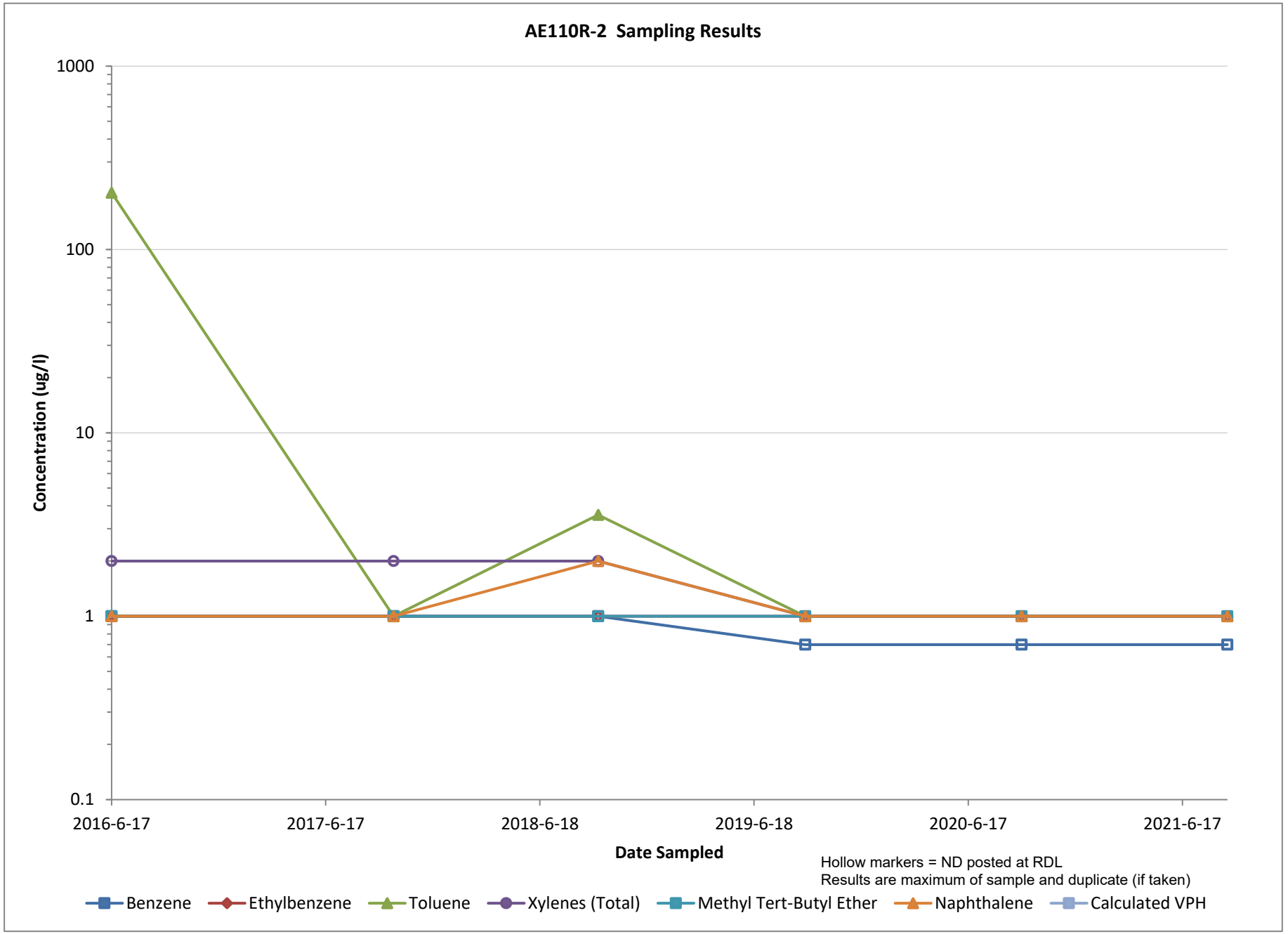

AE109R-5 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

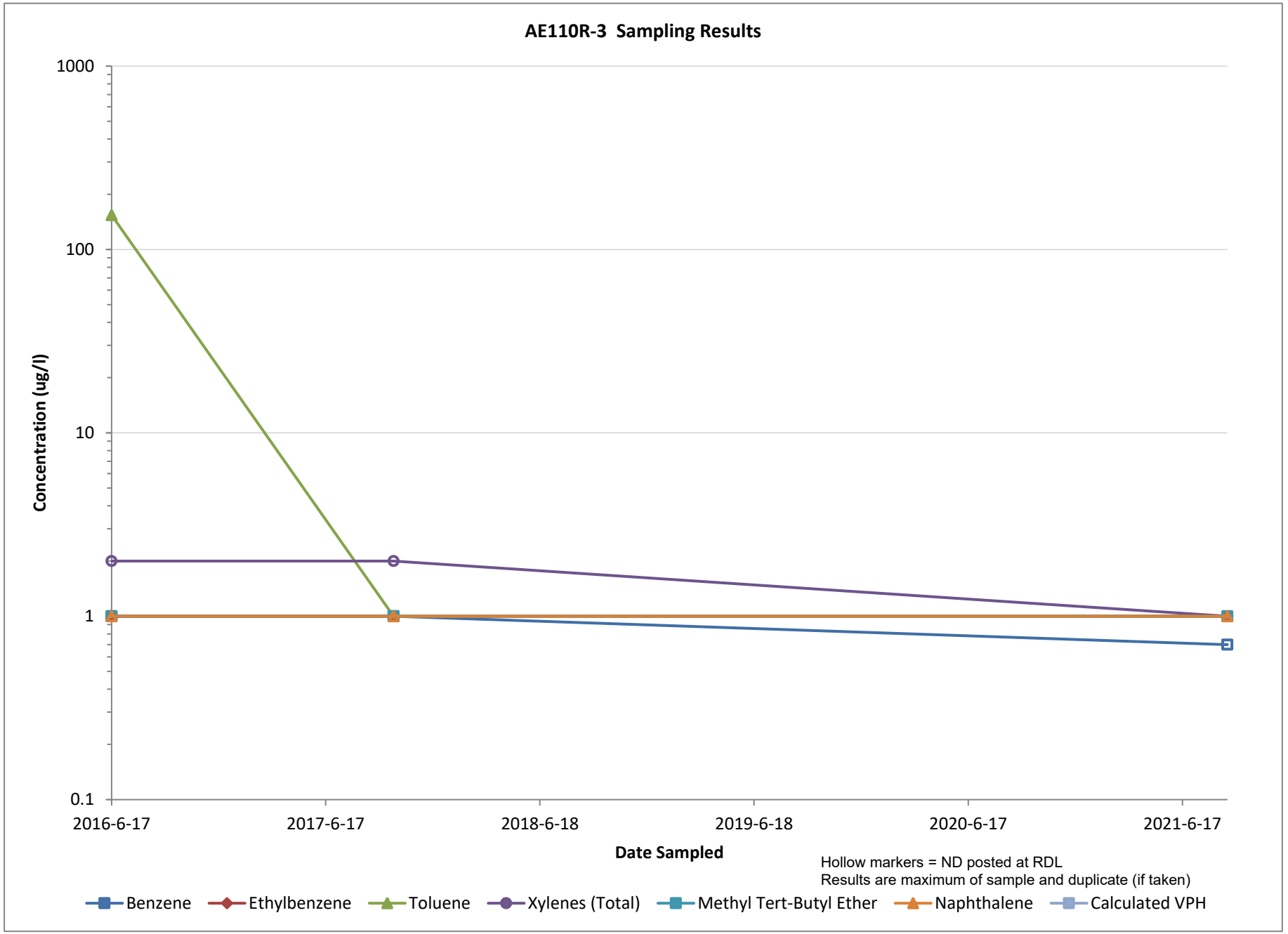

AE109R-6 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

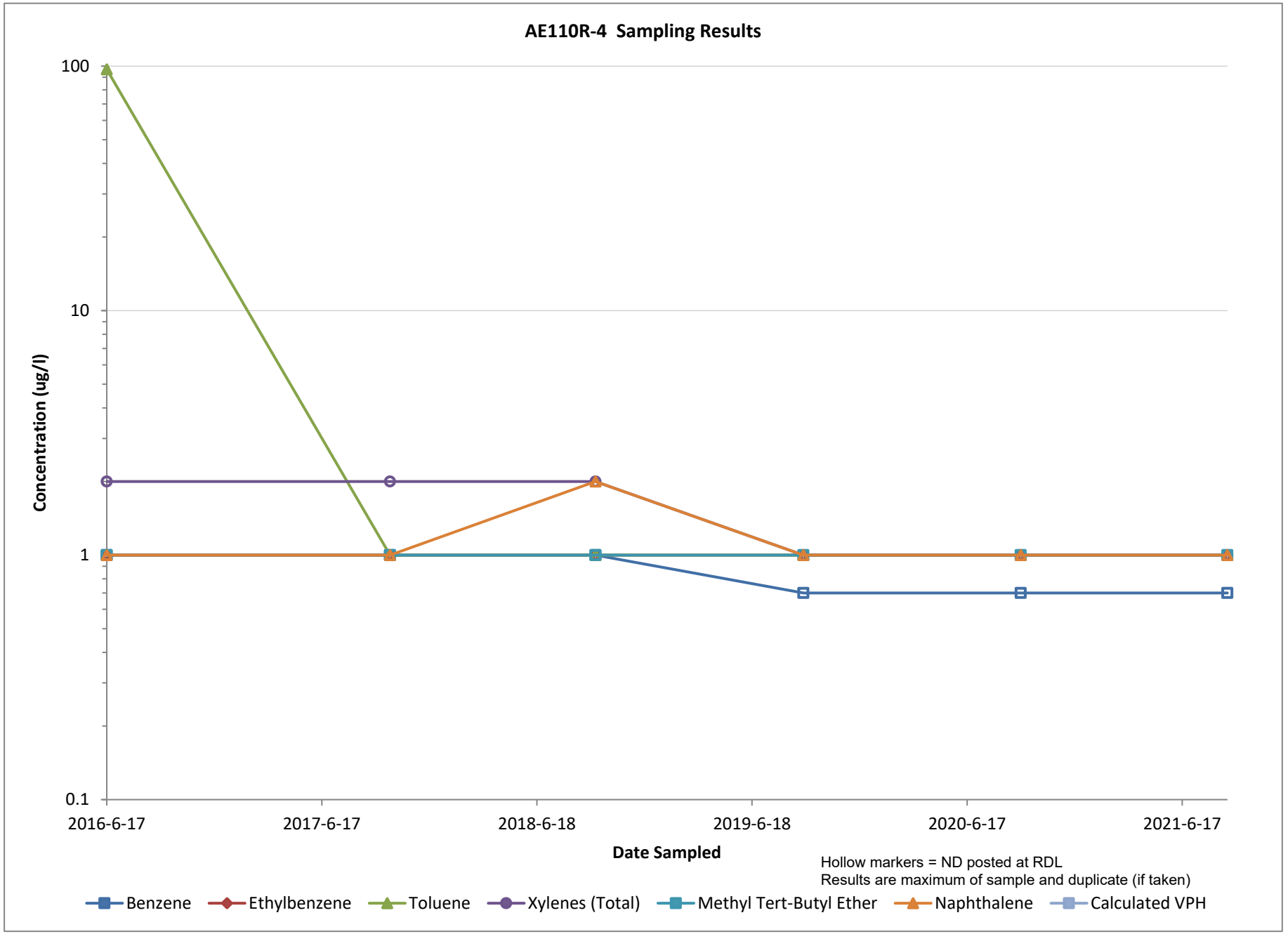

AE109R-7 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

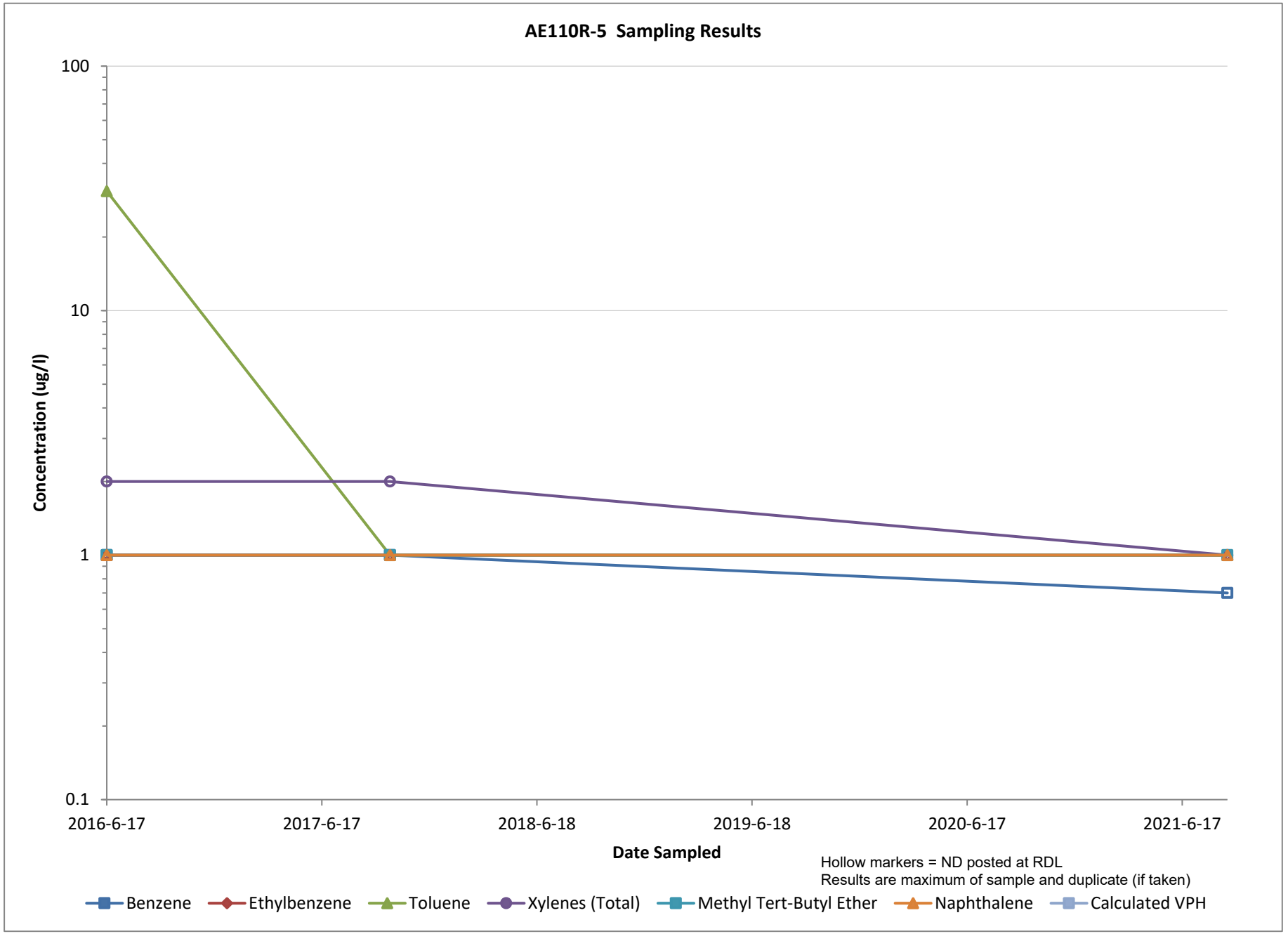

AE109R-8 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

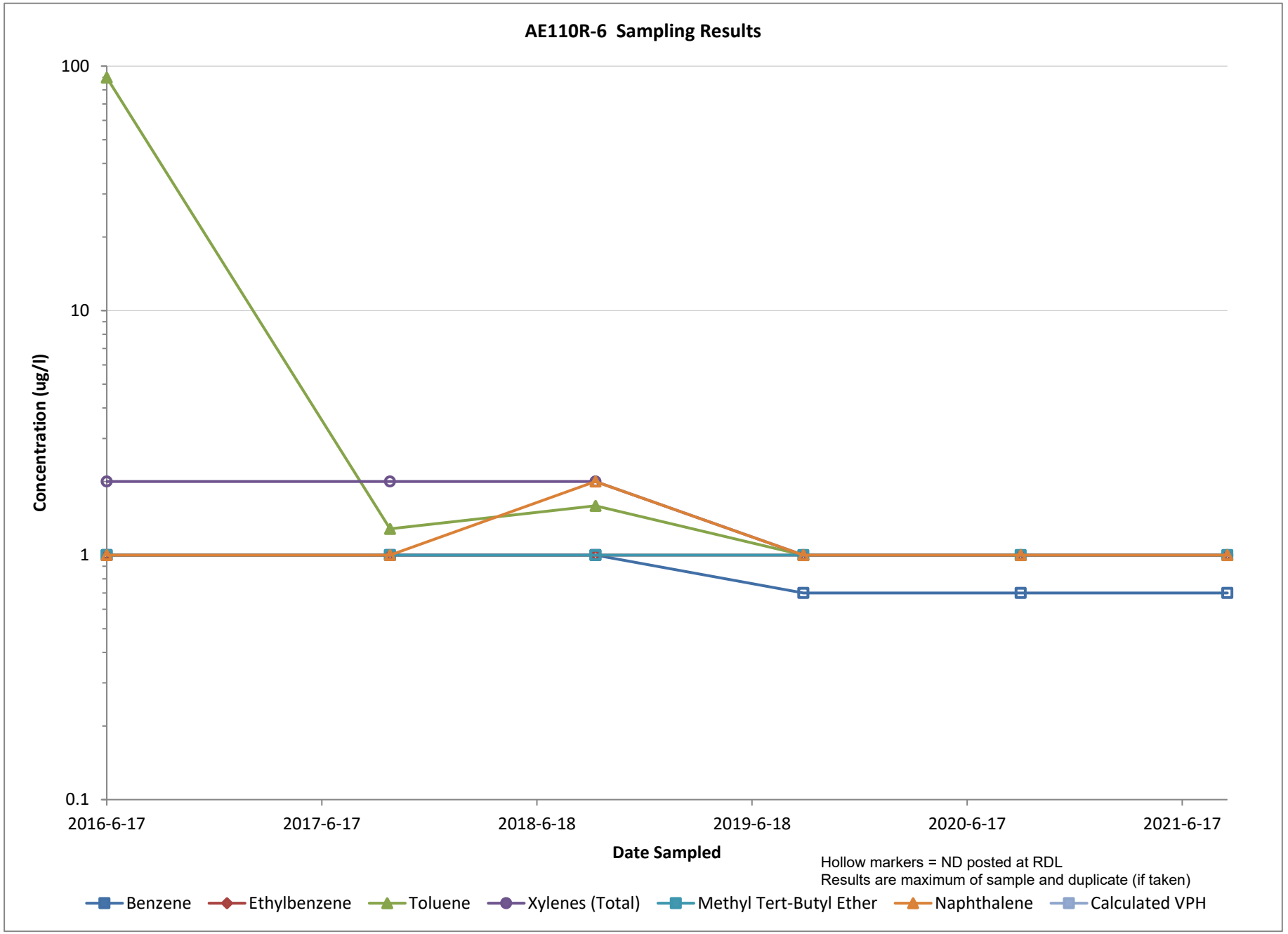

AE110R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

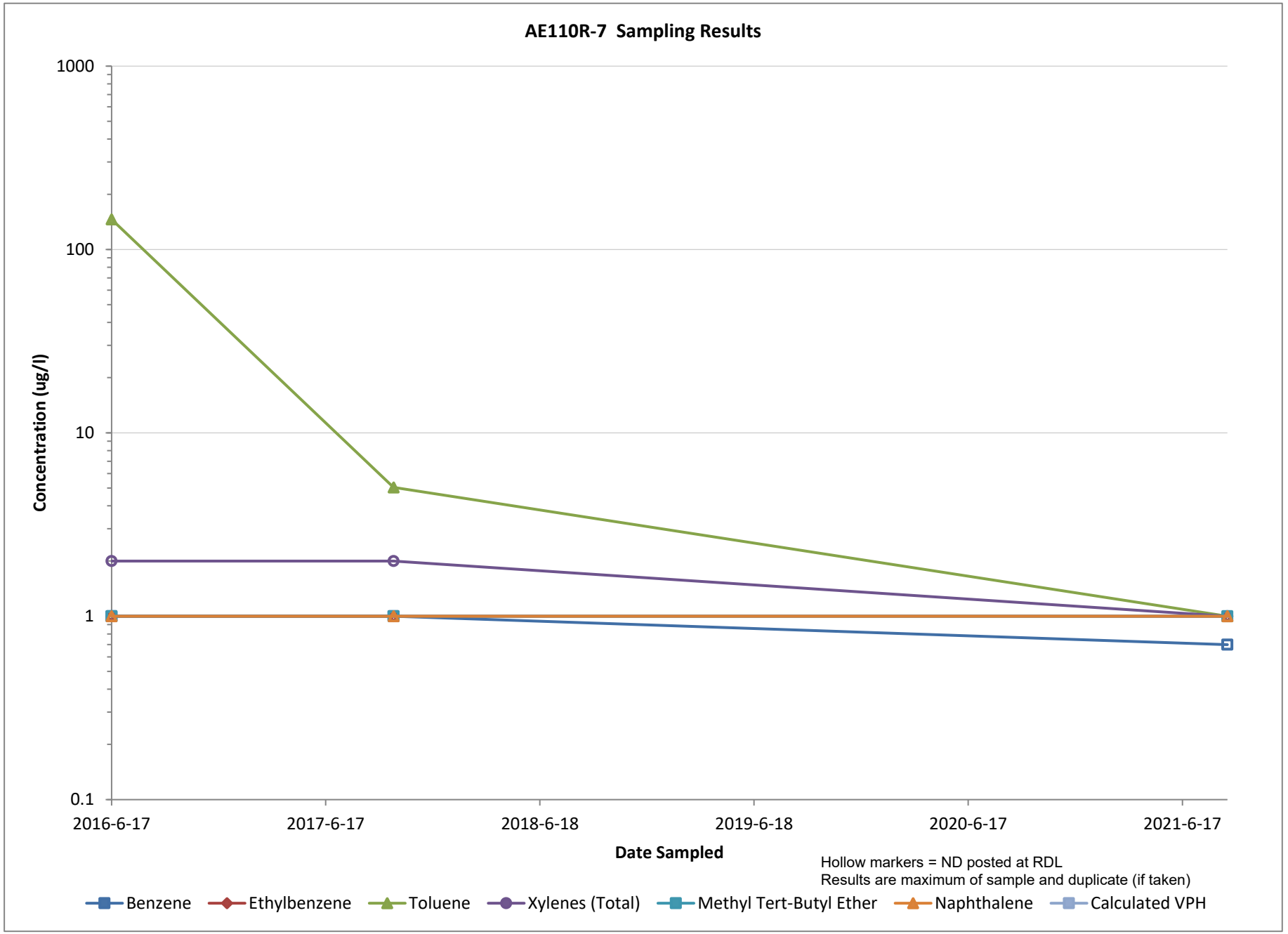

AE110R-2 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

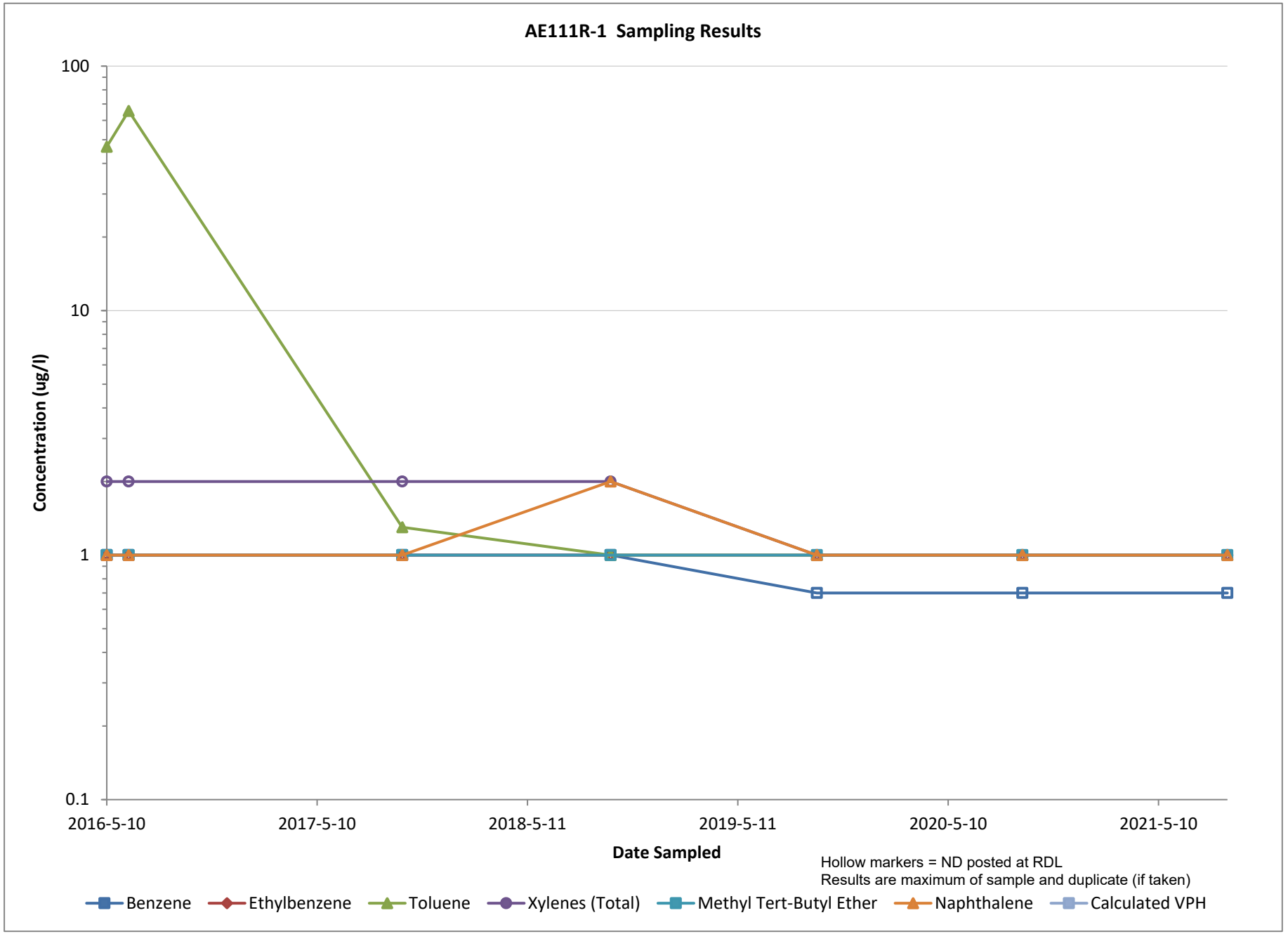

AE110R-3 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

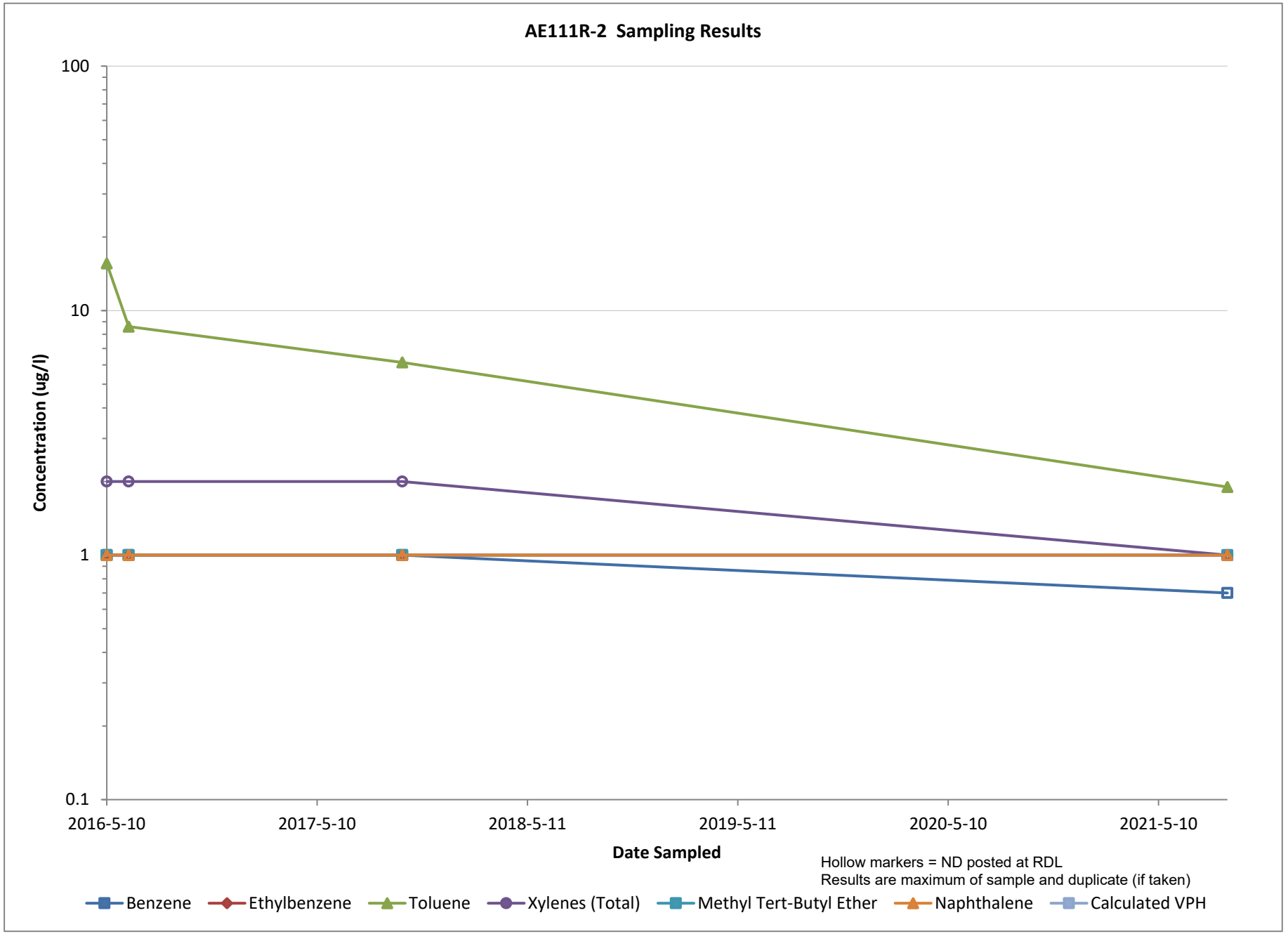

AE110R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

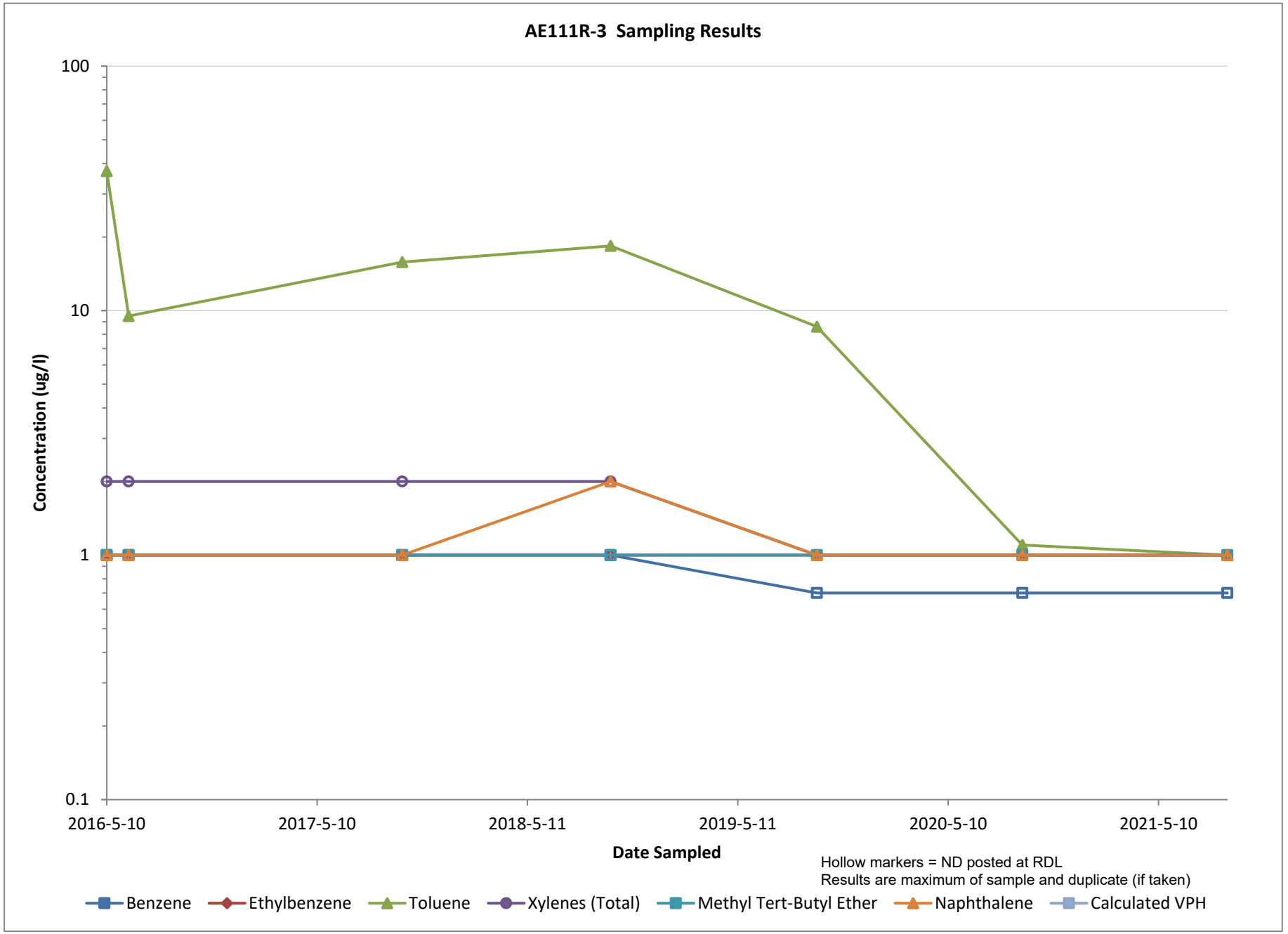

AE110R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

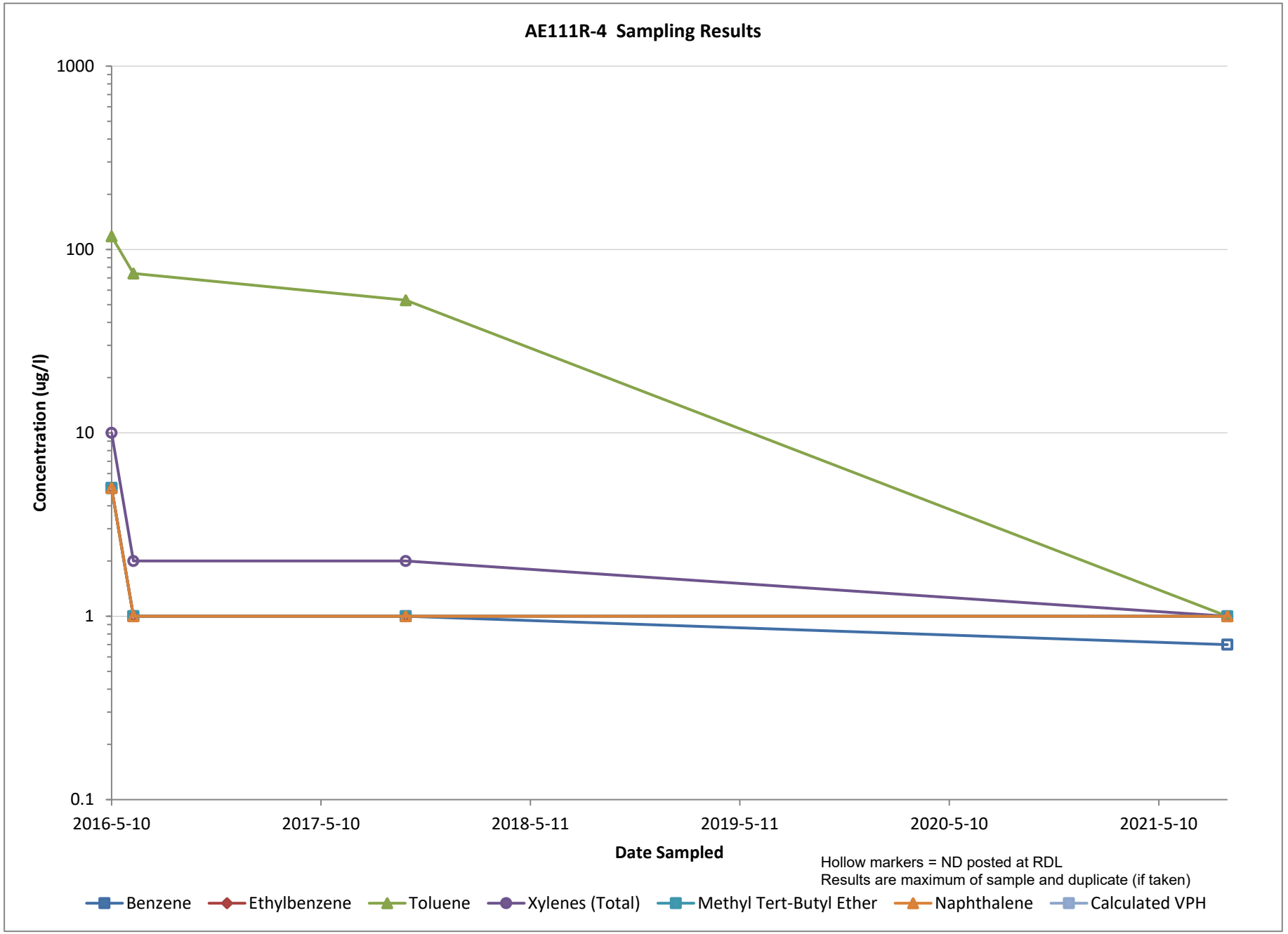

AE110R-6 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

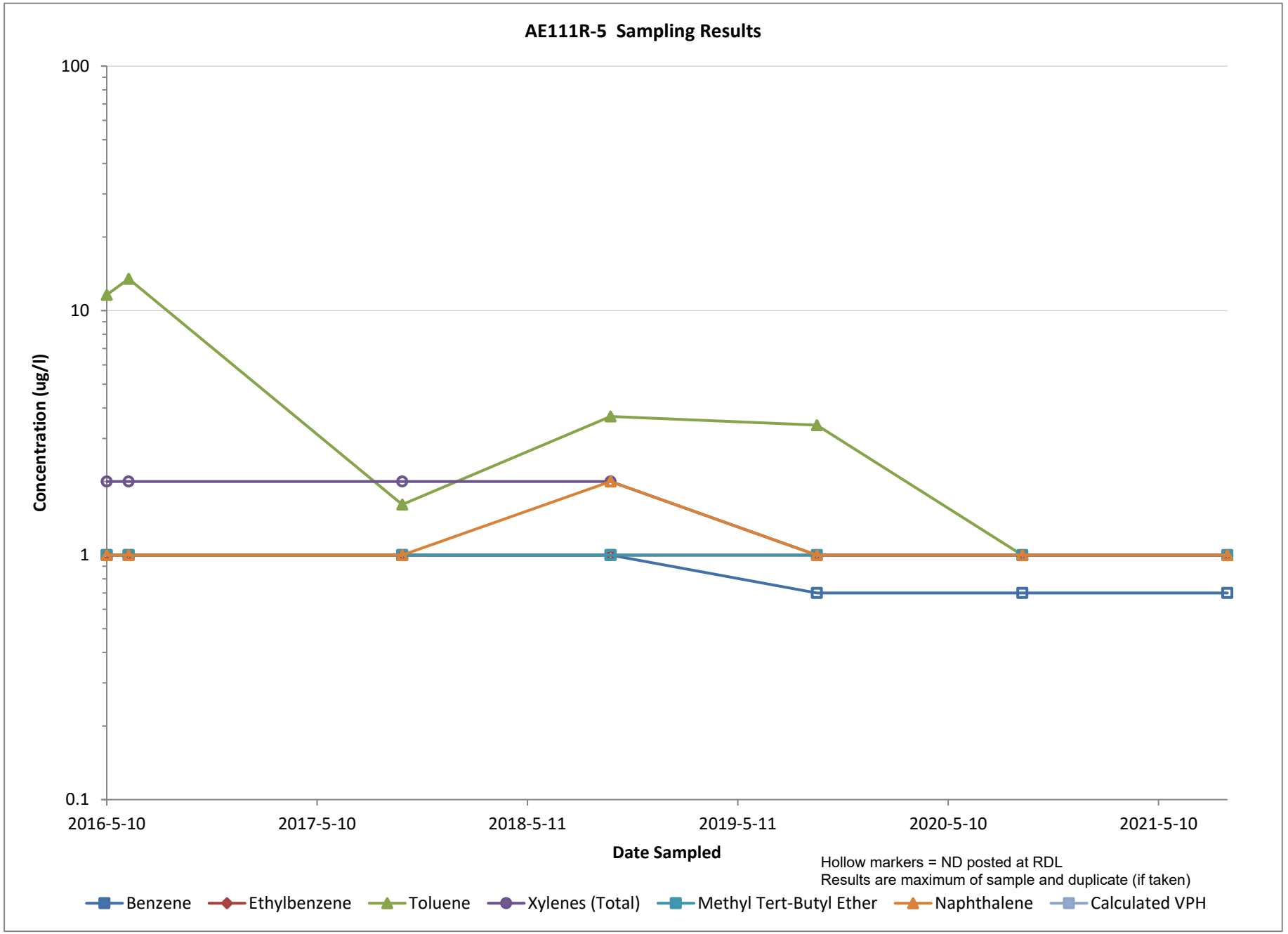

AE110R-7 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

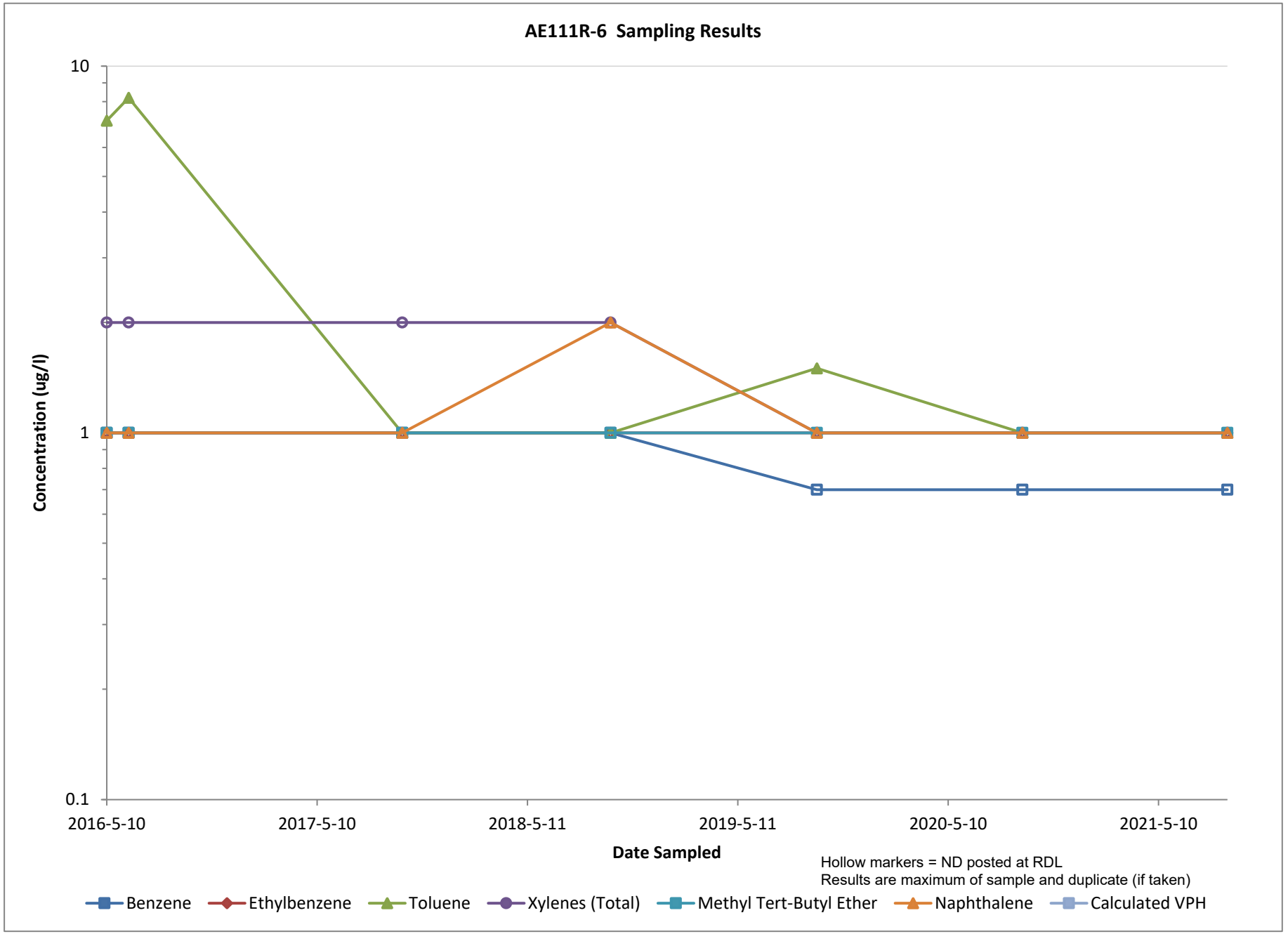

AE111R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

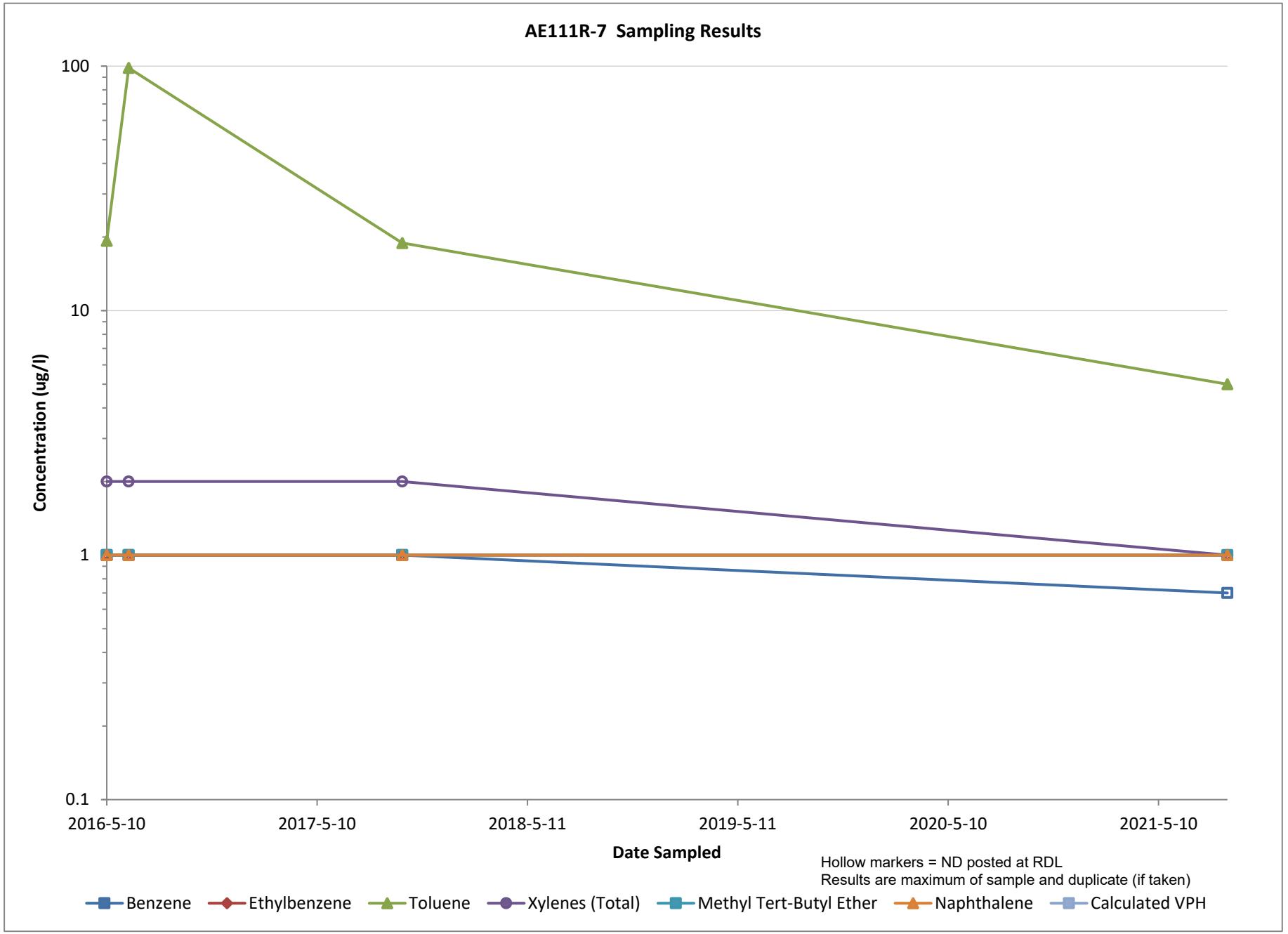

AE111R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

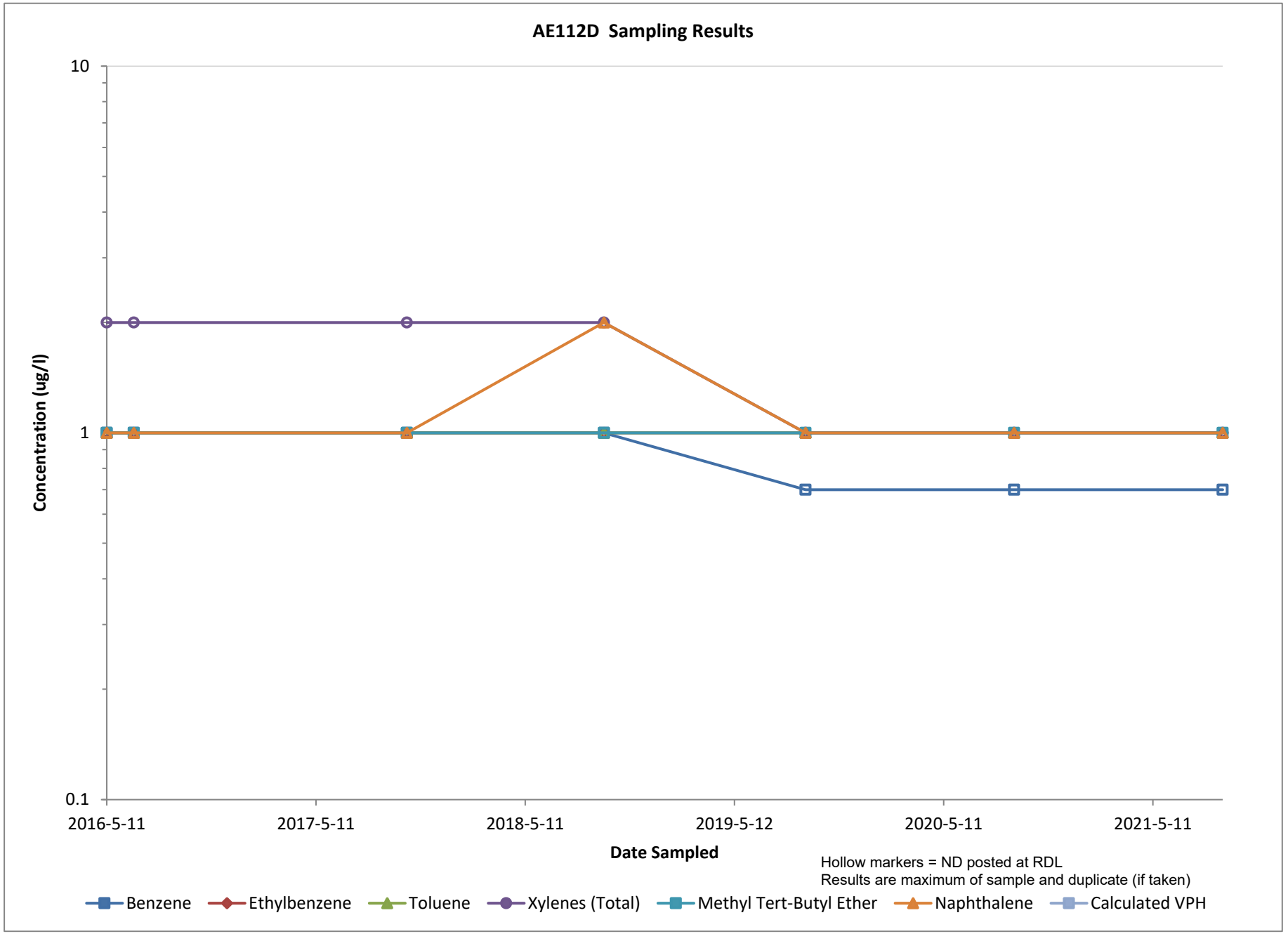

AE111R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

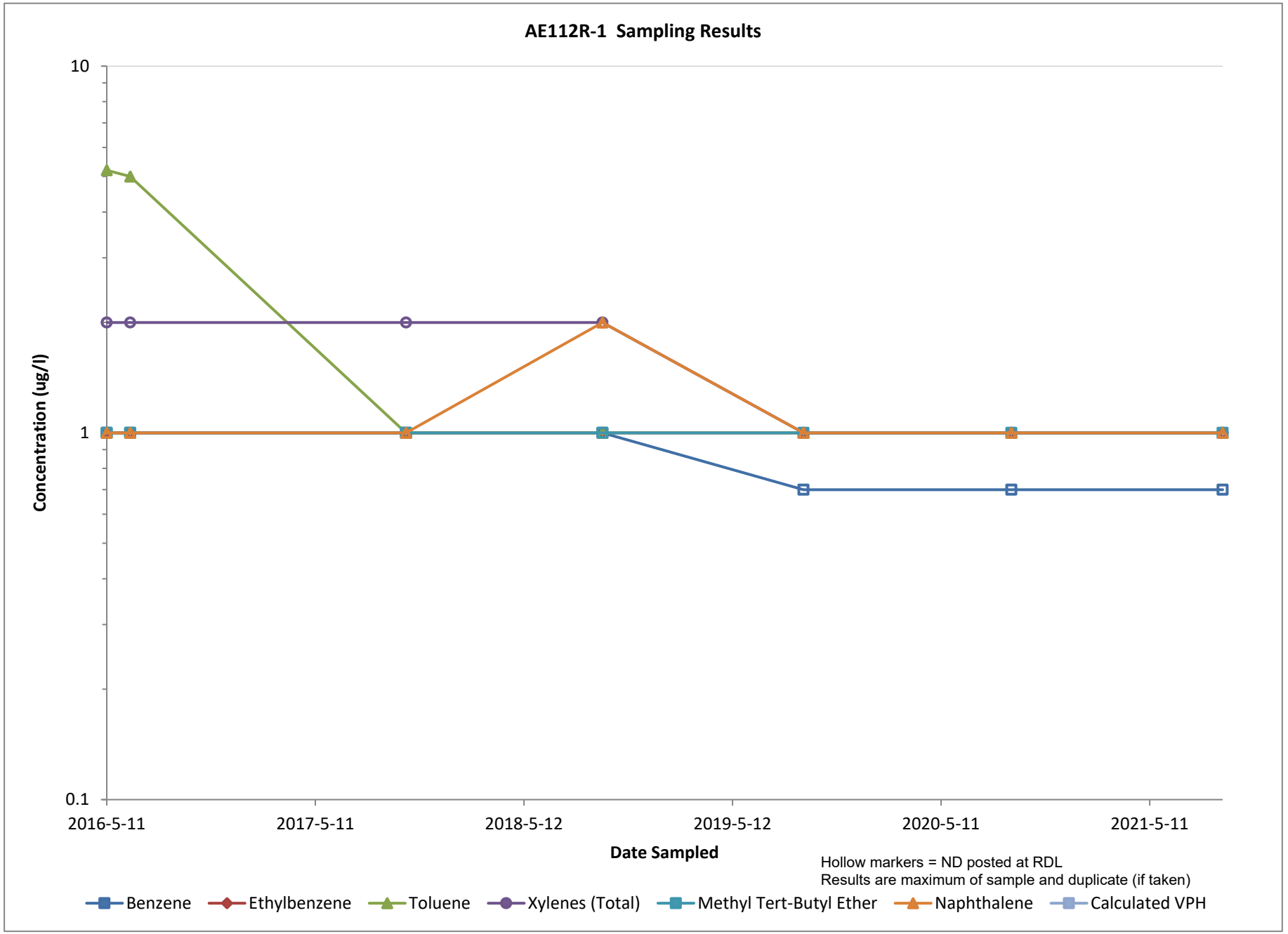

AE111R-4 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

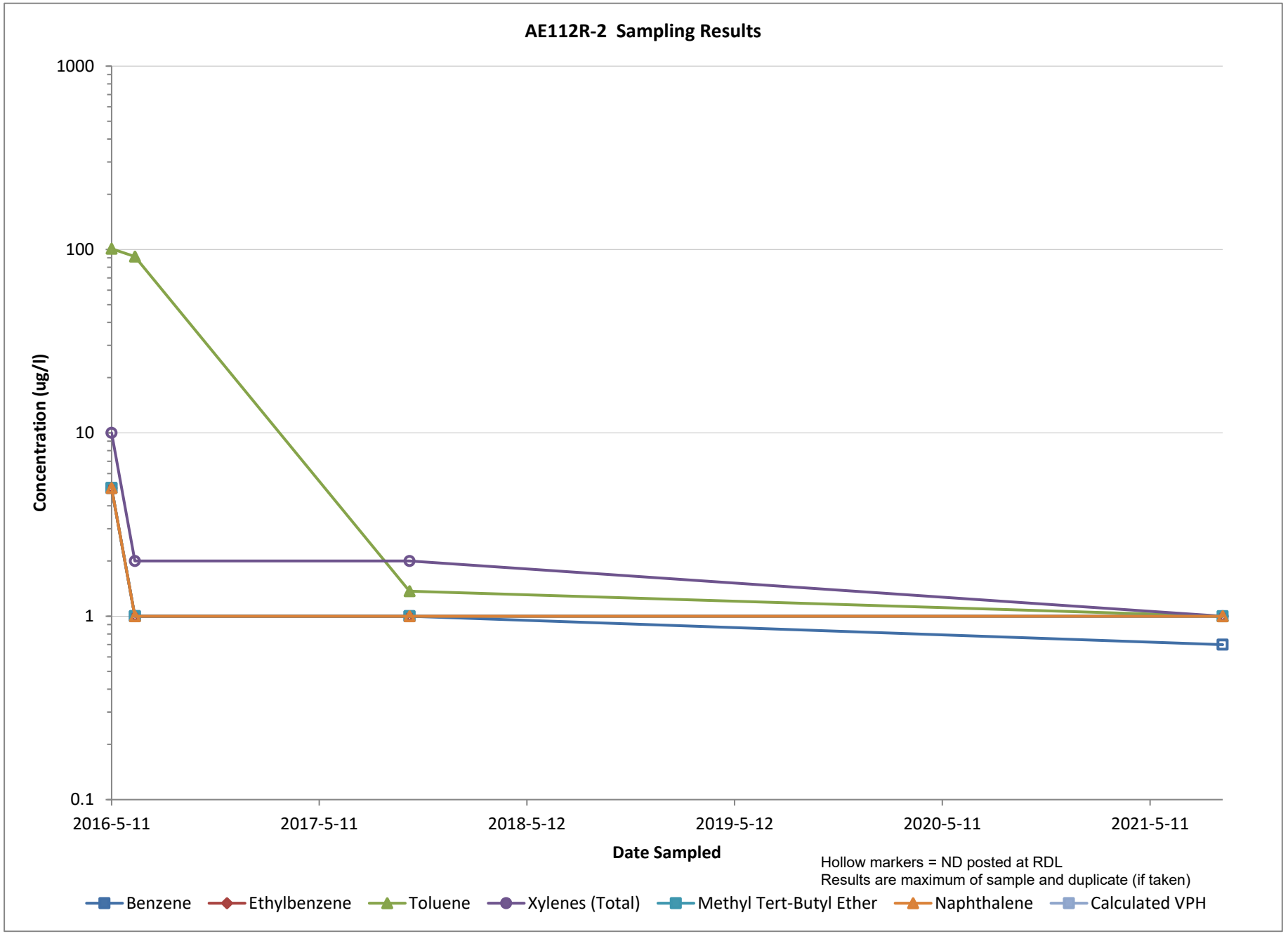

AE111R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

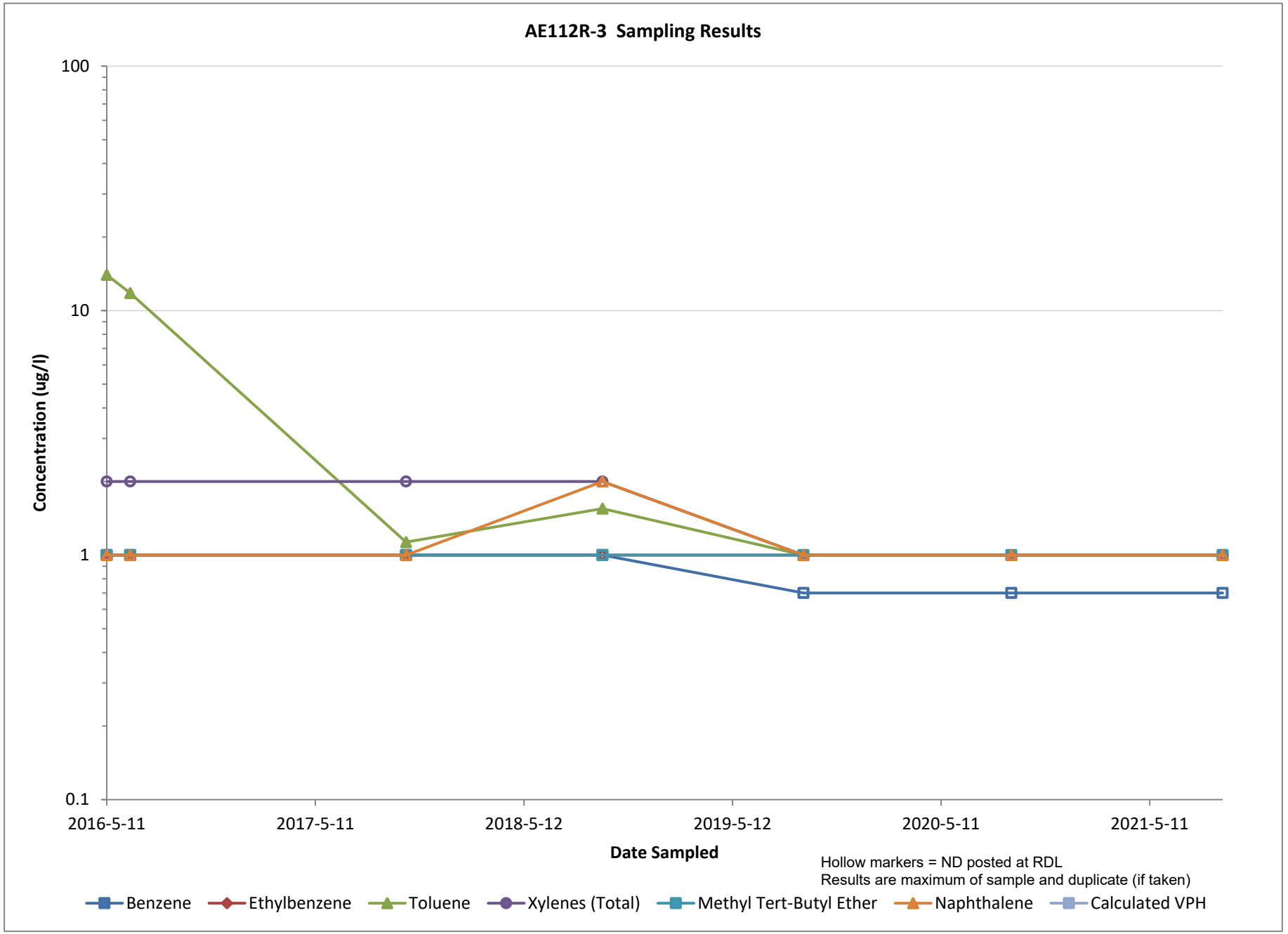

AE111R-6 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

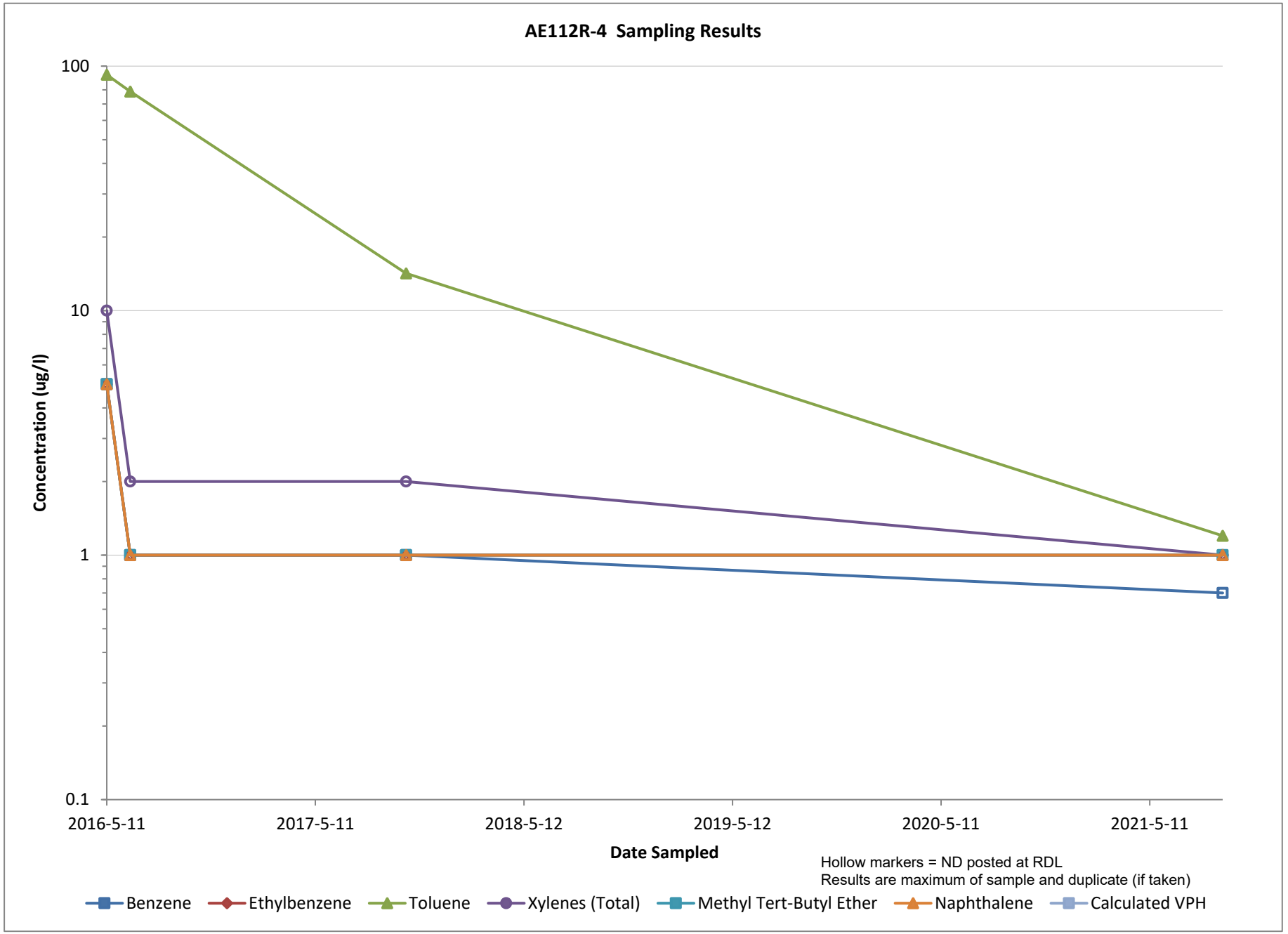

AE111R-7 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

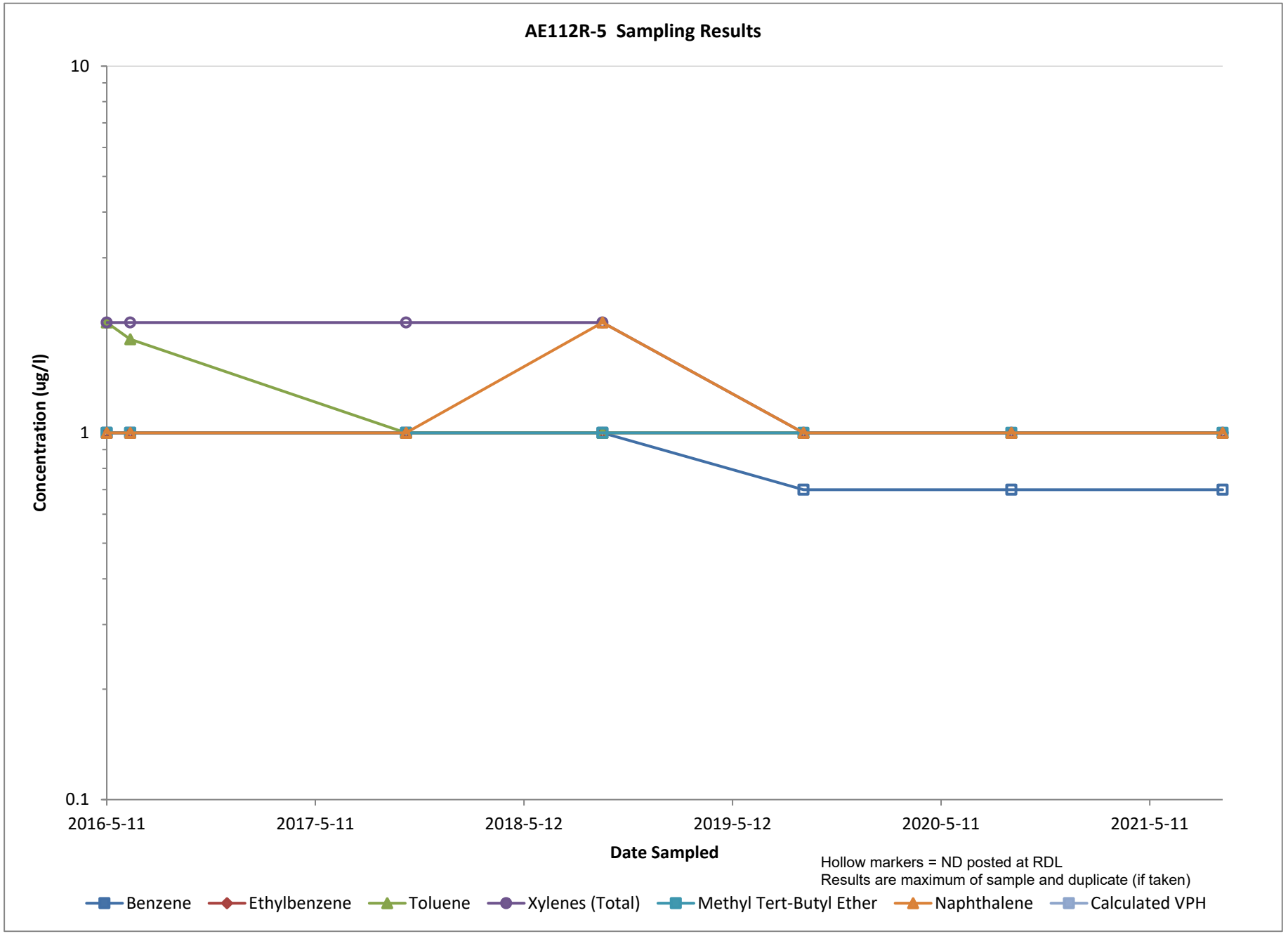

AE112D Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-11
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

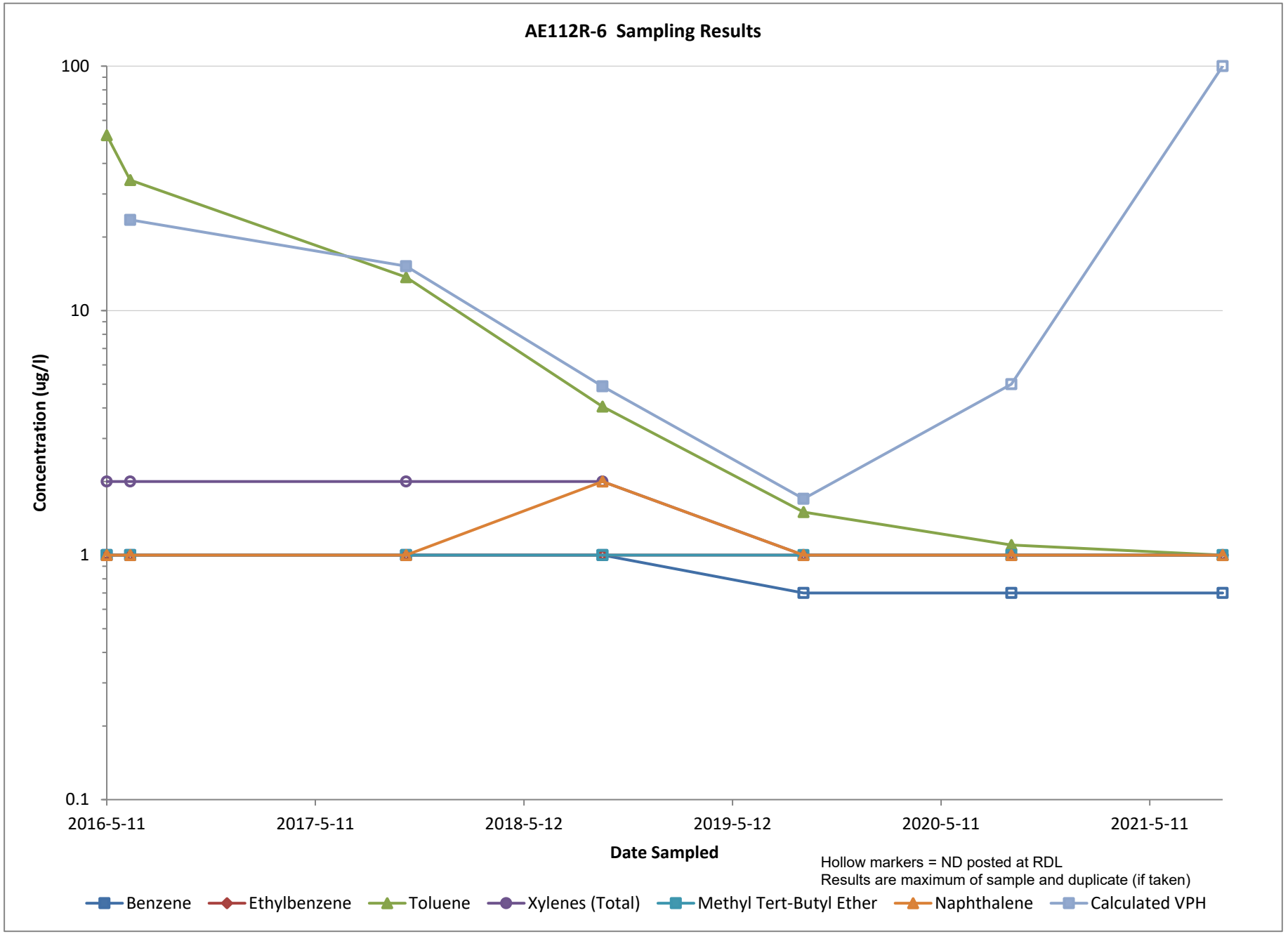

AE112R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

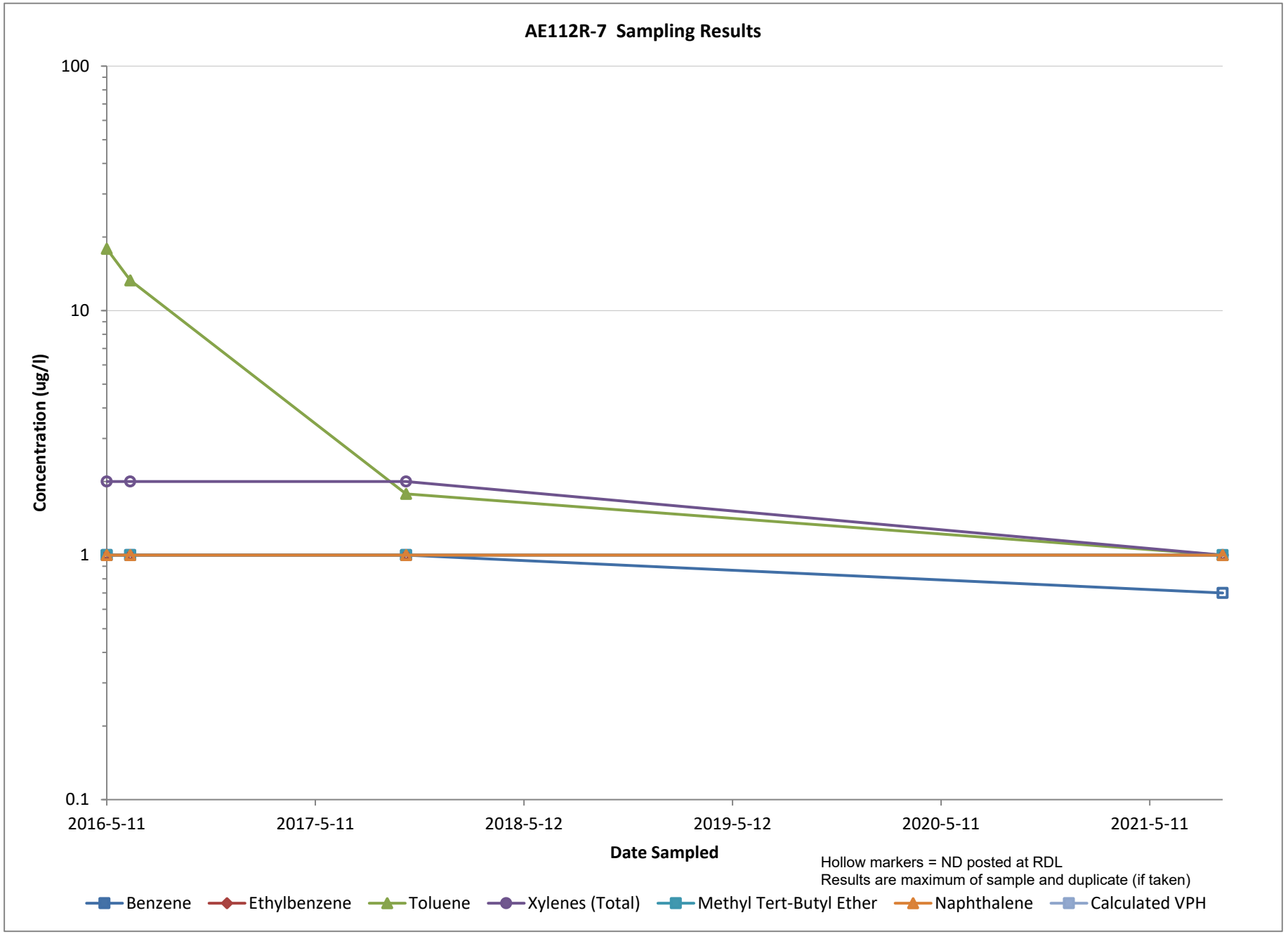

AE112R-2 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

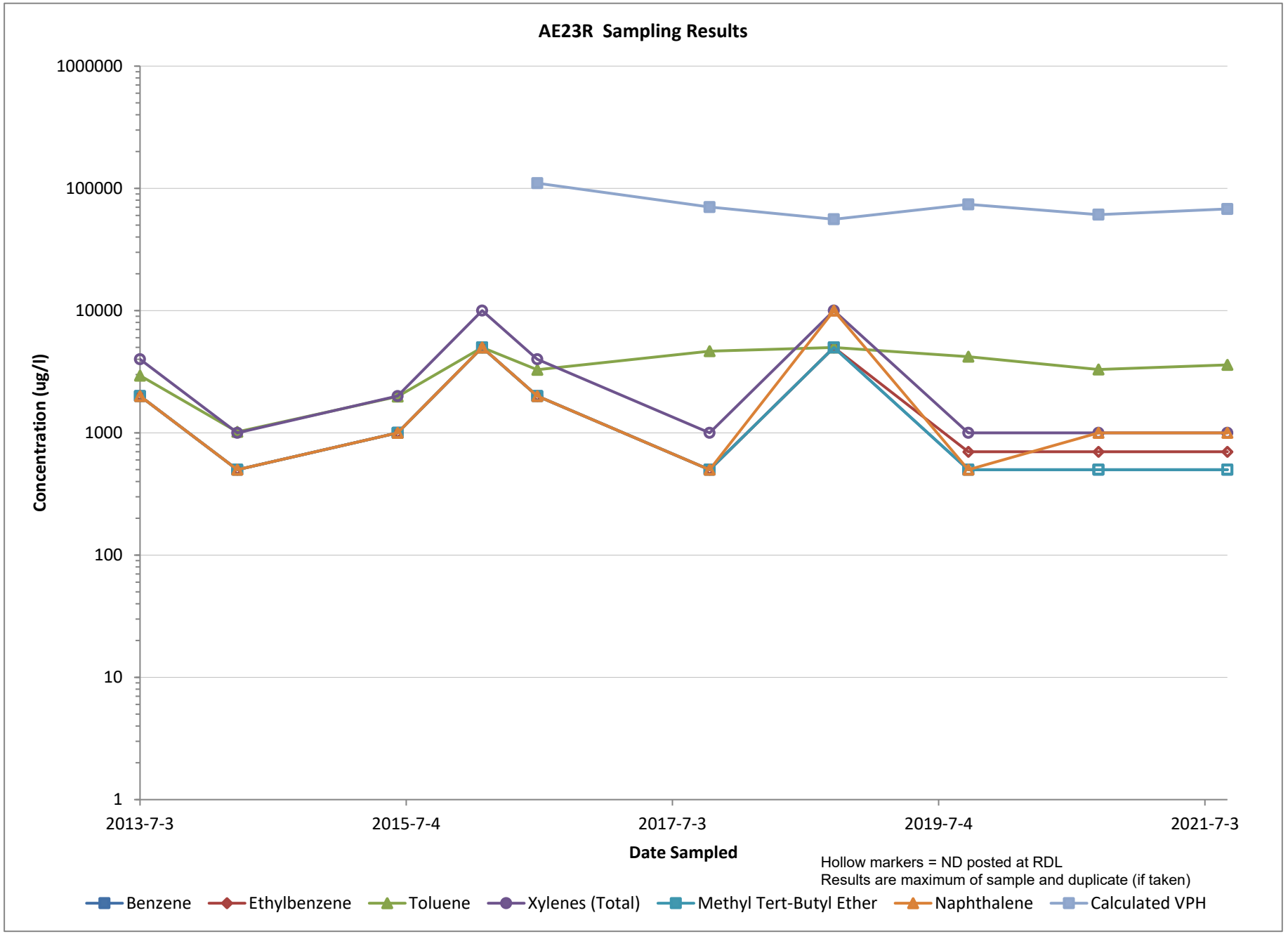

AE112R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

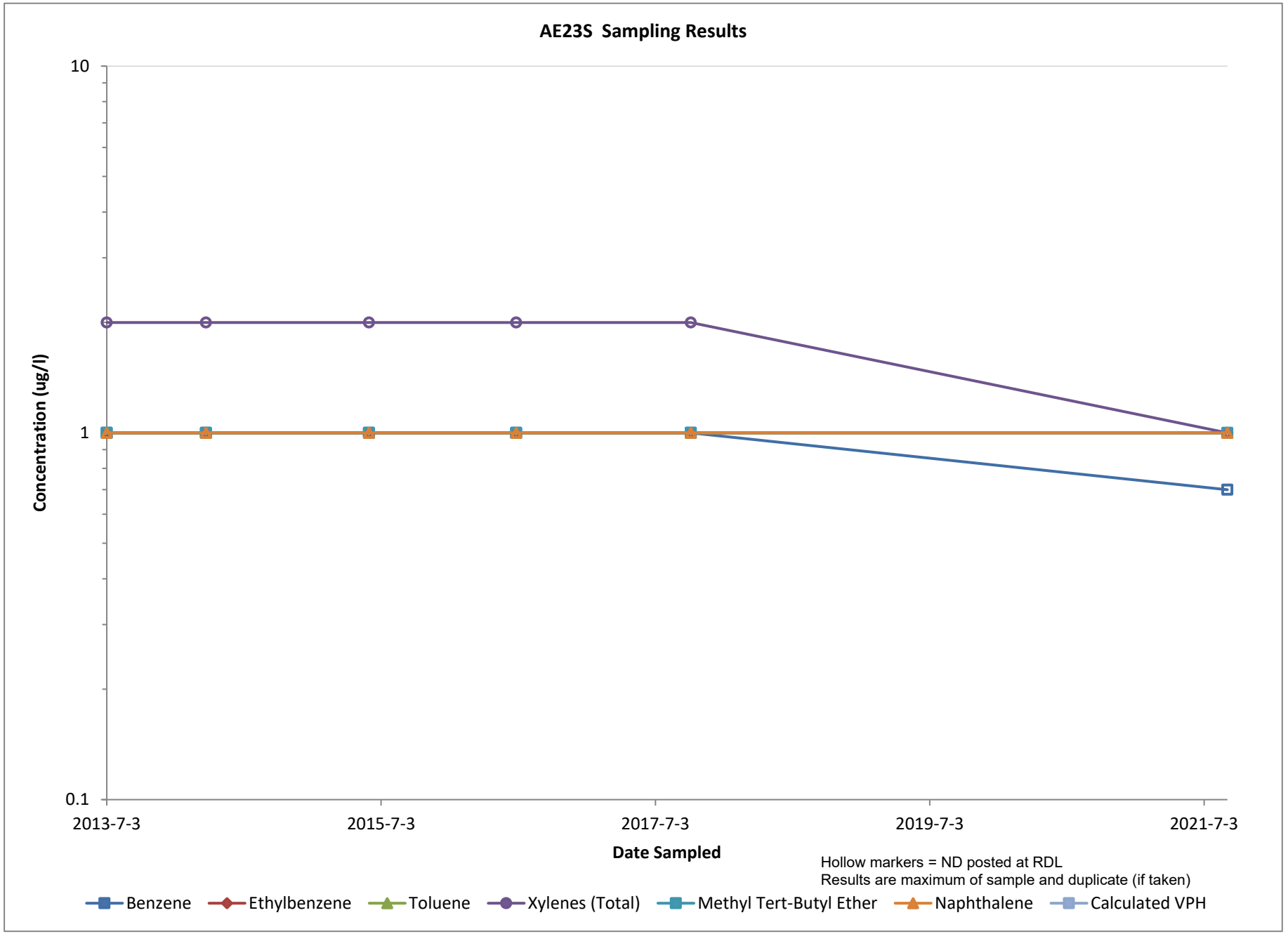

AE112R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

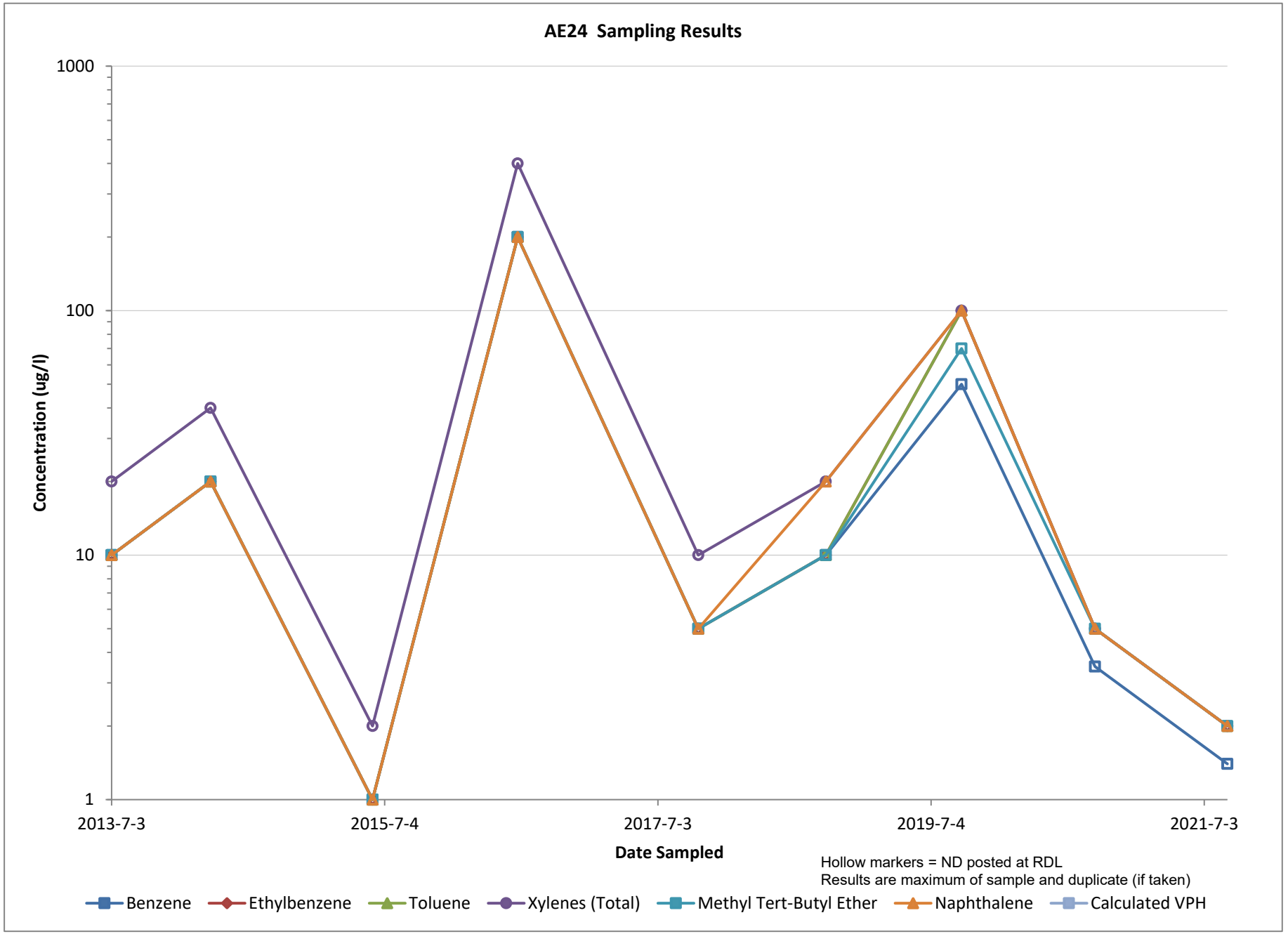

AE112R-5 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

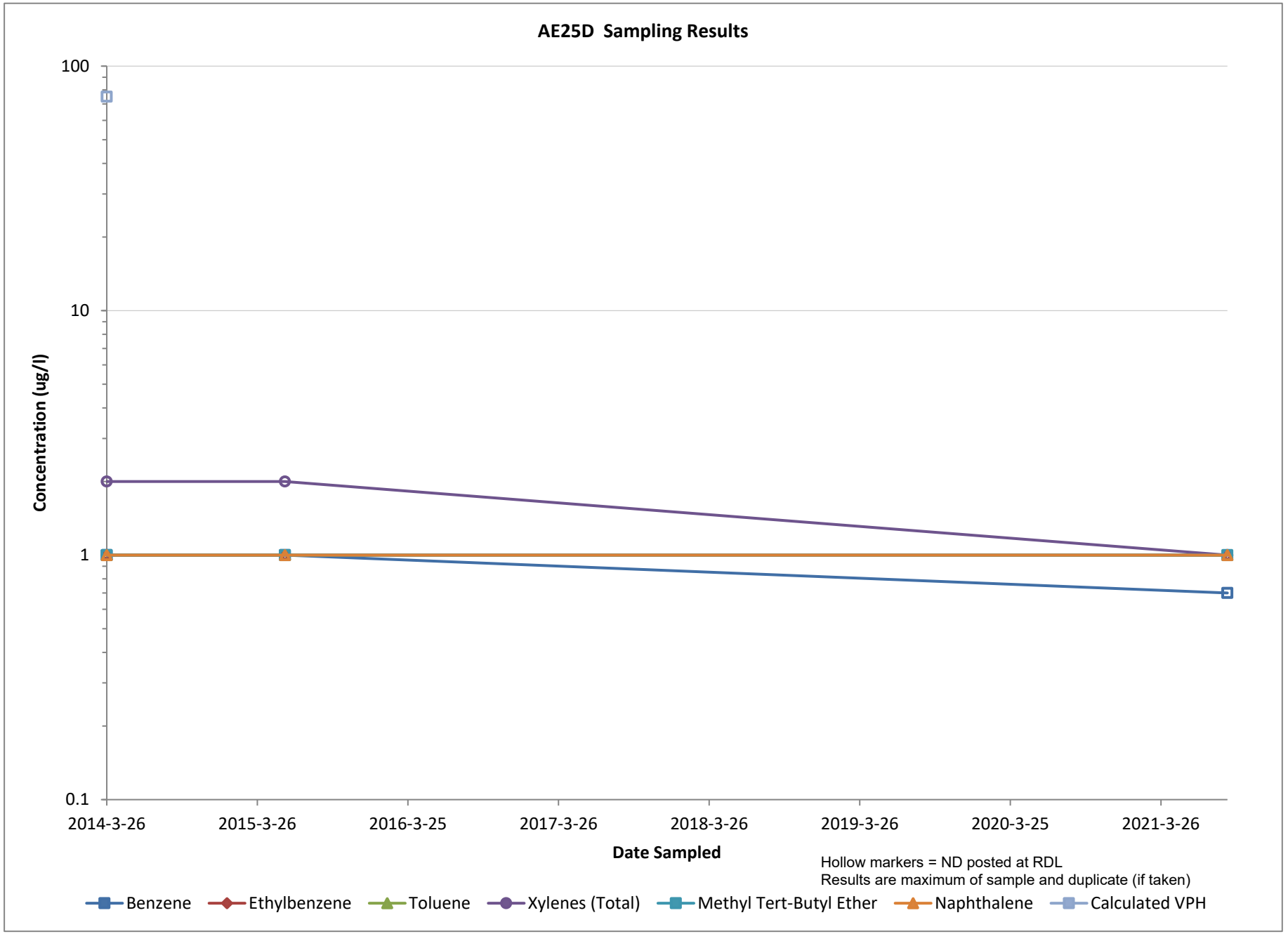

AE112R-6 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

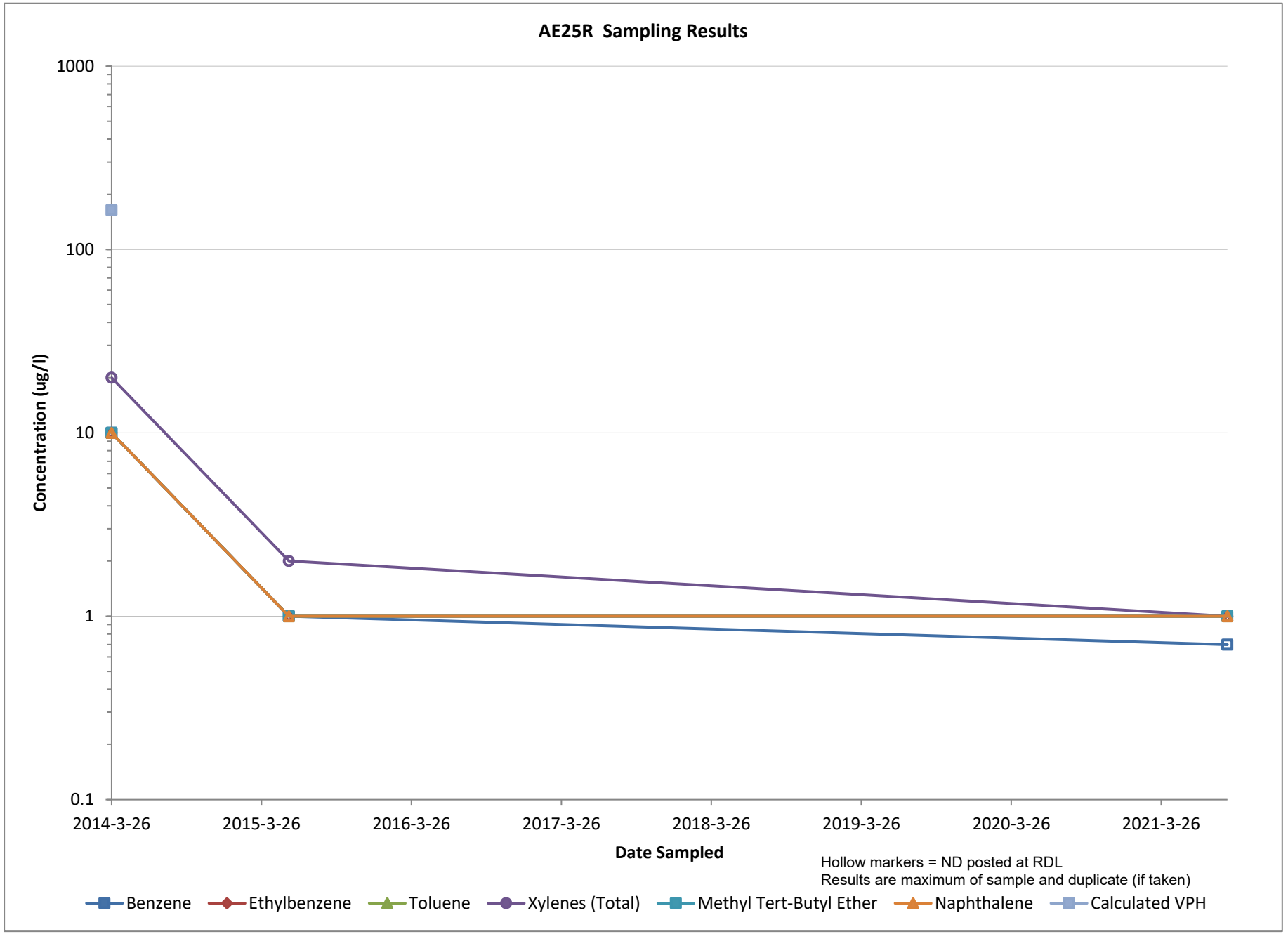

AE112R-7 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

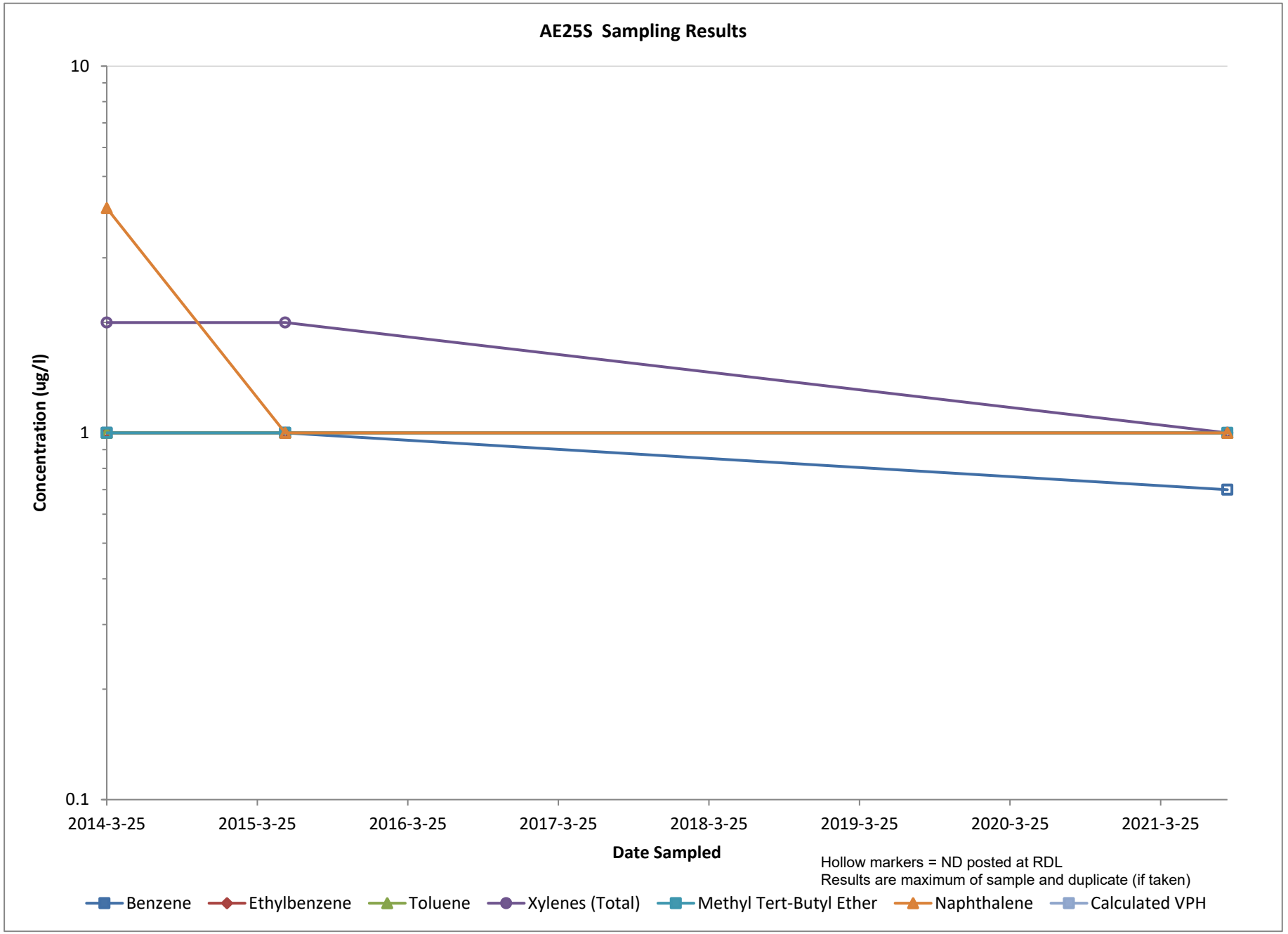

AE23R Sampling Results
1000000
100000
10000
1000
100
10
1
Concentration (ug/l)
2013-7-3
2015-7-4
2017-7-3
2019-7-4
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

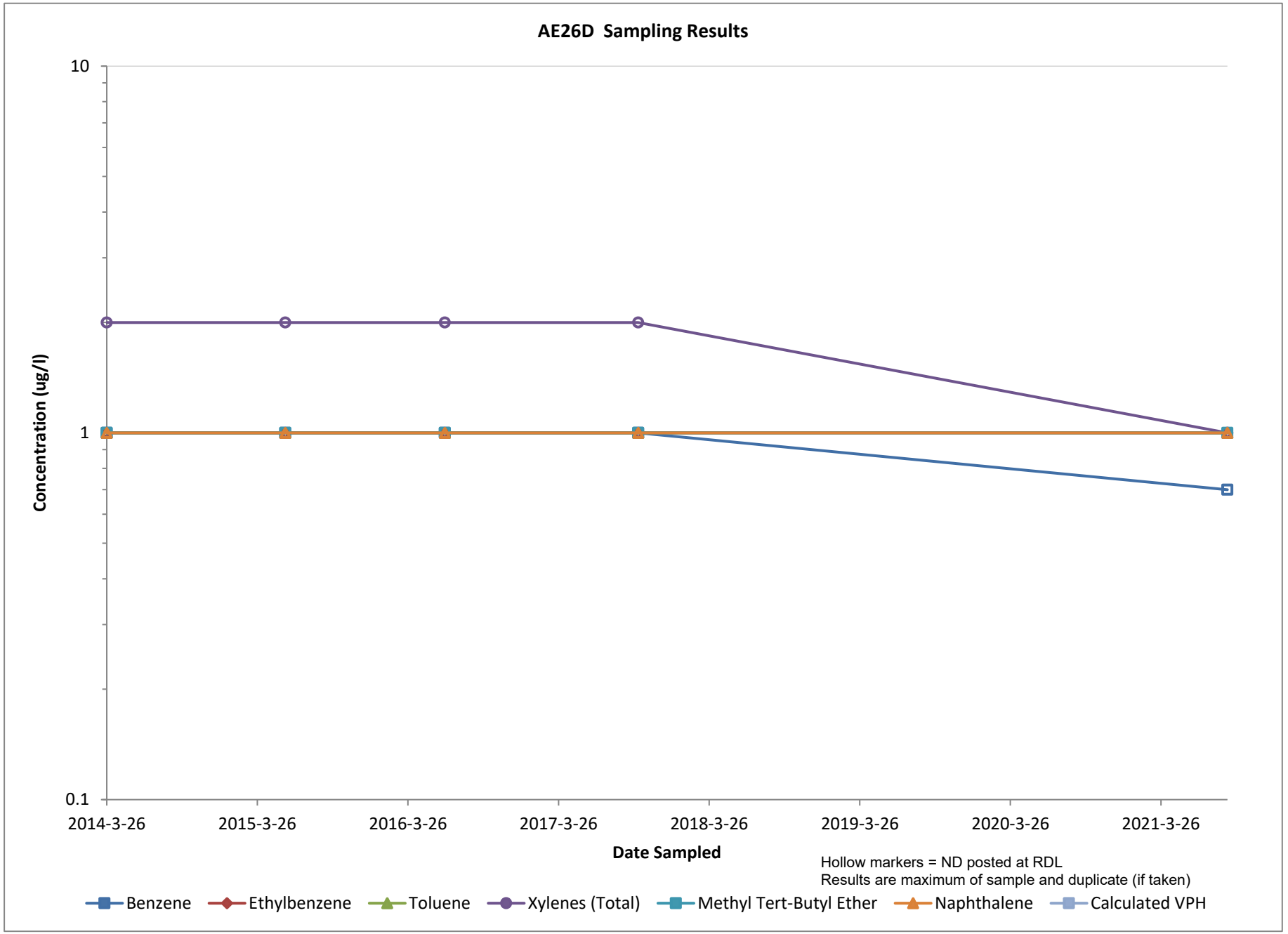

AE23S Sampling Results
10
1
0.1
Concentration (ug/l)
2013-7-3
2015-7-3
2017-7-3
2019-7-3
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

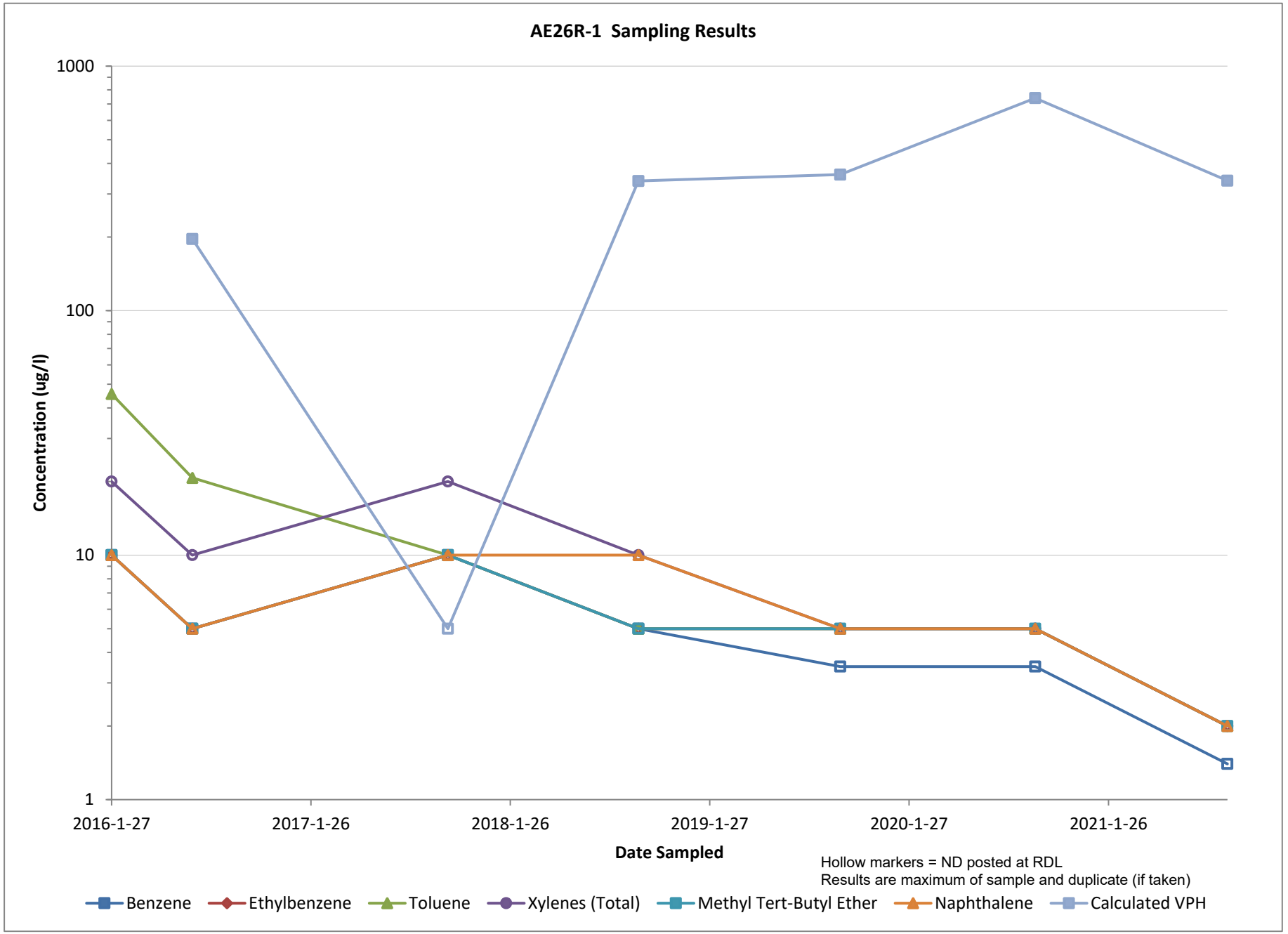

AE24 Sampling Results
1000
100
10
1
Concentration (ug/l)
2013-7-3
2015-7-4
2017-7-3
2019-7-4
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

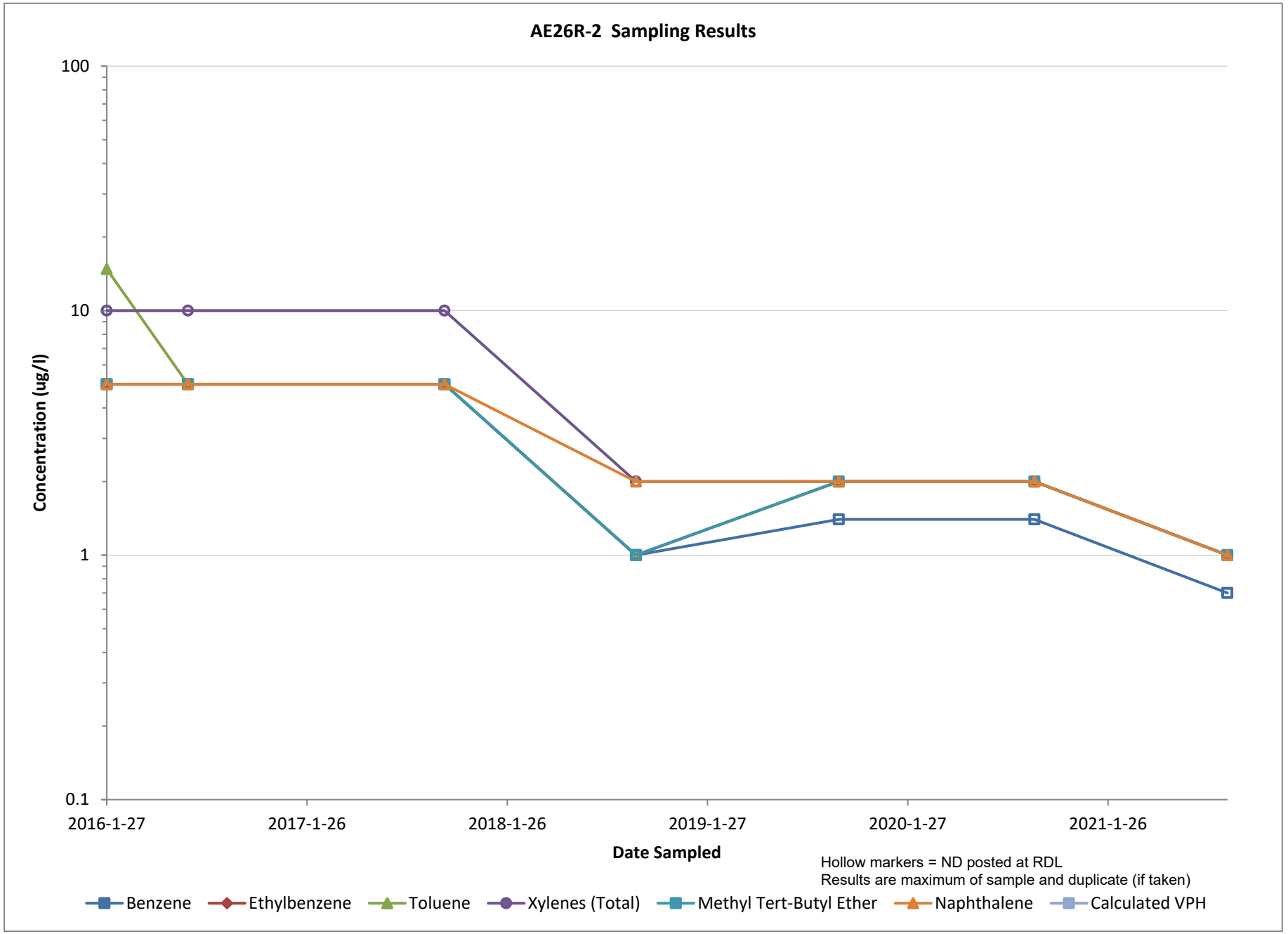

AE25D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-3-26
2015-3-26
2016-3-25
2017-3-26
2018-3-26
2019-3-26
2020-3-25
2021-3-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

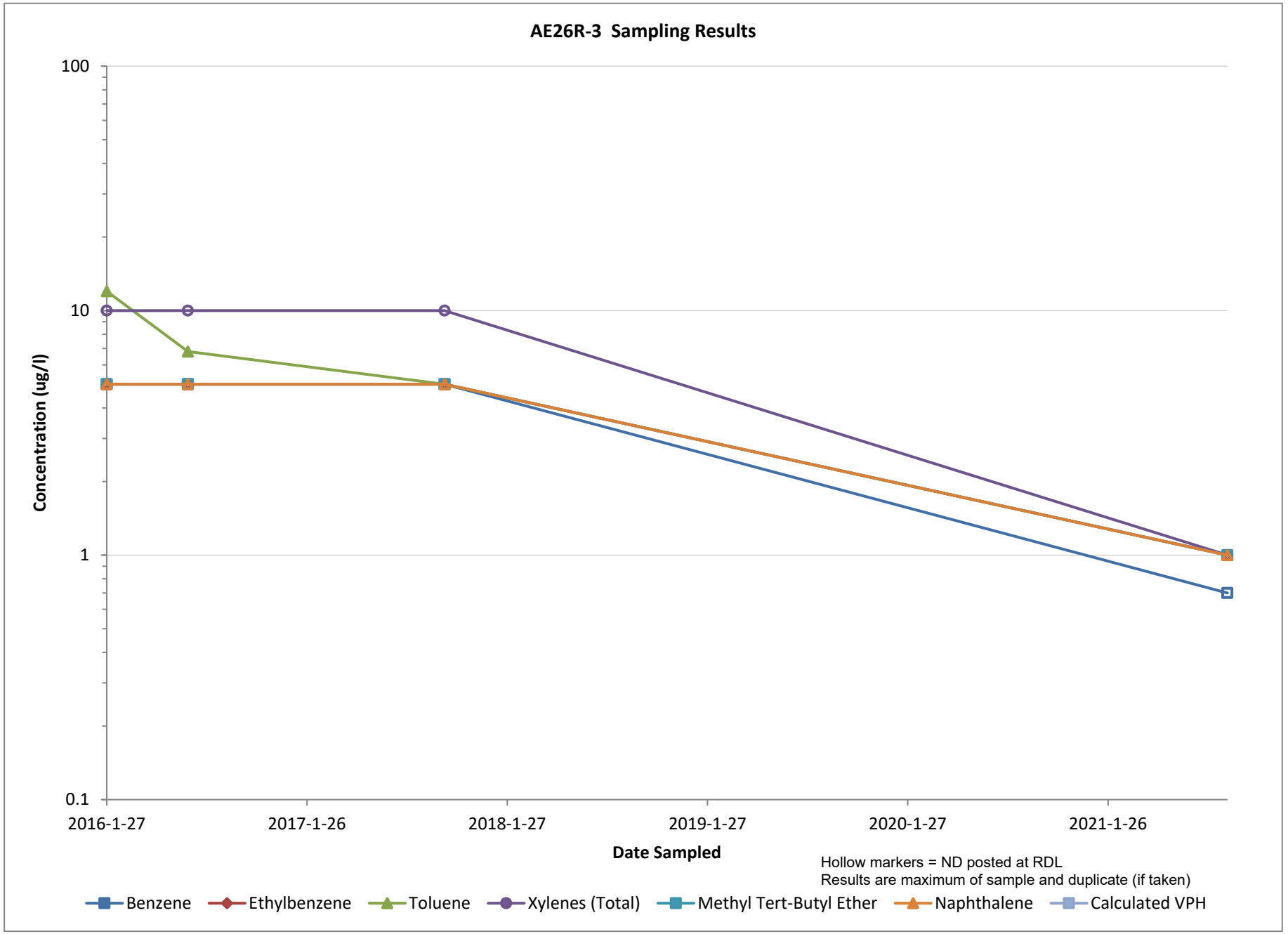

AE25R Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-3-26
2015-3-26
2016-3-26
2017-3-26
2018-3-26
2019-3-26
2020-3-26
2021-3-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

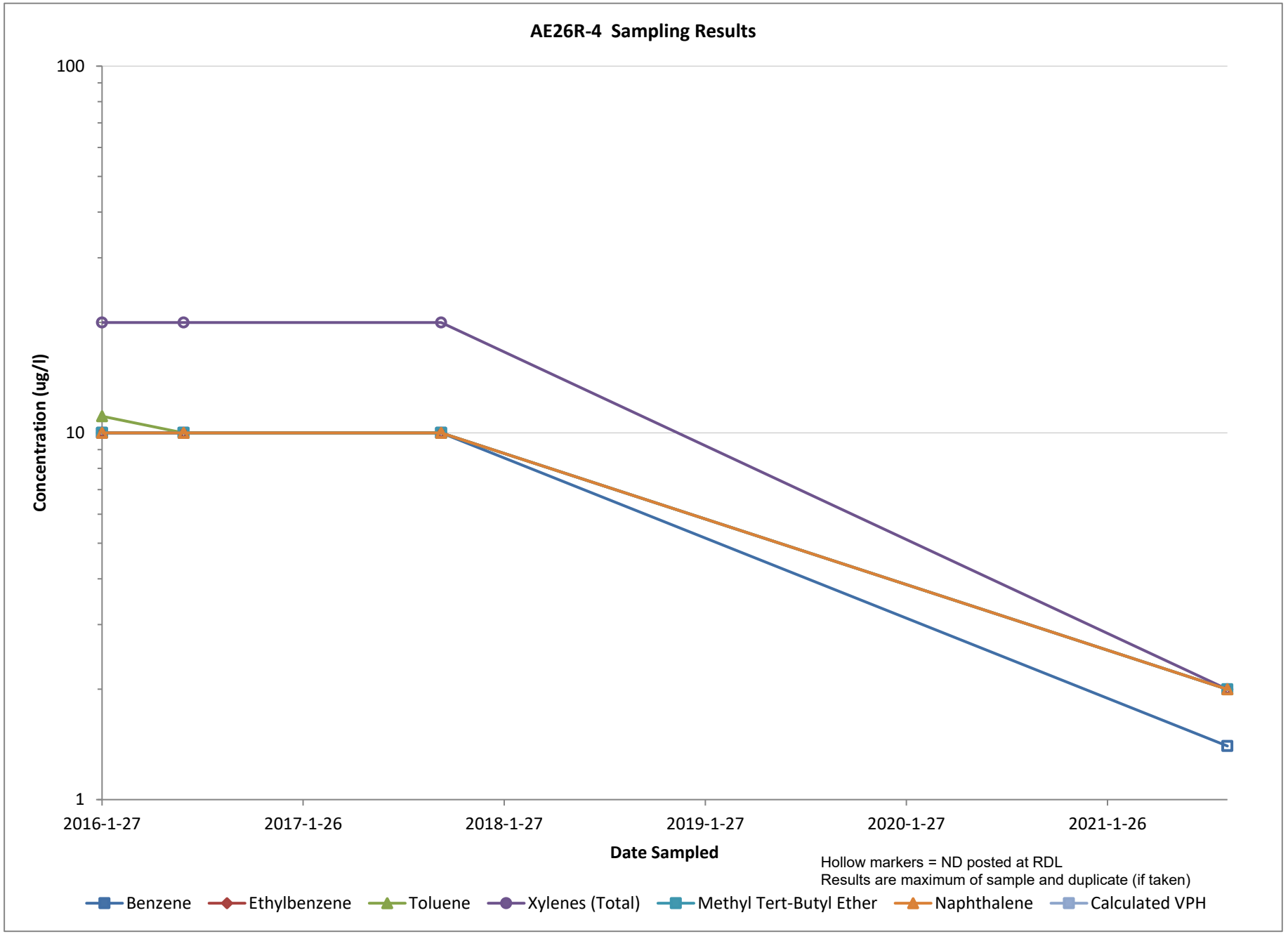

AE25S Sampling Results
10
1
0.1
Concentration (ug/l)
2014-3-25
2015-3-25
2016-3-25
2017-3-25
2018-3-25
2019-3-25
2020-3-25
2021-3-25
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

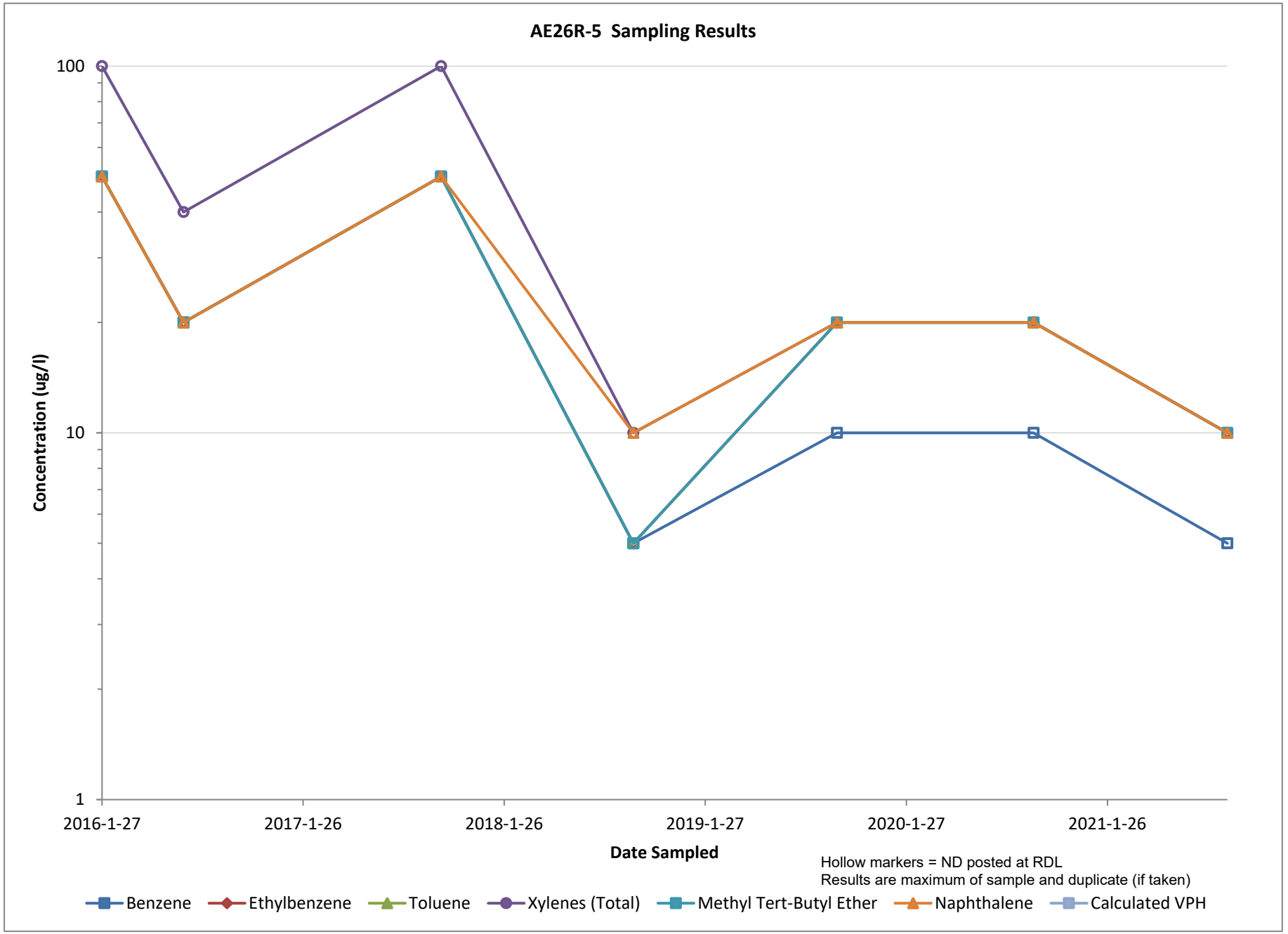

AE26D Sampling Results
10
1
0.1
Concentration (ug/l)
2014-3-26
2015-3-26
2016-3-26
2017-3-26
2018-3-26
2019-3-26
2020-3-26
2021-3-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

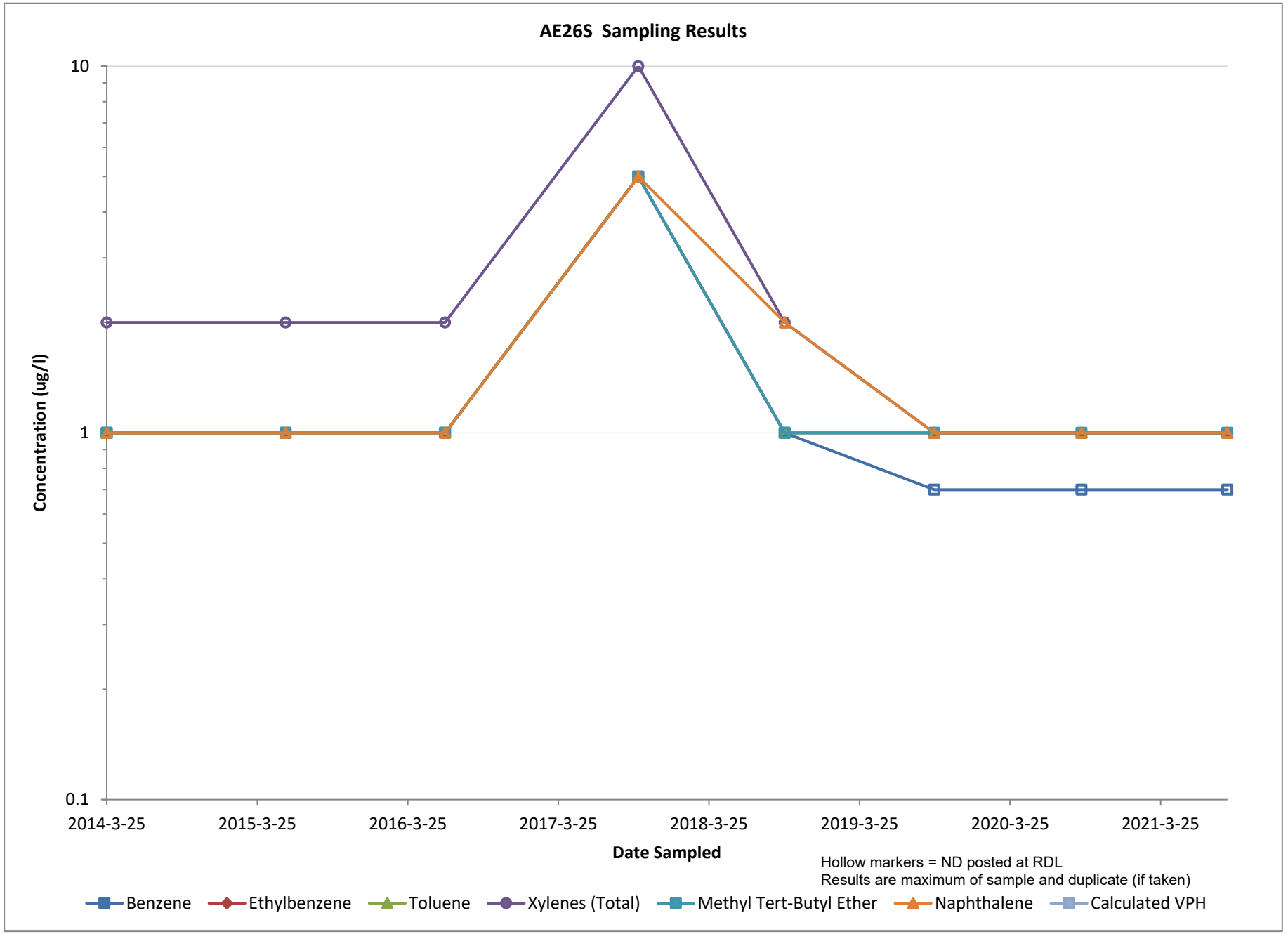

AE26R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

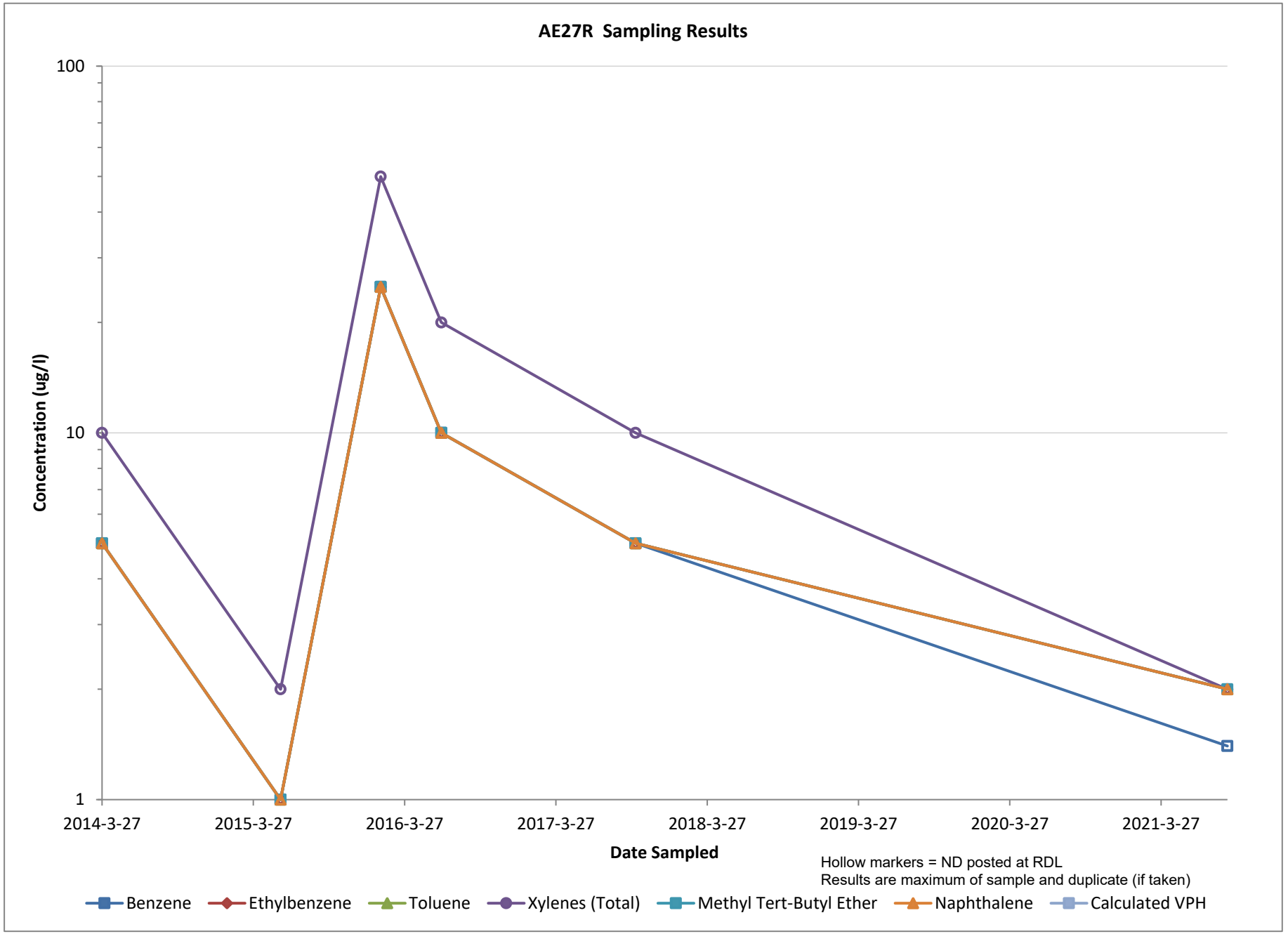

AE26R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

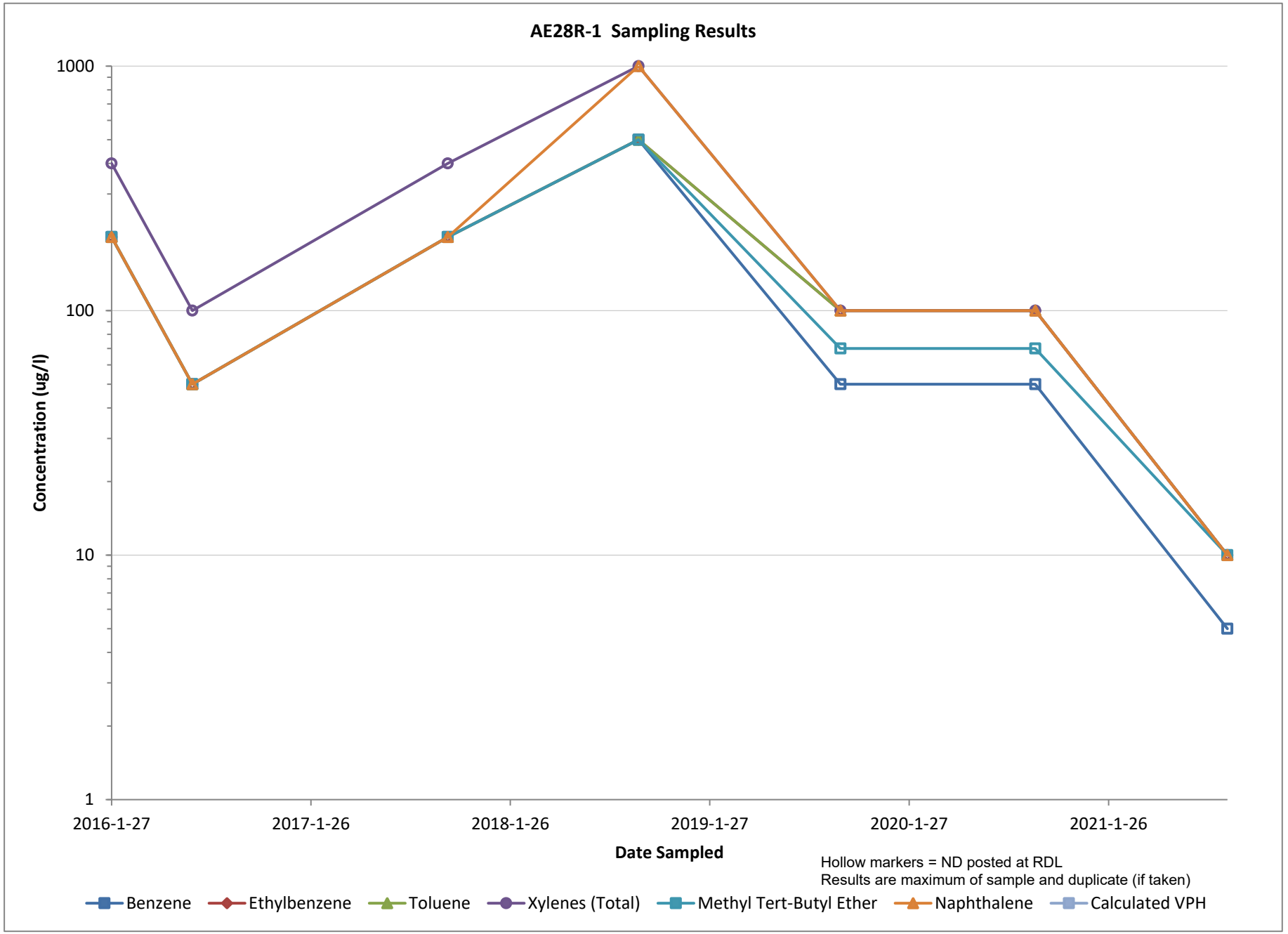

AE26R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

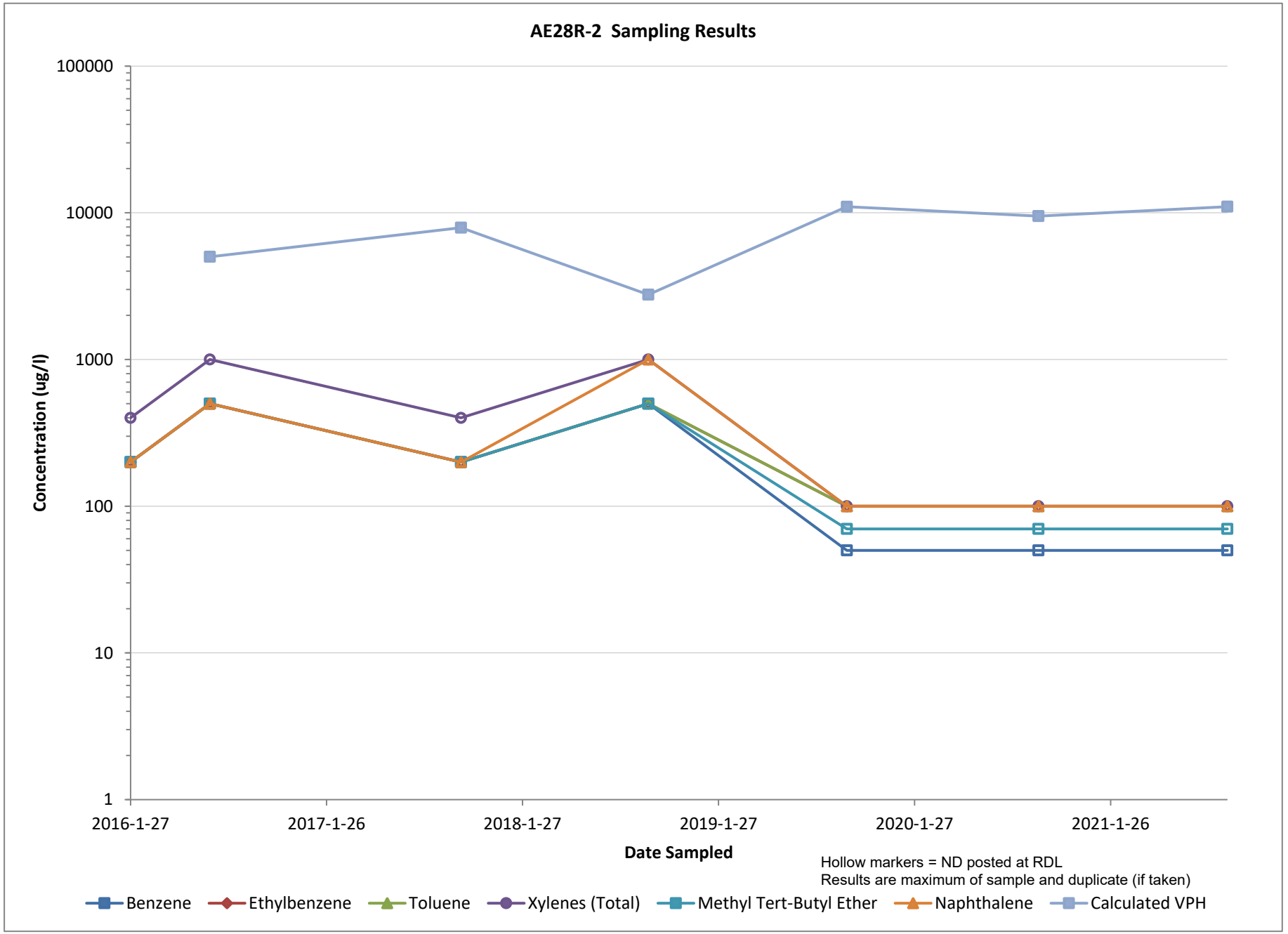

AE26R-4 Sampling Results
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

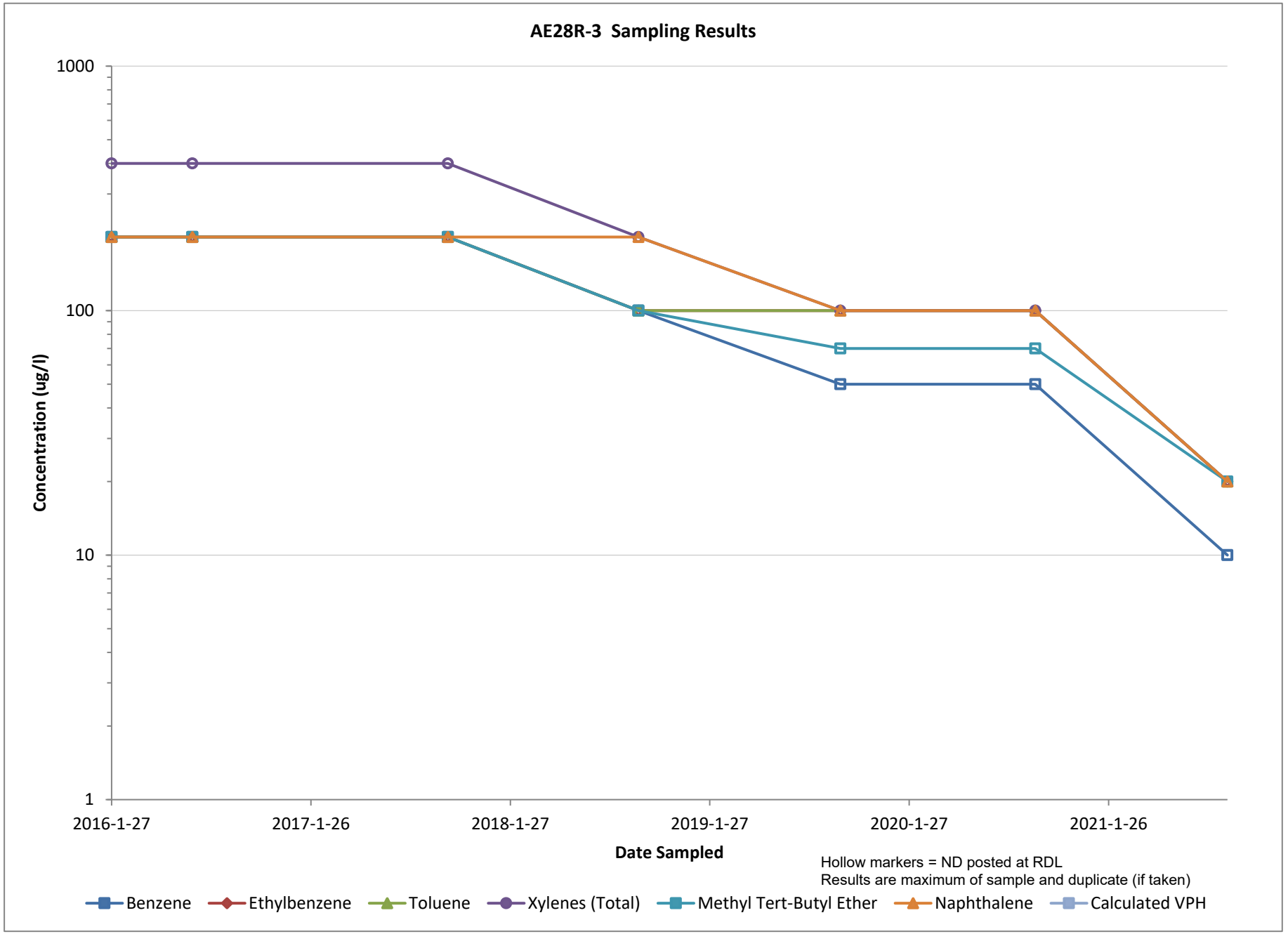

AE26R-5 Sampling Results
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

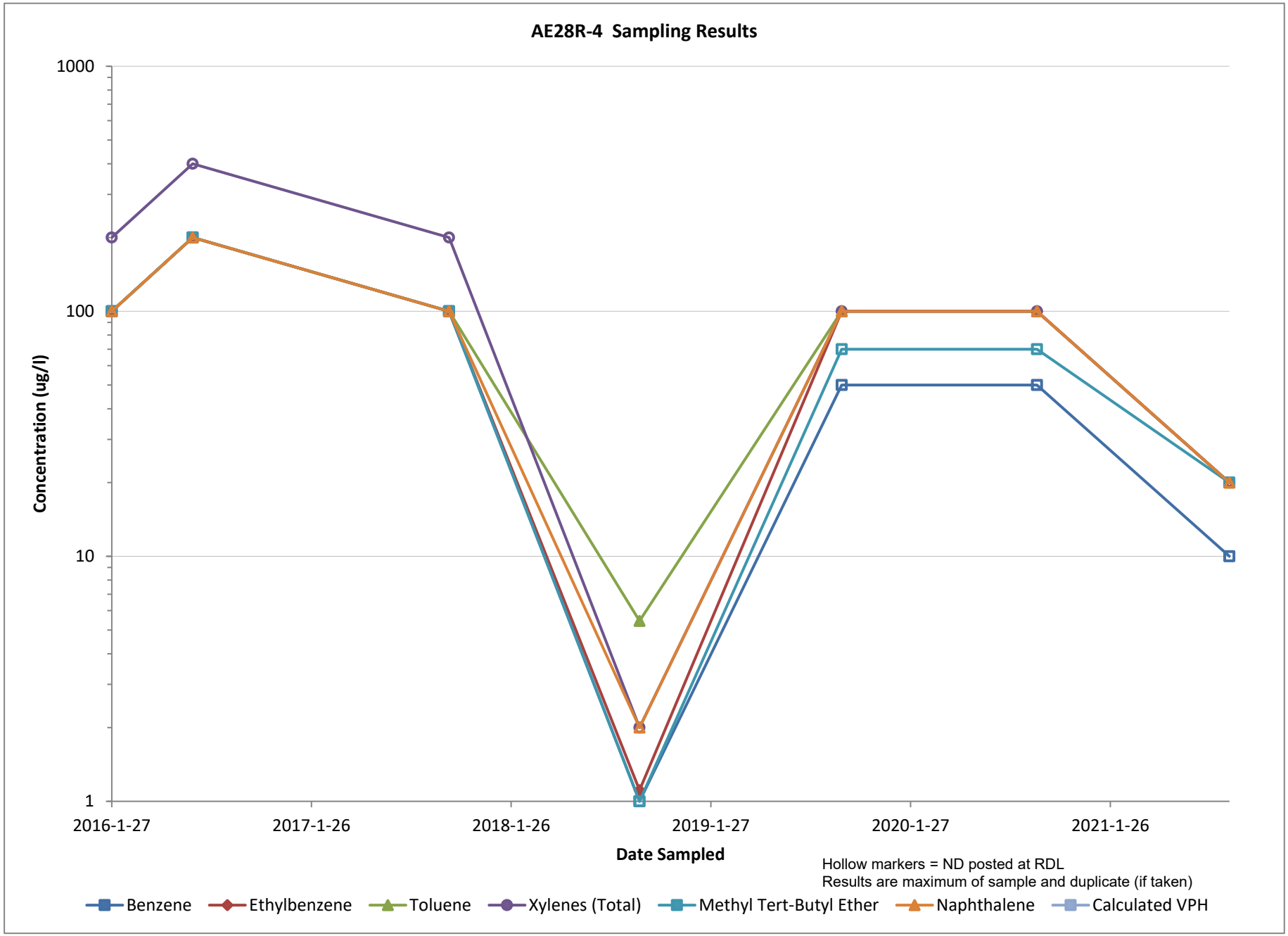

AE26S Sampling Results
10
1
0.1
Concentration (ug/l)
2014-3-25
2015-3-25
2016-3-25
2017-3-25
2018-3-25
2019-3-25
2020-3-25
2021-3-25
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

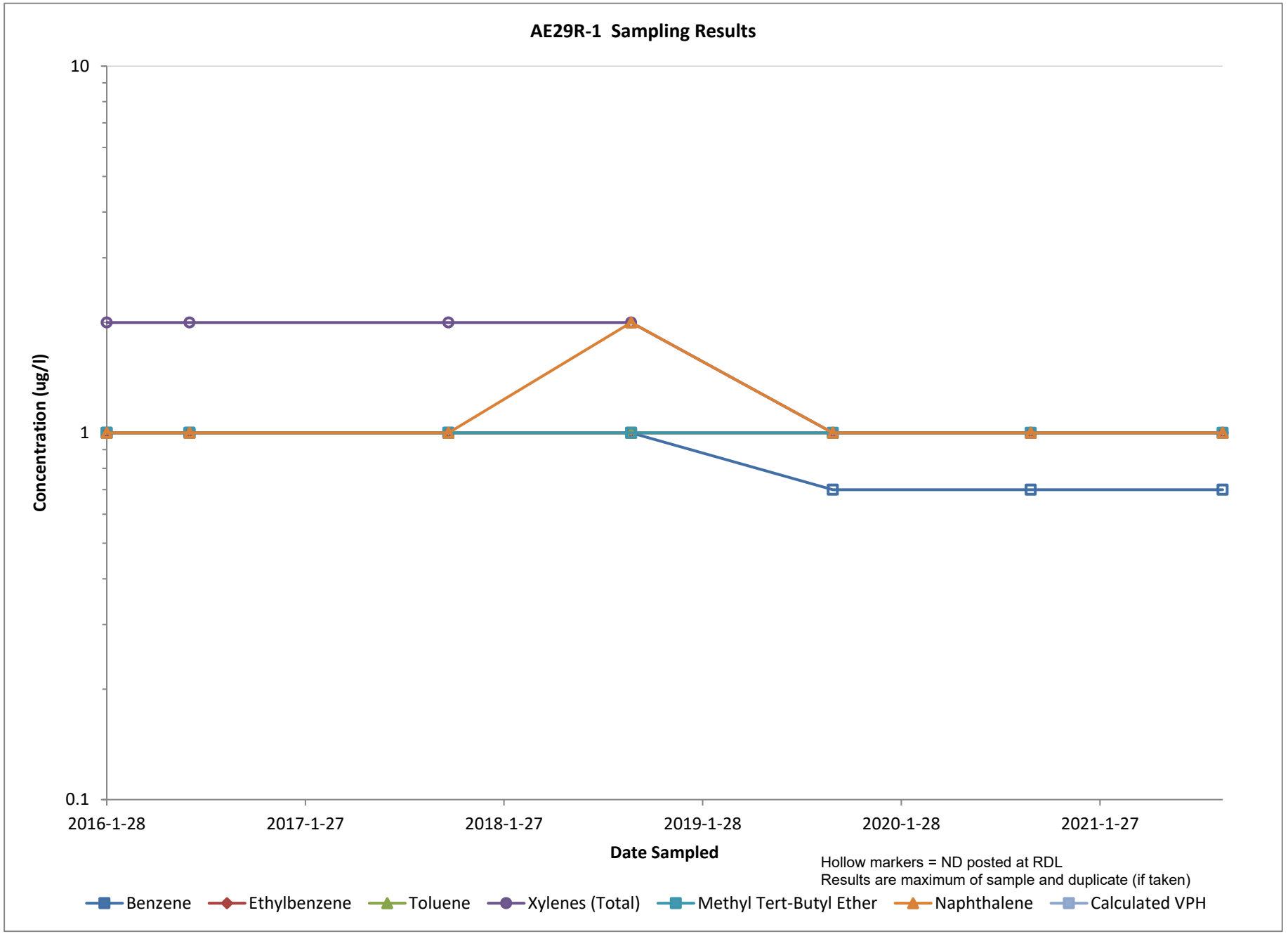

AE27R Sampling Results
100
10
1
Concentration (ug/l)
2014-3-27
2015-3-27
2016-3-27
2017-3-27
2018-3-27
2019-3-27
2020-3-27
2021-3-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

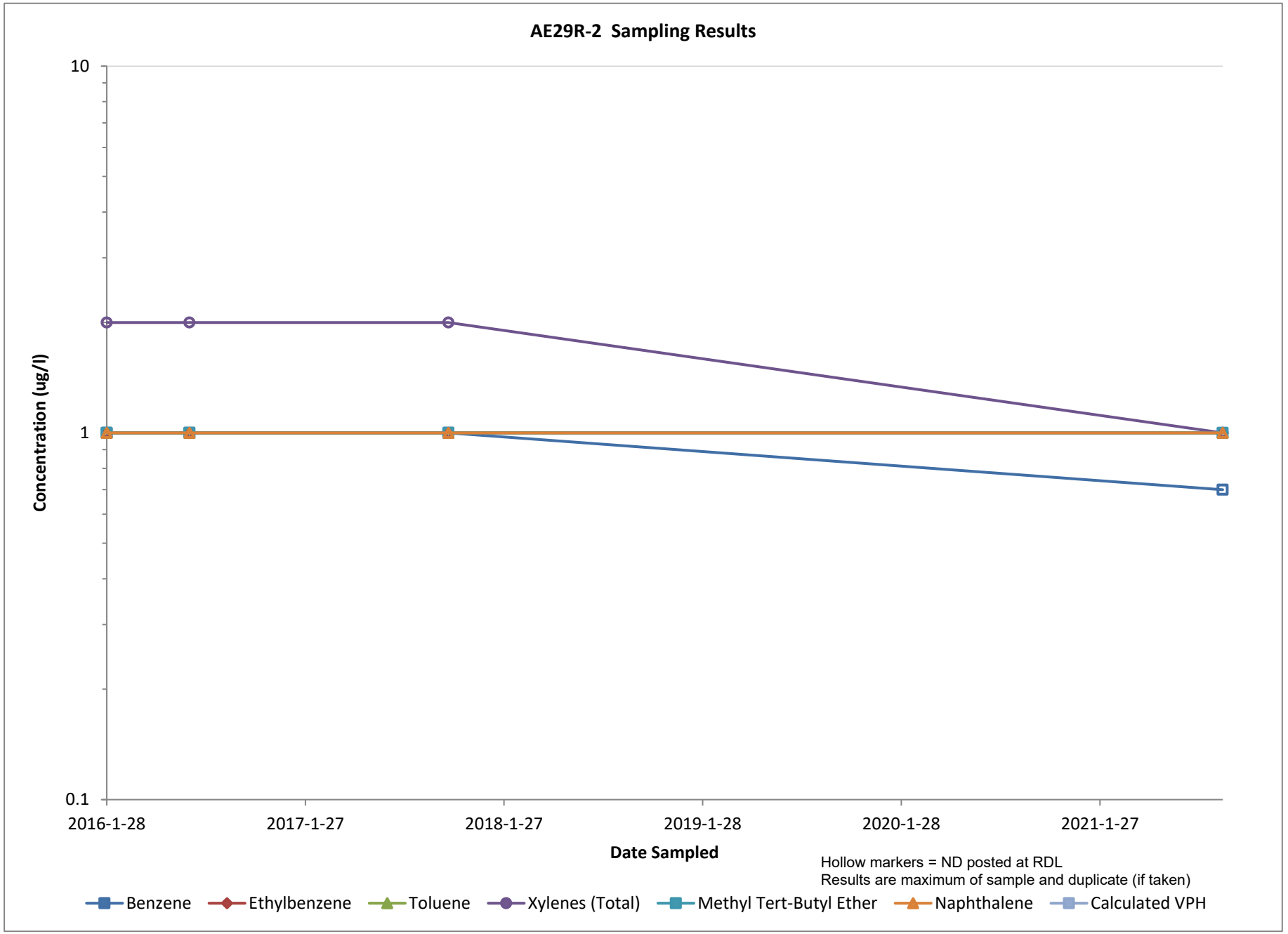

AE28R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

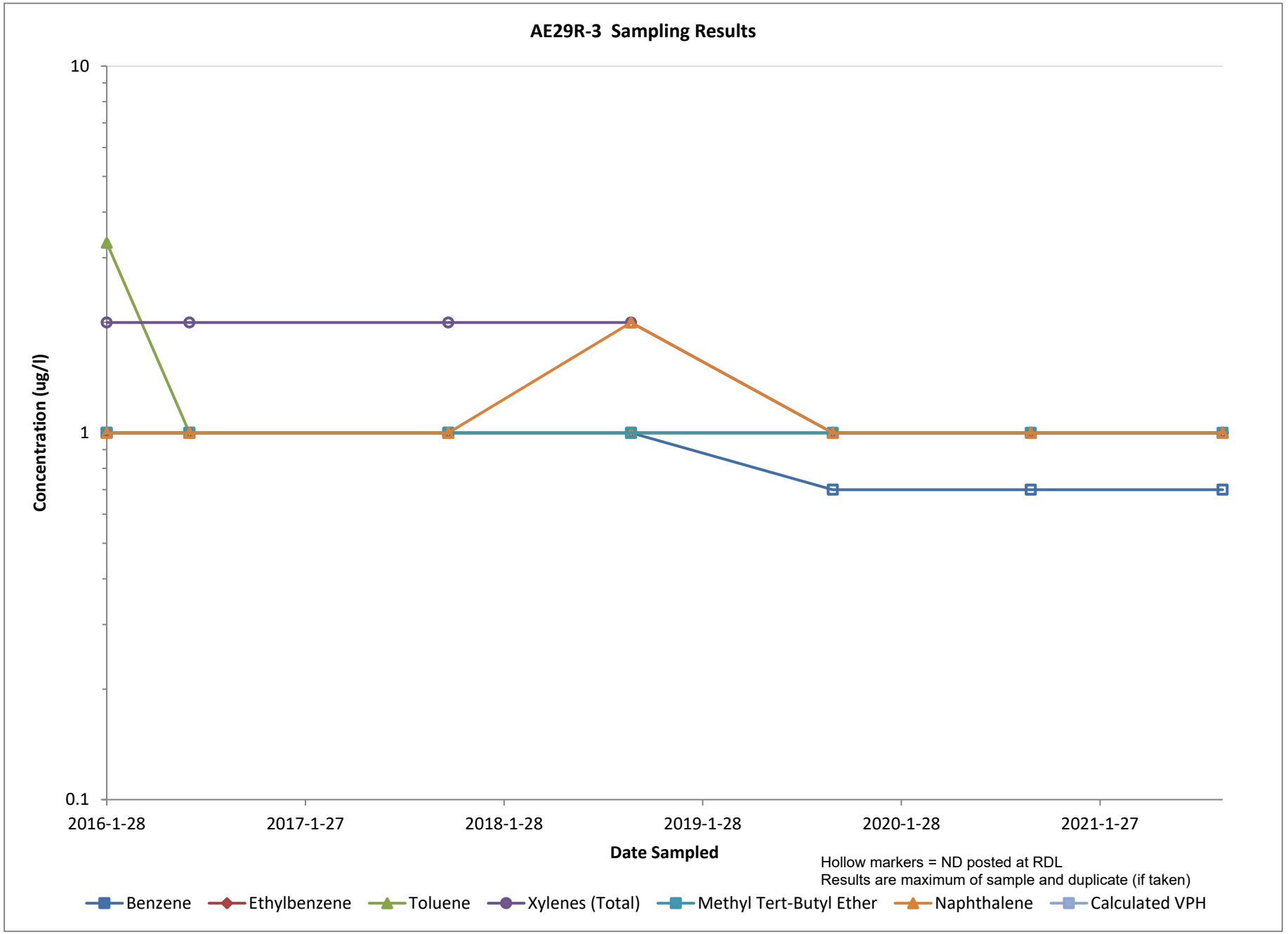

AE28R-2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

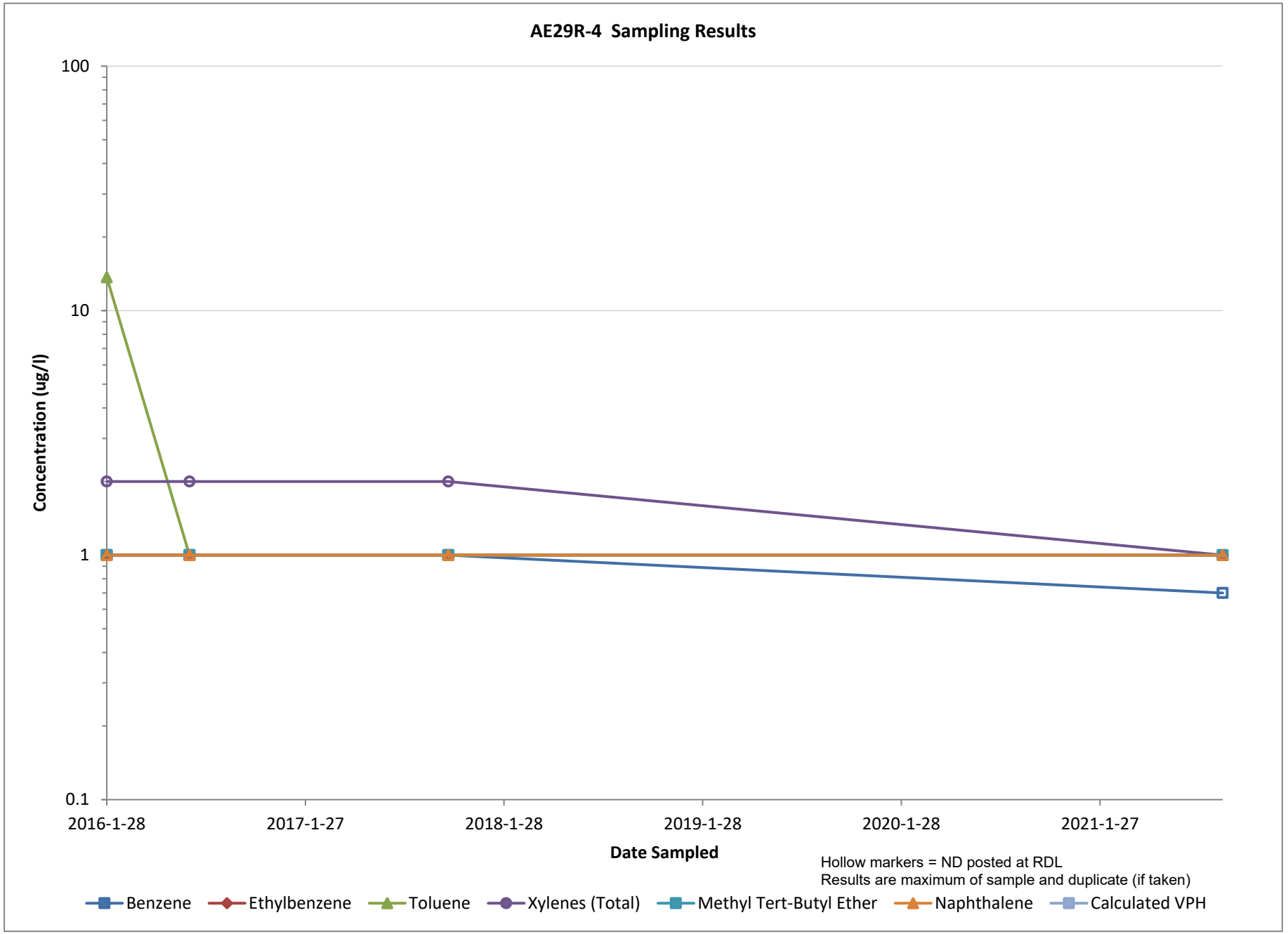

AE28R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

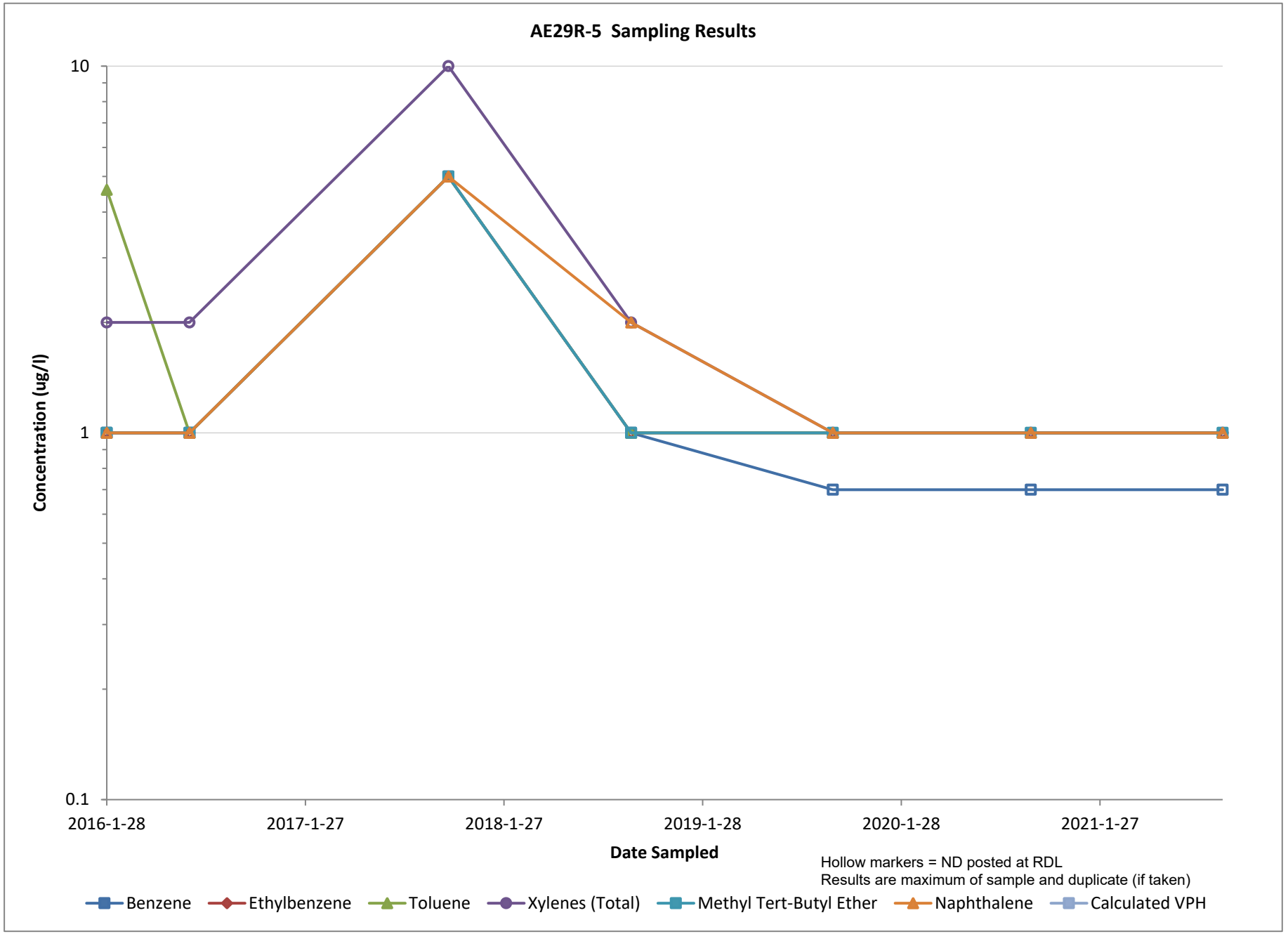

AE28R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

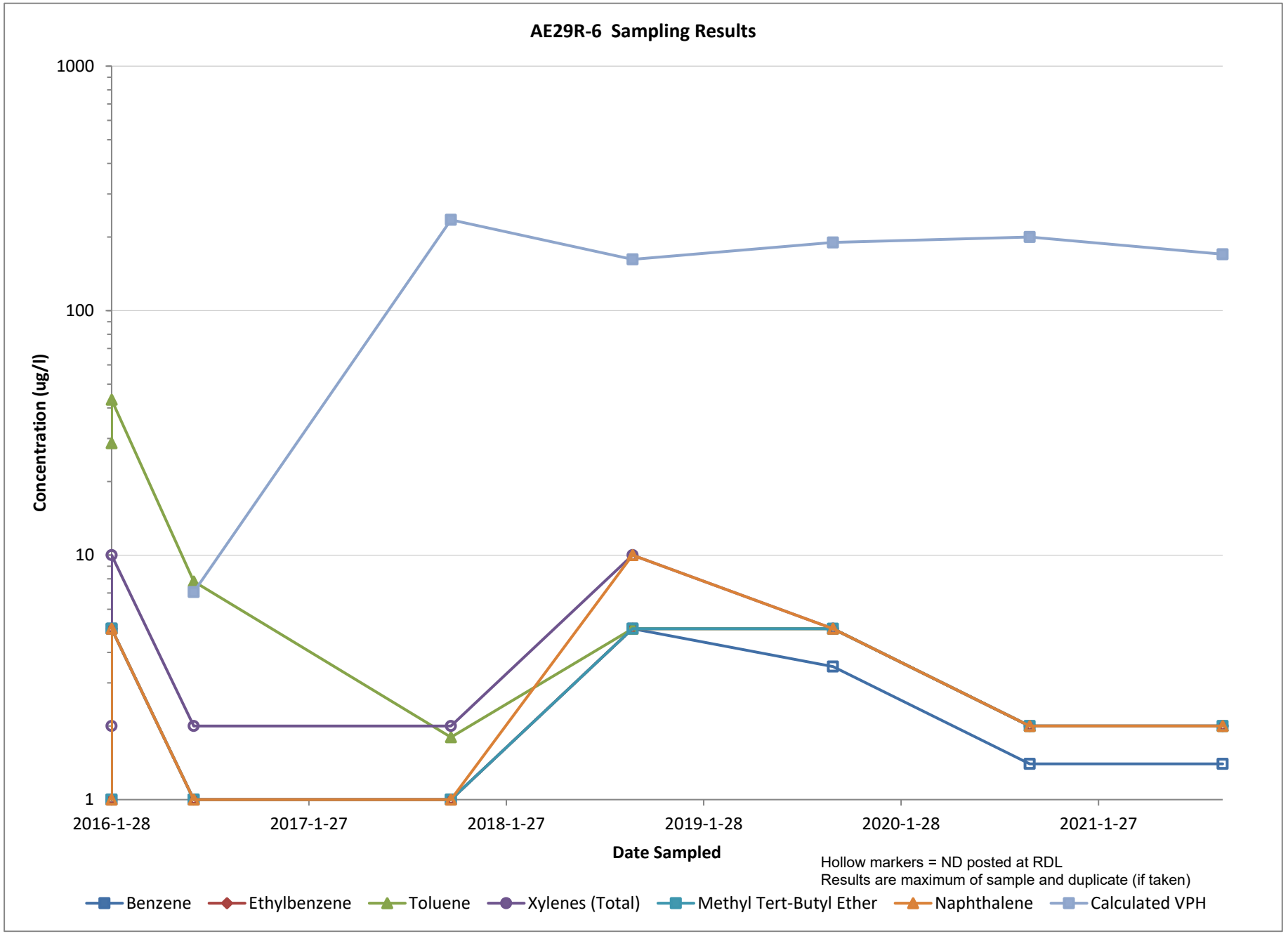

AE29R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

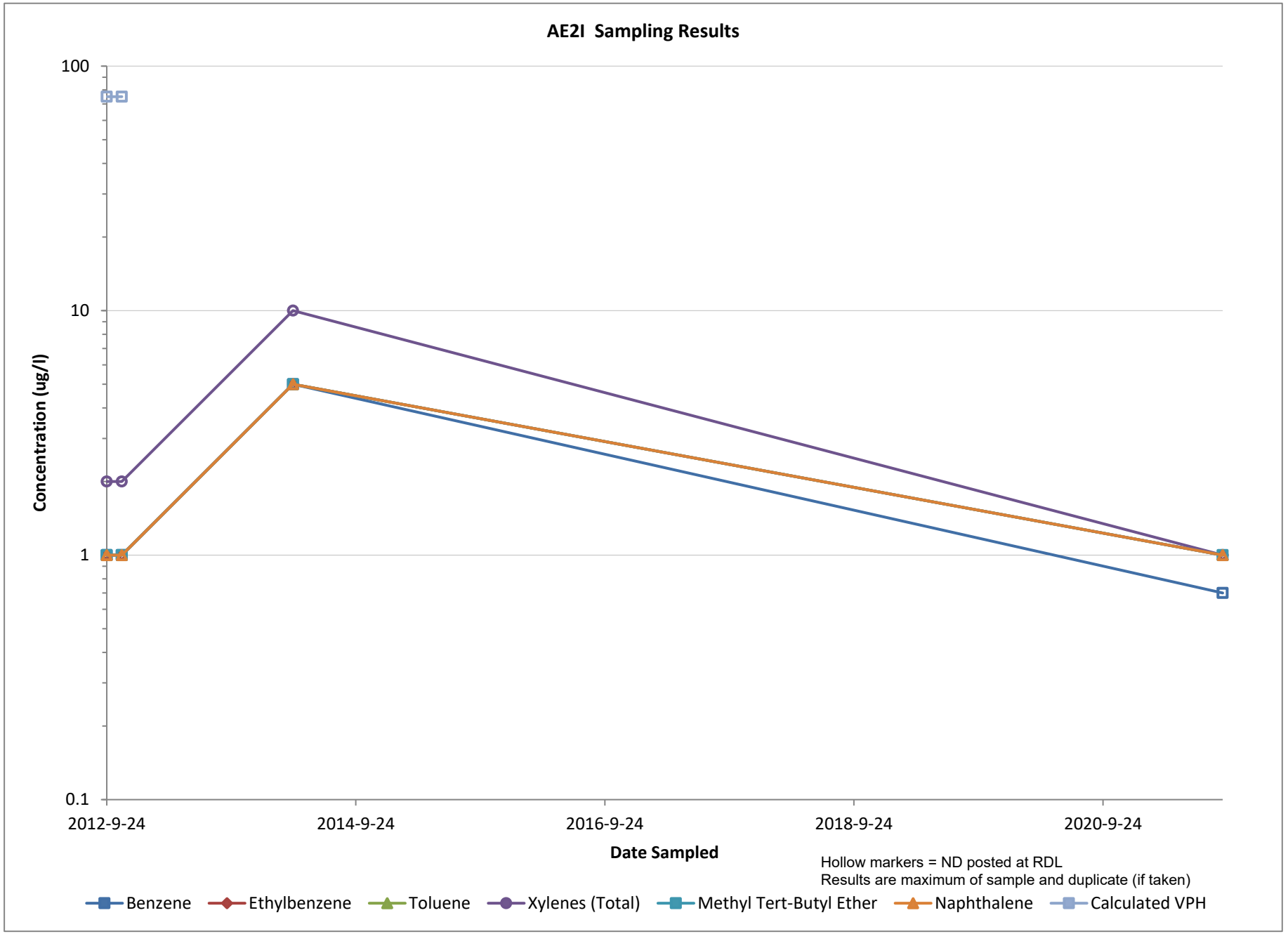

AE29R-2 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

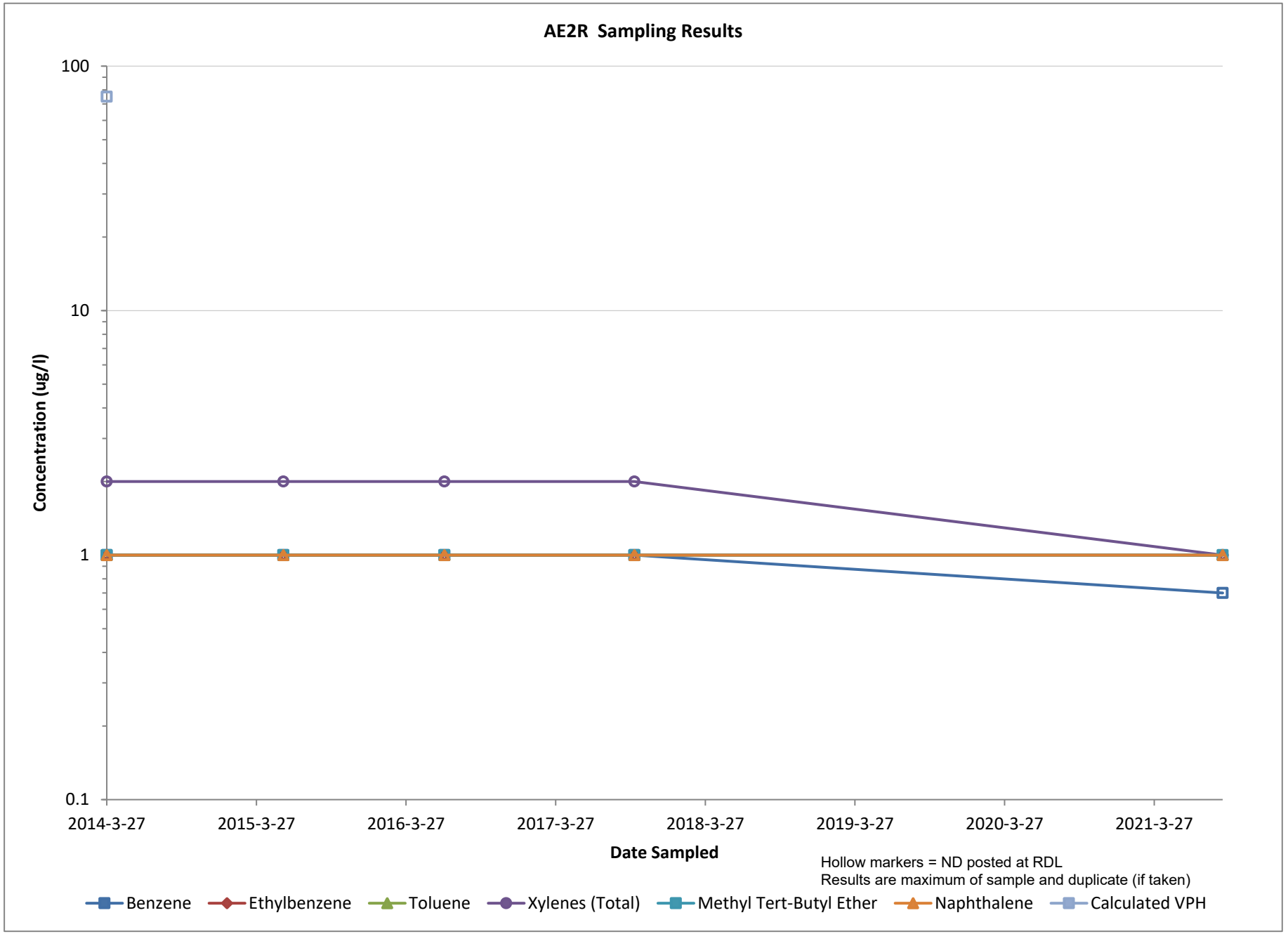

AE29R-3 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-28
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

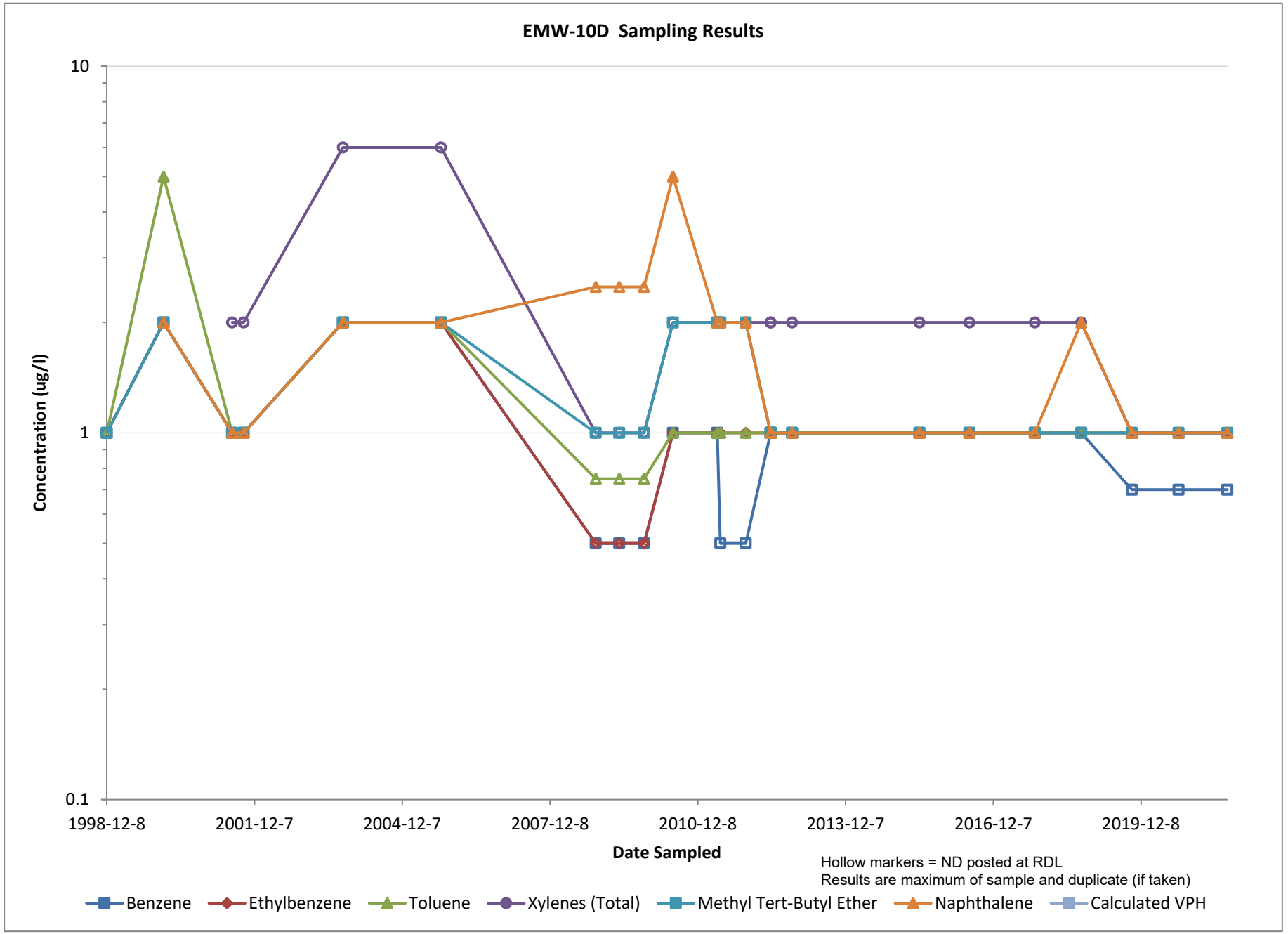

AE29R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-28
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

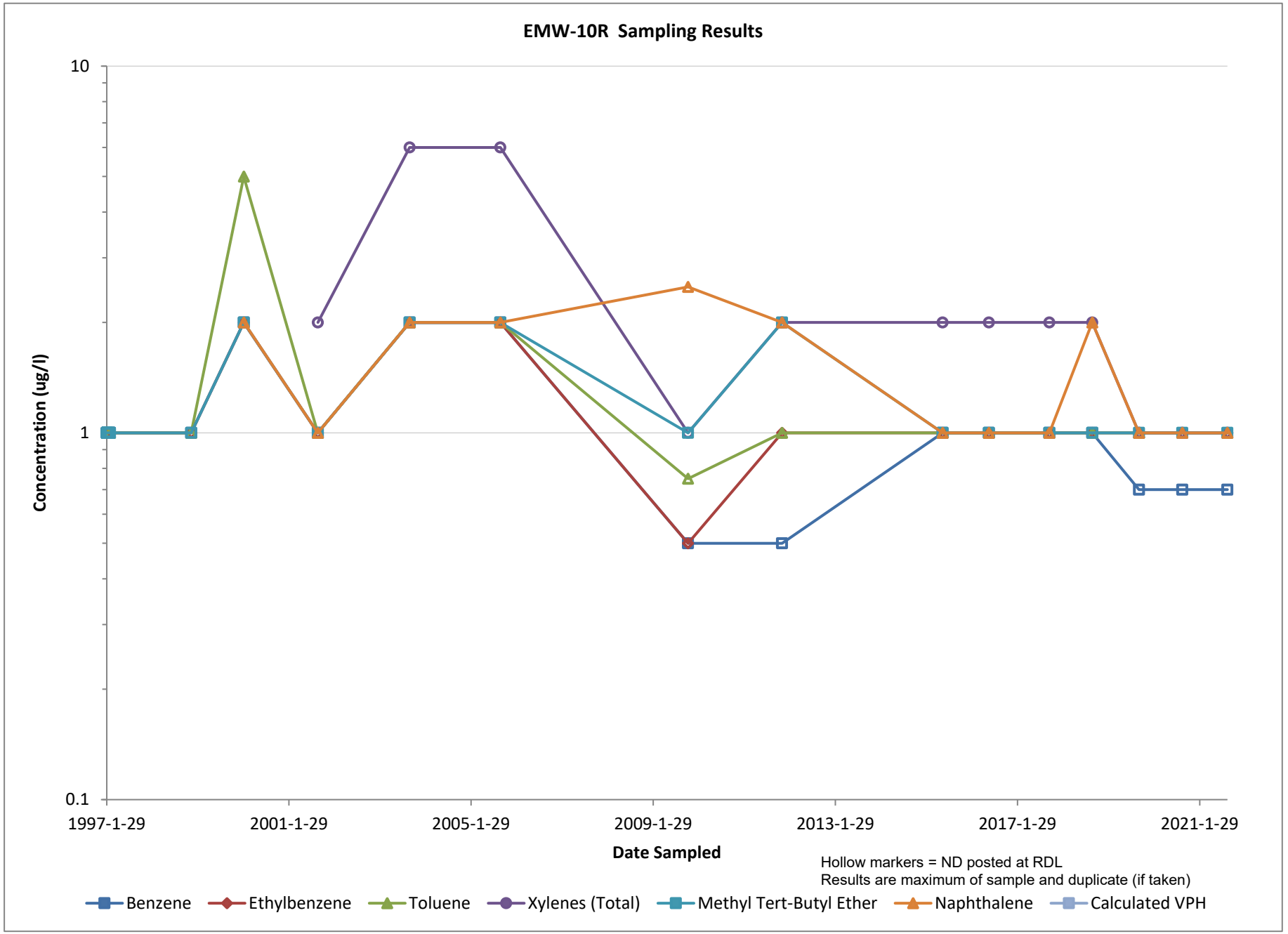

AE29R-5 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

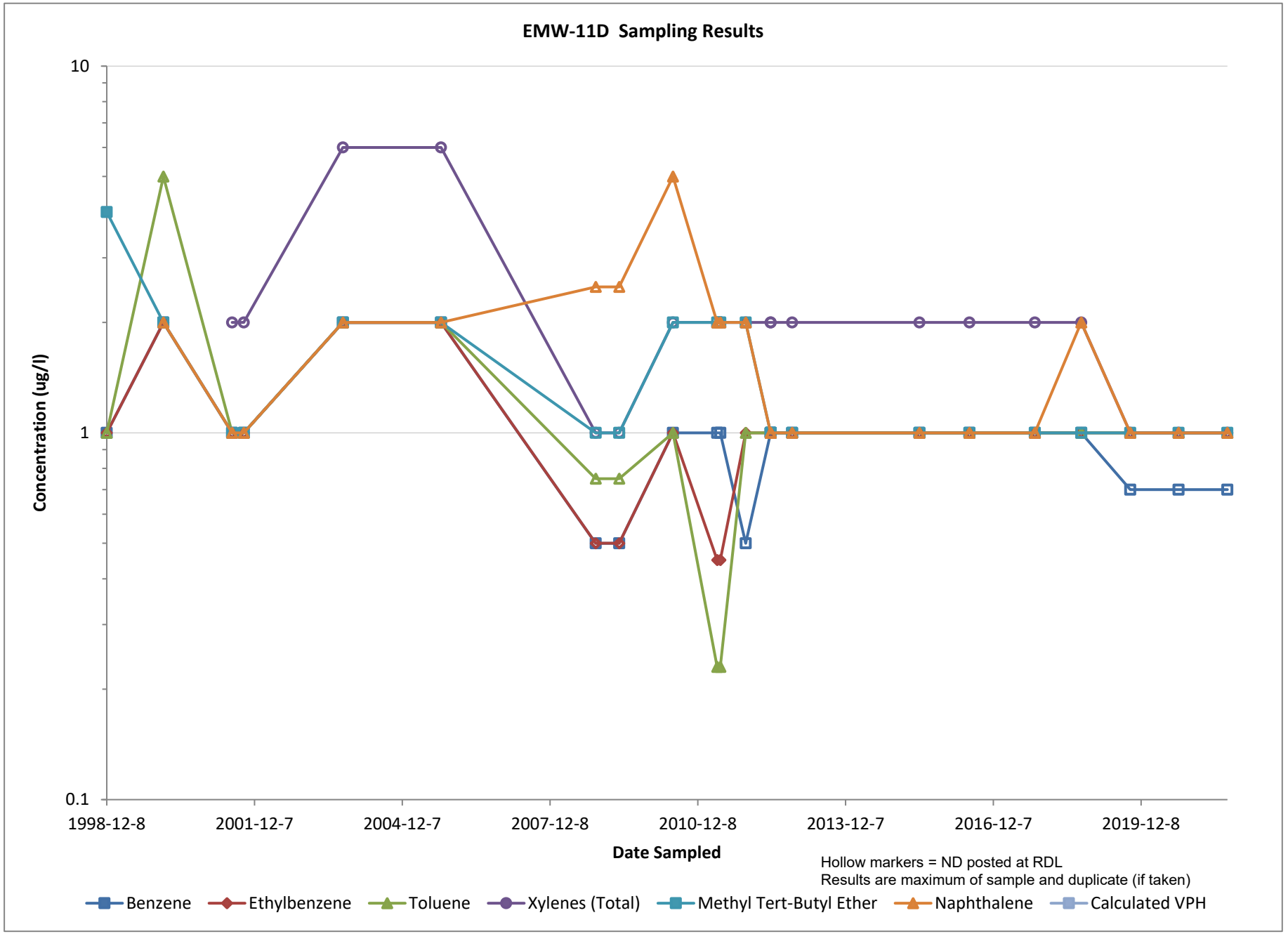

AE29R-6 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

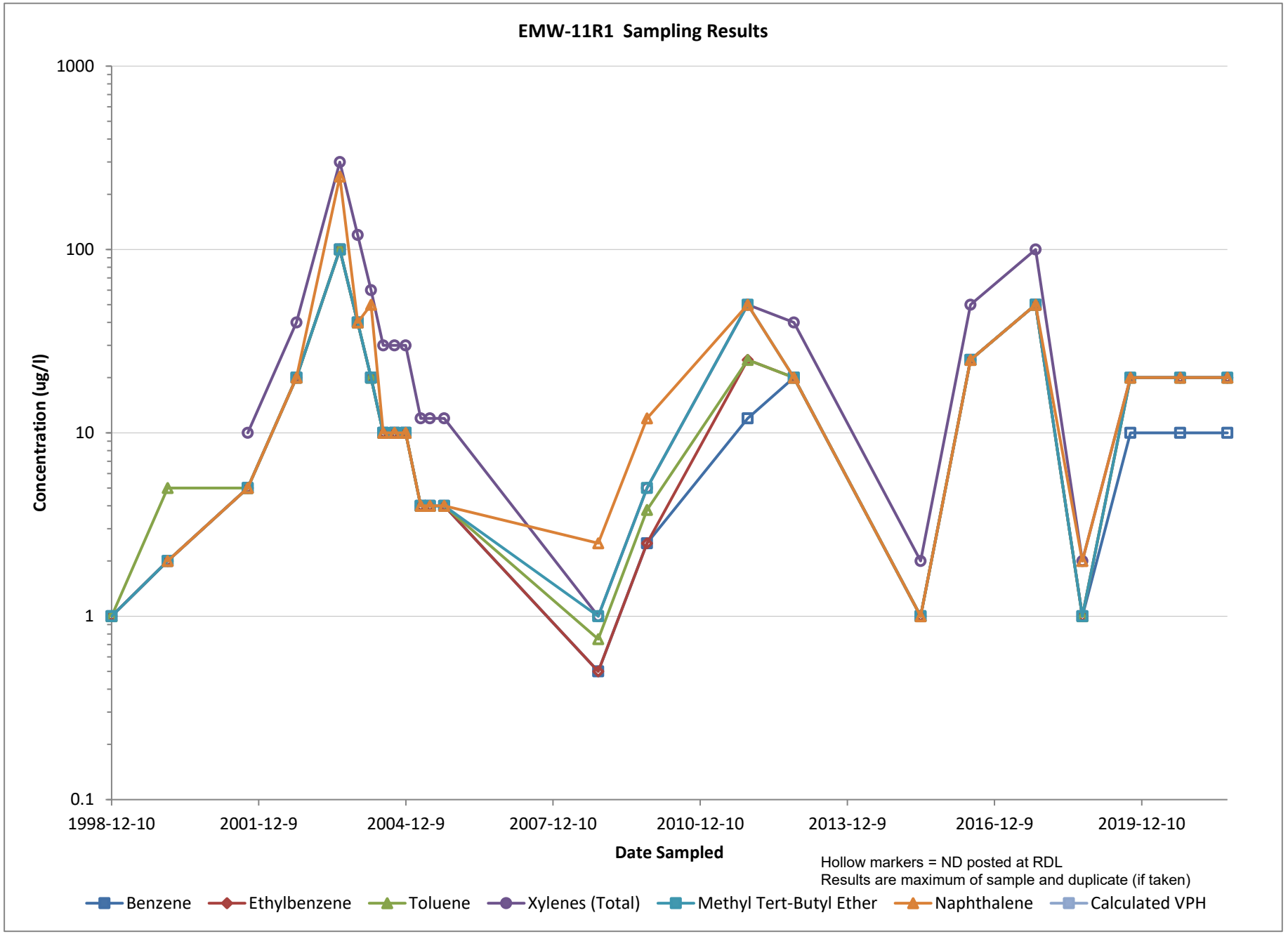

AE2I Sampling Results
100
10
1
0.1
Concentration (ug/l)
2012-9-24
2014-9-24
2016-9-24
2018-9-24
2020-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

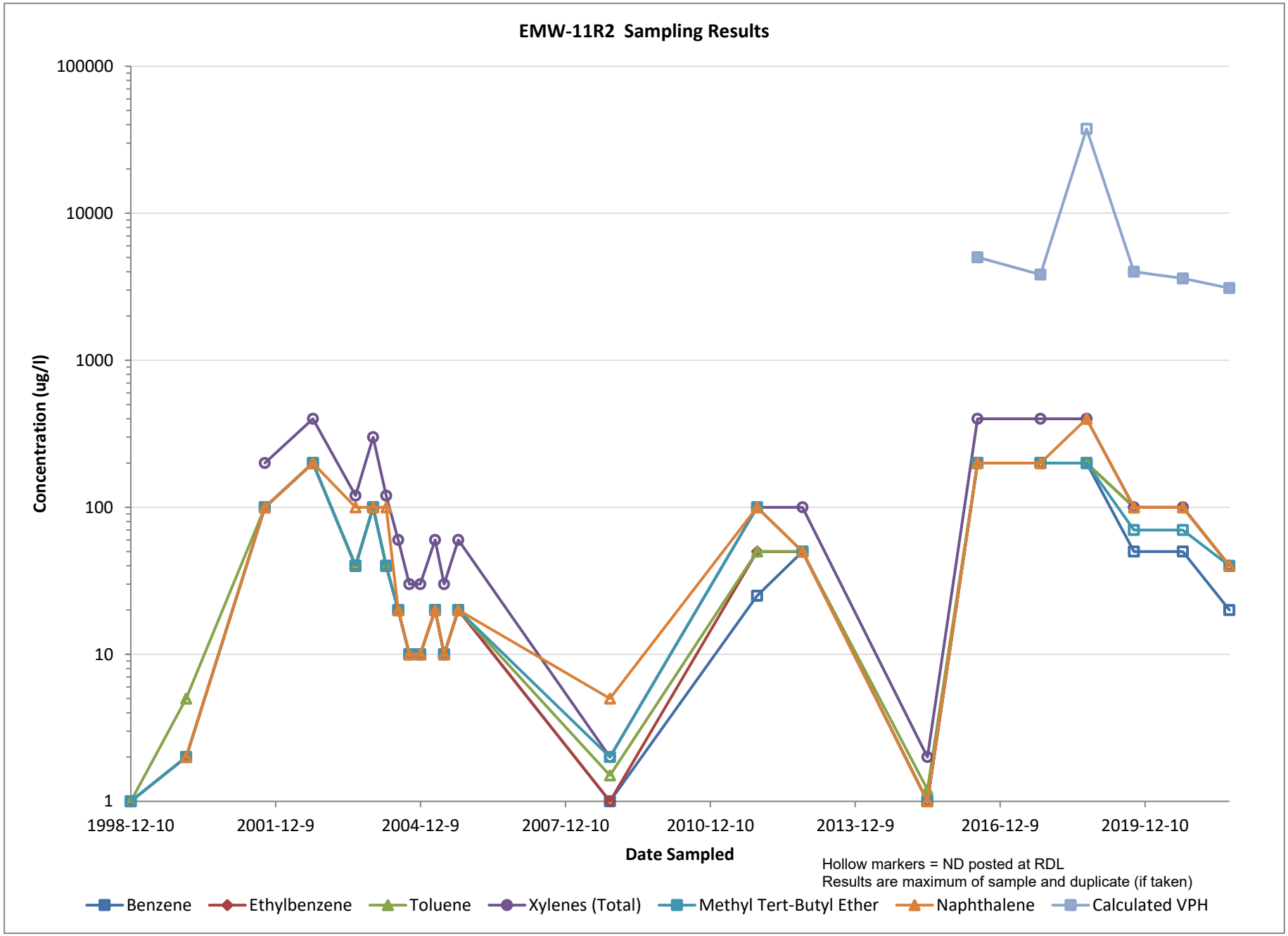

AE2R Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-3-27
2015-3-27
2016-3-27
2017-3-27
2018-3-27
2019-3-27
2020-3-27
2021-3-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

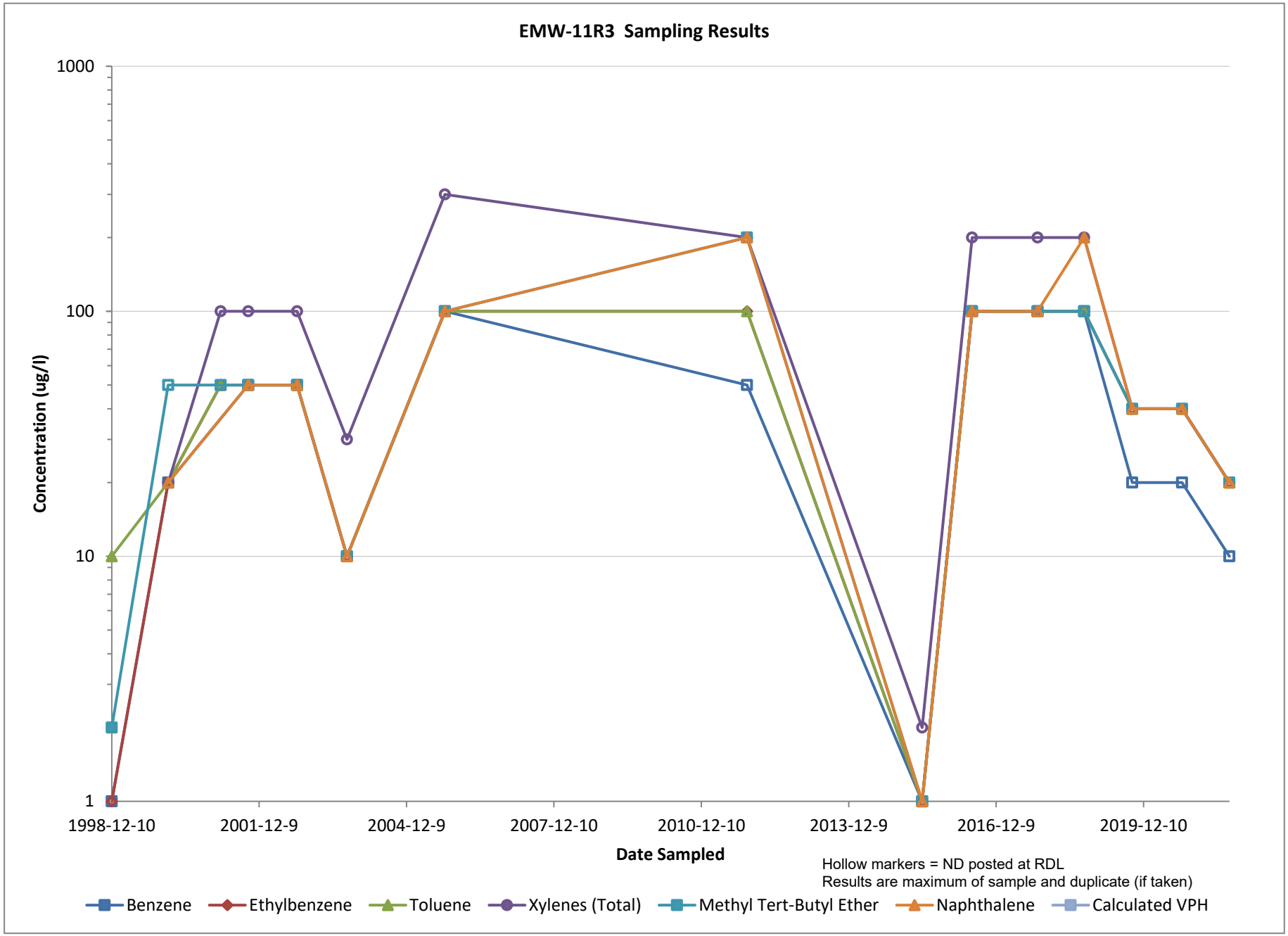

EMW-10D Sampling Results
10
1
0.1
Concentration (ug/l)
1998-12-8
2001-12-7
2004-12-7
2007-12-8
2010-12-8
2013-12-7
2016-12-7
2019-12-8
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

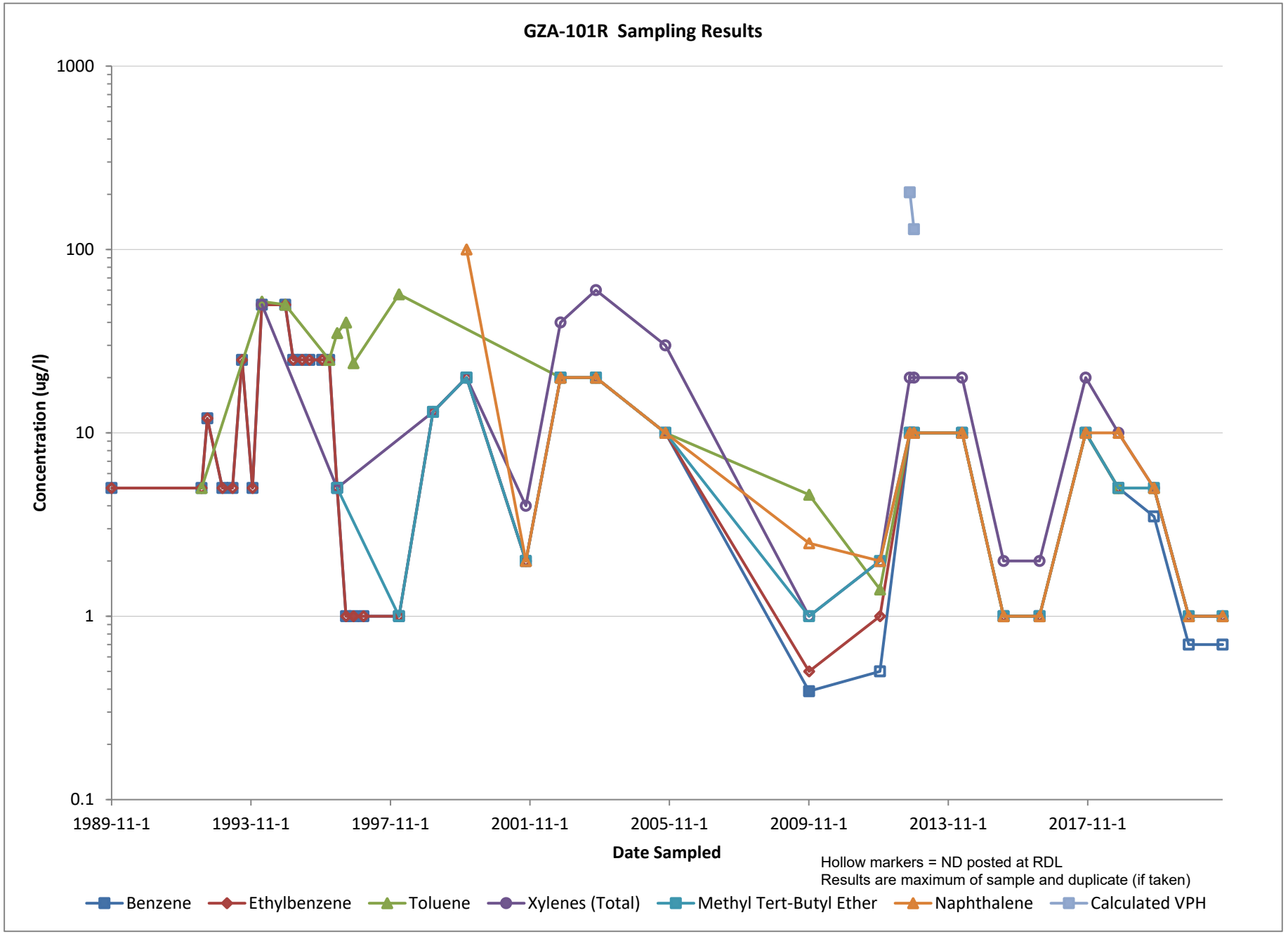

EMW-10R Sampling Results
10
1
0.1
Concentration (ug/l)
1997-1-29
2001-1-29
2005-1-29
2009-1-29
2013-1-29
2017-1-29
2021-1-29
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

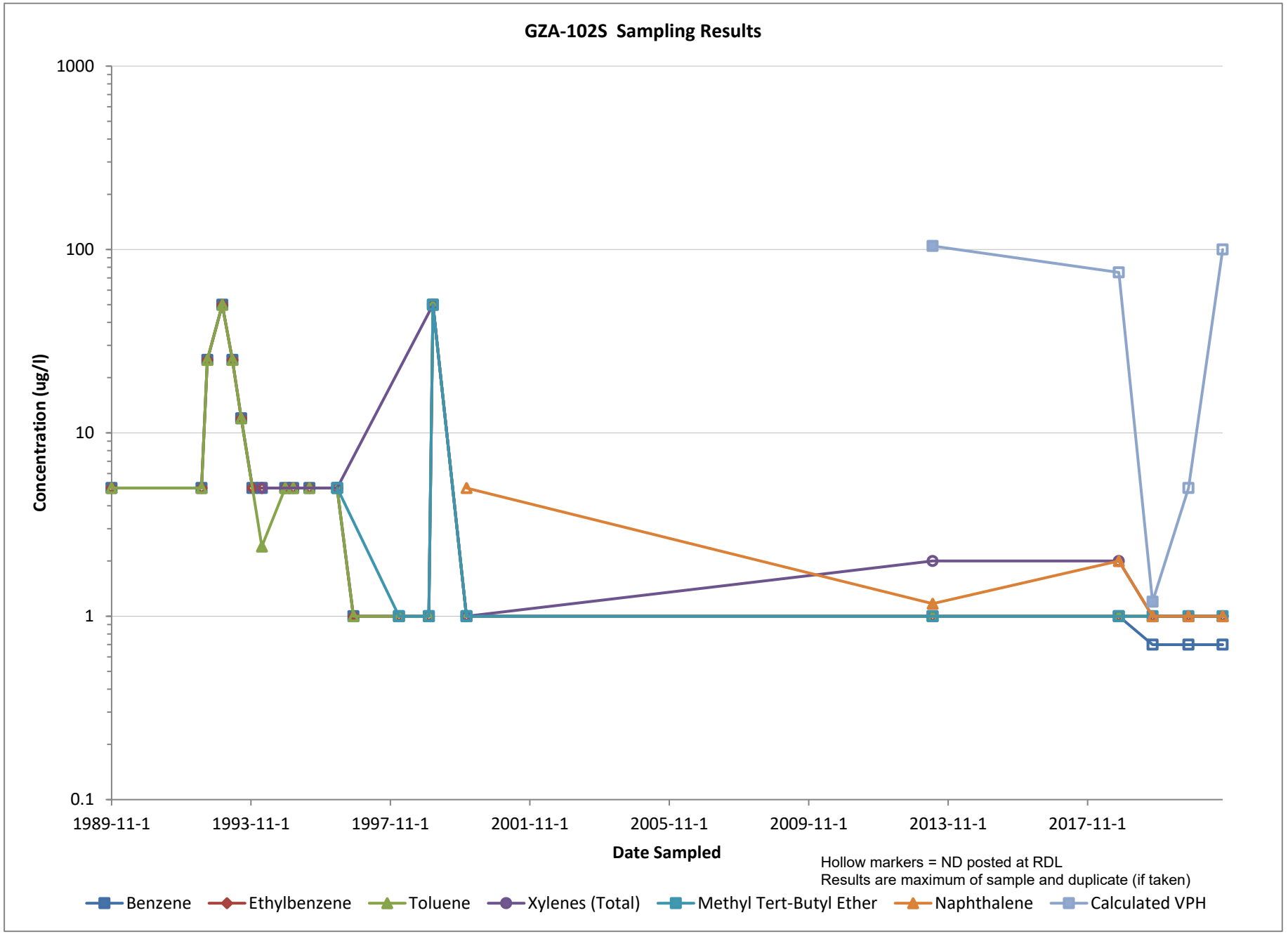

EMW-11D Sampling Results
10
1
0.1
Concentration (ug/l)
1998-12-8
2001-12-7
2004-12-7
2007-12-8
2010-12-8
2013-12-7
2016-12-7
2019-12-8
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

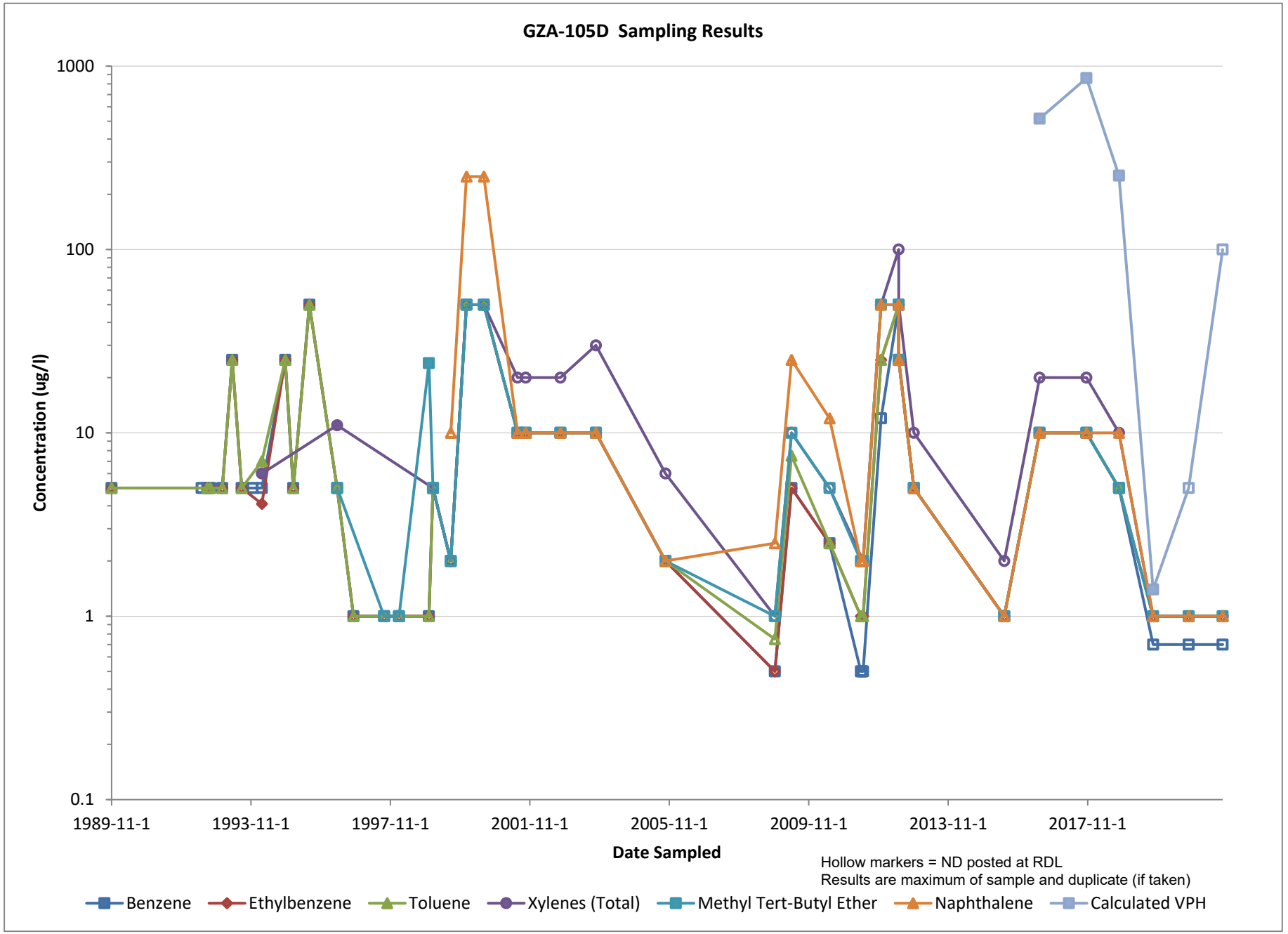

EMW-11R1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1998-12-10
2001-12-9
2004-12-9
2007-12-10
2010-12-10
2013-12-9
2016-12-9
2019-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

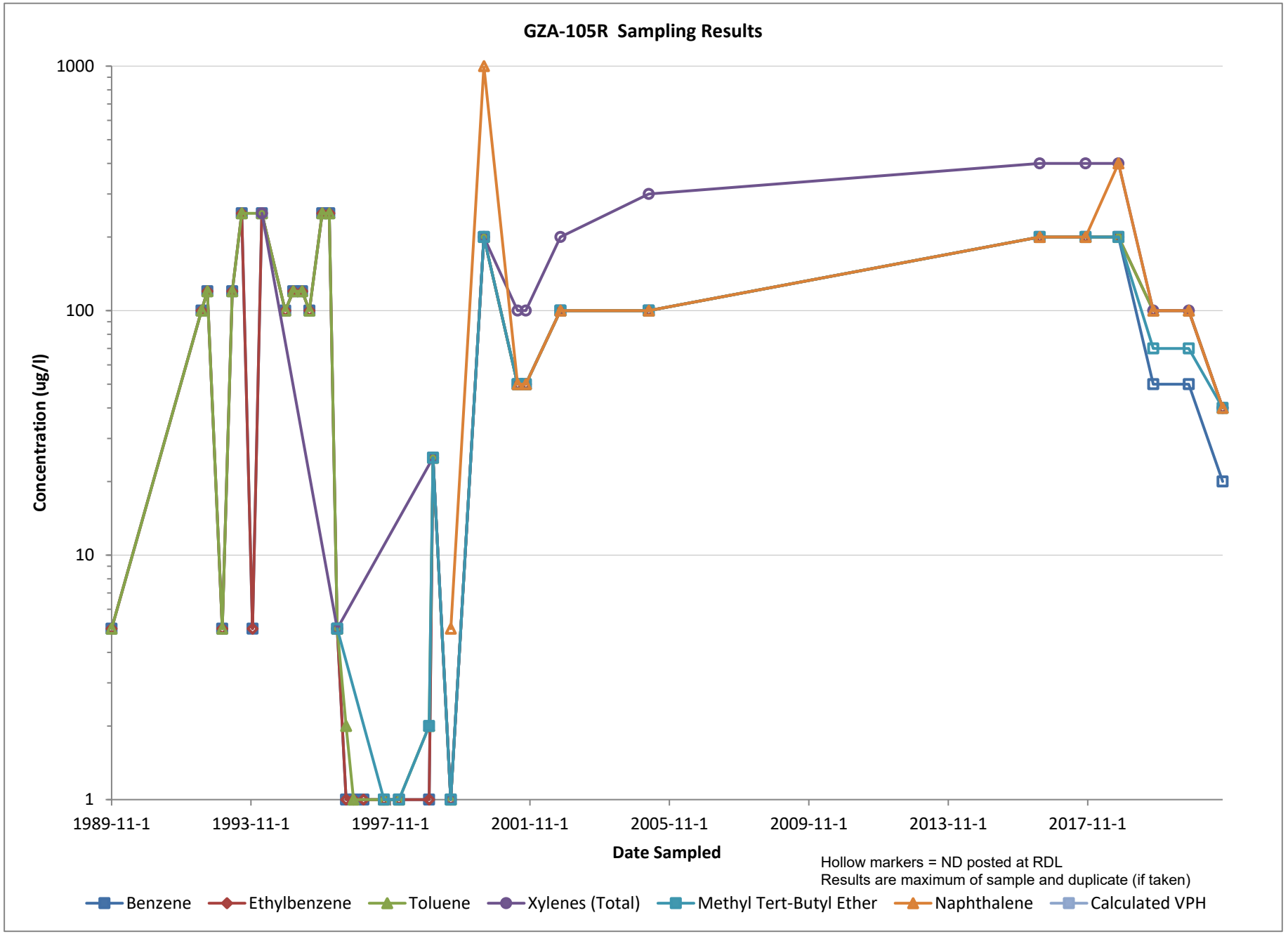

EMW-11R2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
1998-12-10
2001-12-9
2004-12-9
2007-12-10
2010-12-10
2013-12-9
2016-12-9
2019-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

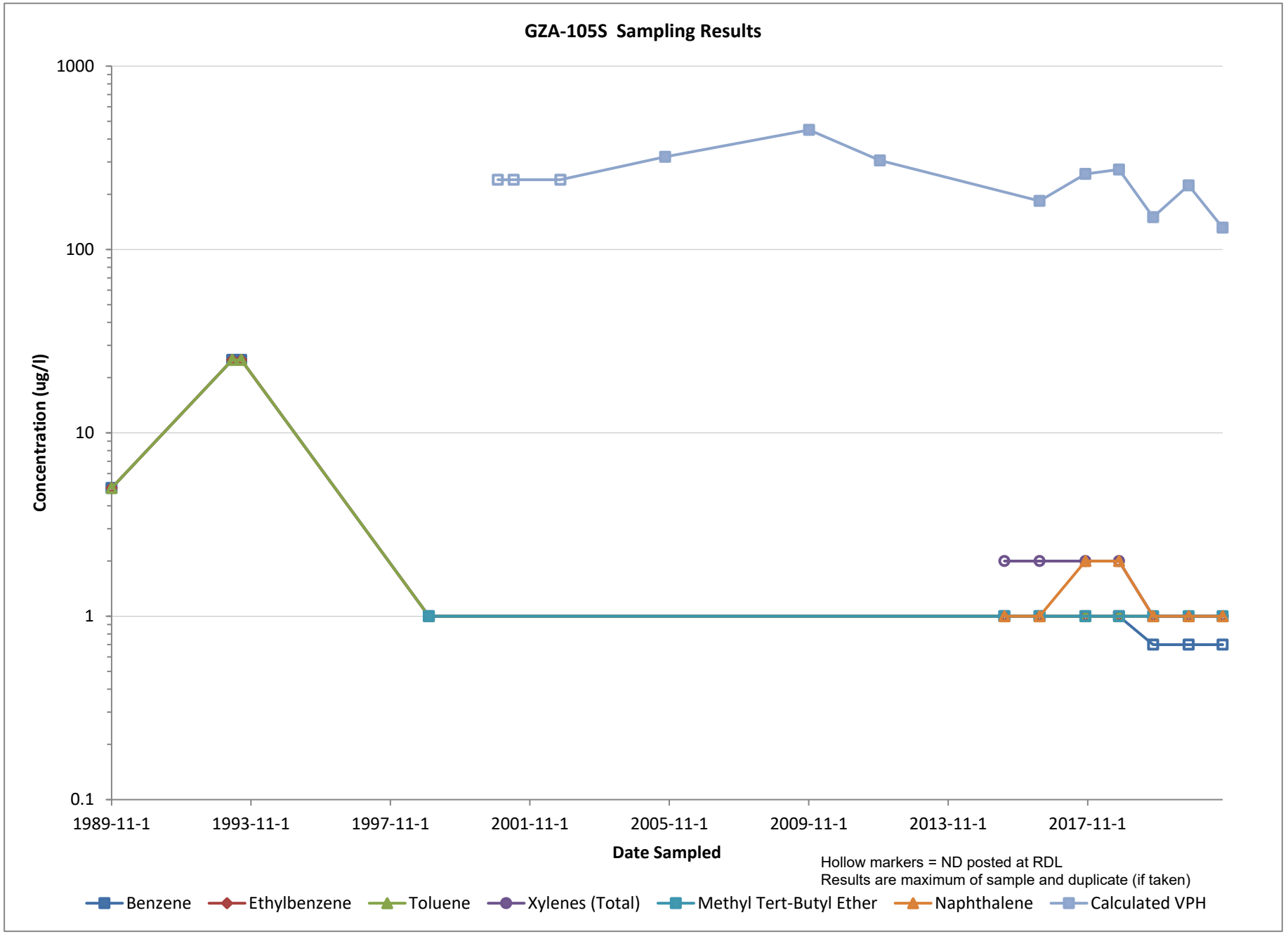

EMW-11R3 Sampling Results
1000
100
10
1
Concentration (ug/l)
1998-12-10
2001-12-9
2004-12-9
2007-12-10
2010-12-10
2013-12-9
2016-12-9
2019-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

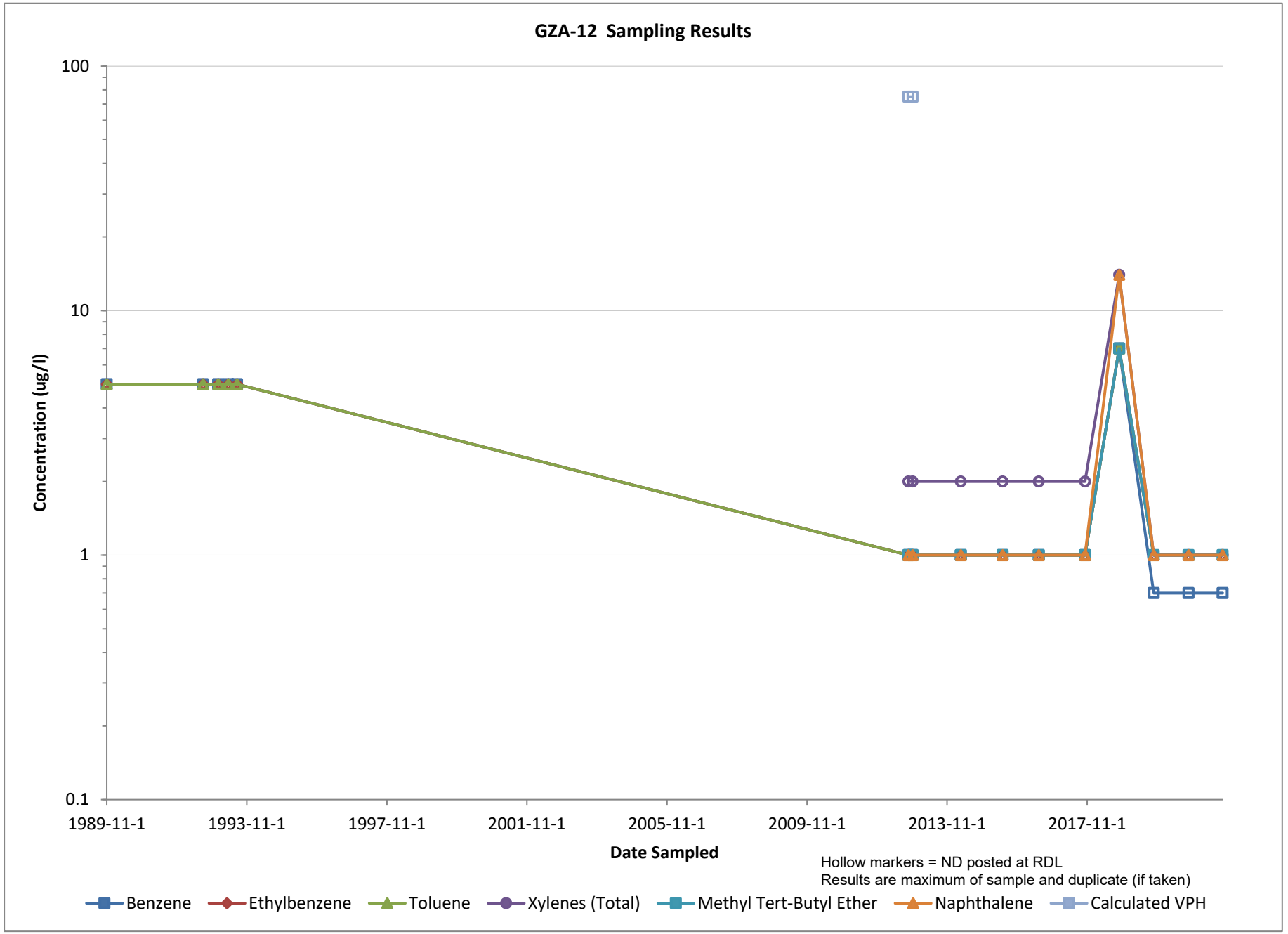

GZA-101R Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

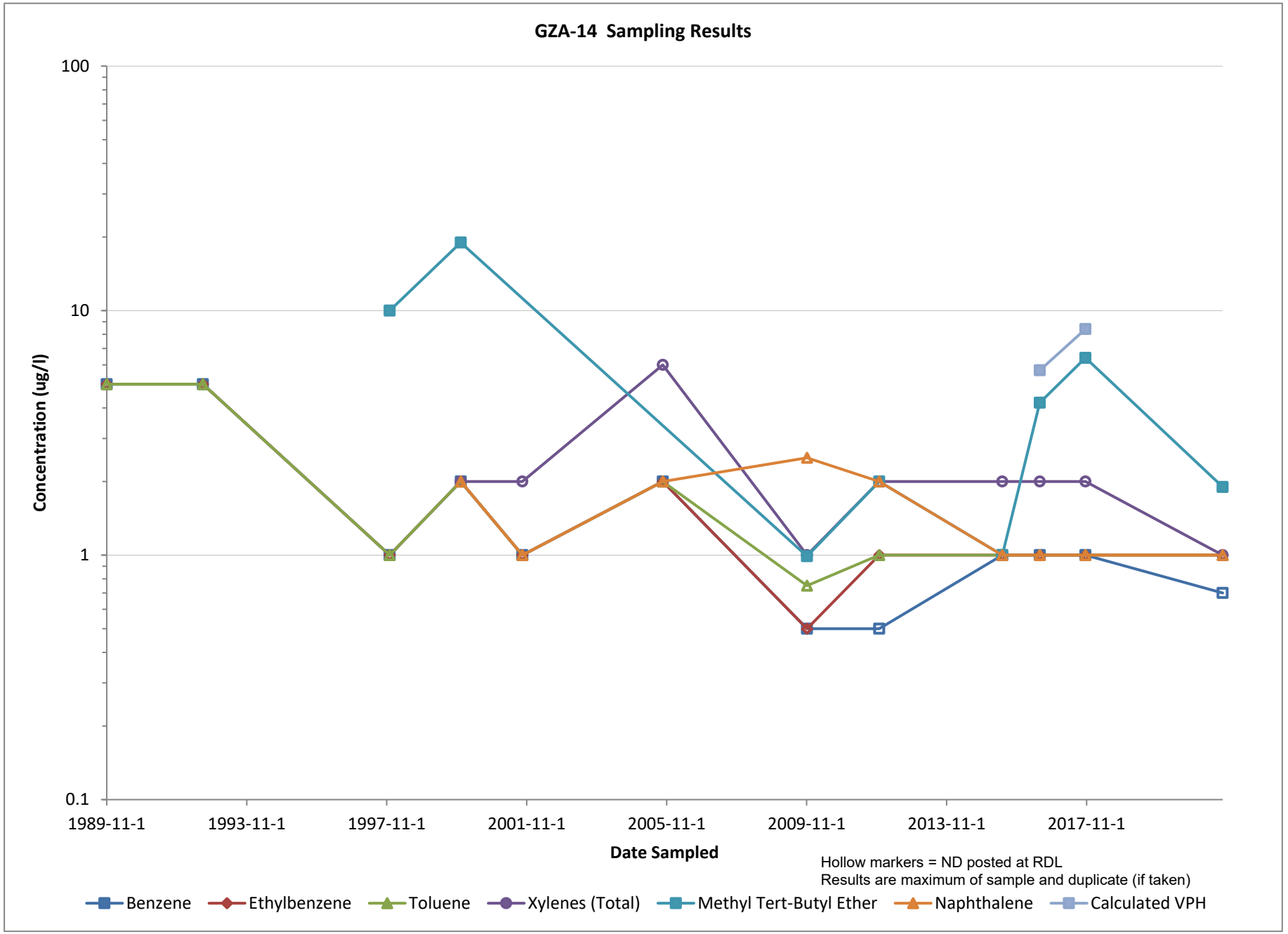

GZA-102S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

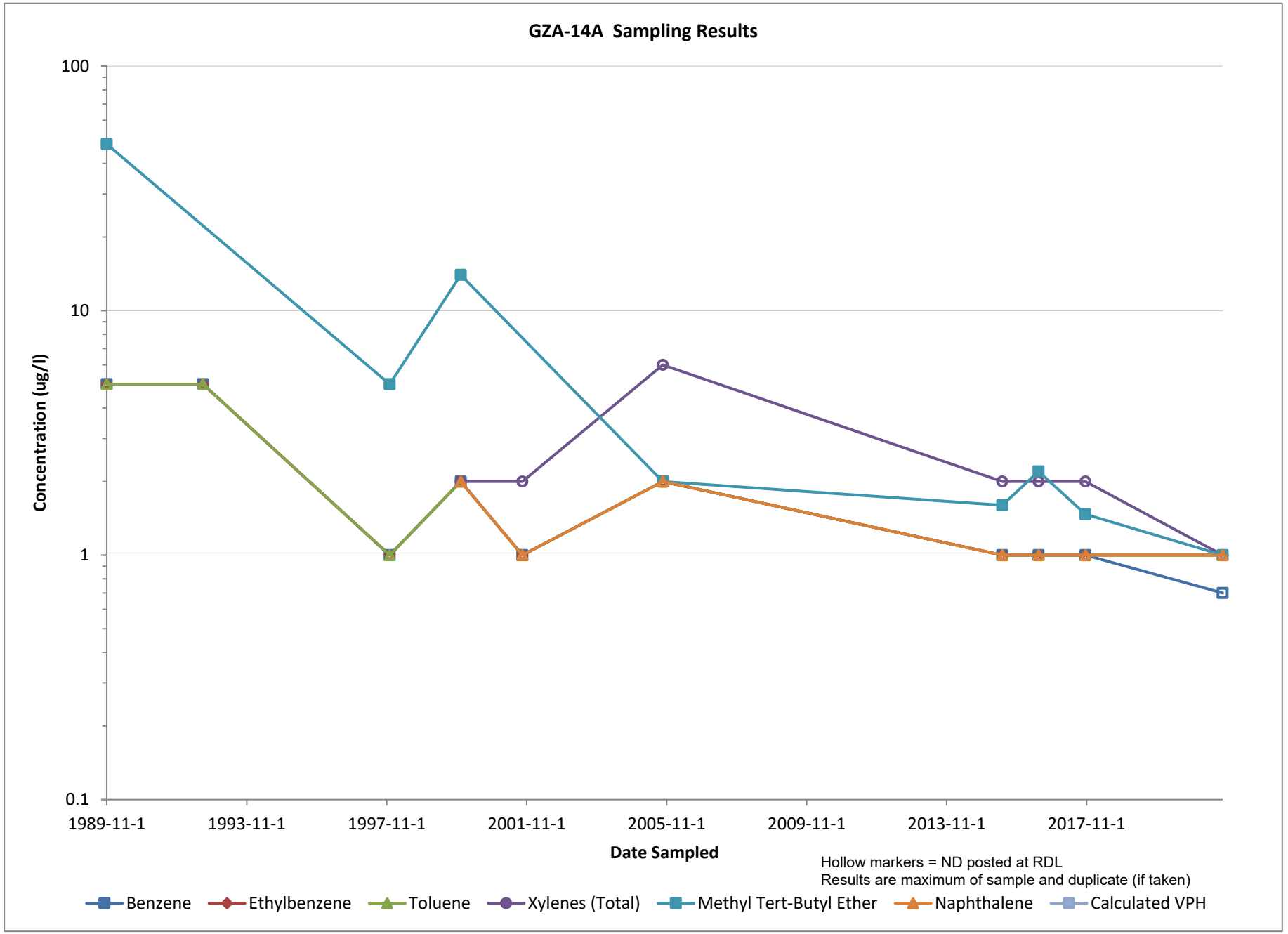

GZA-105D Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

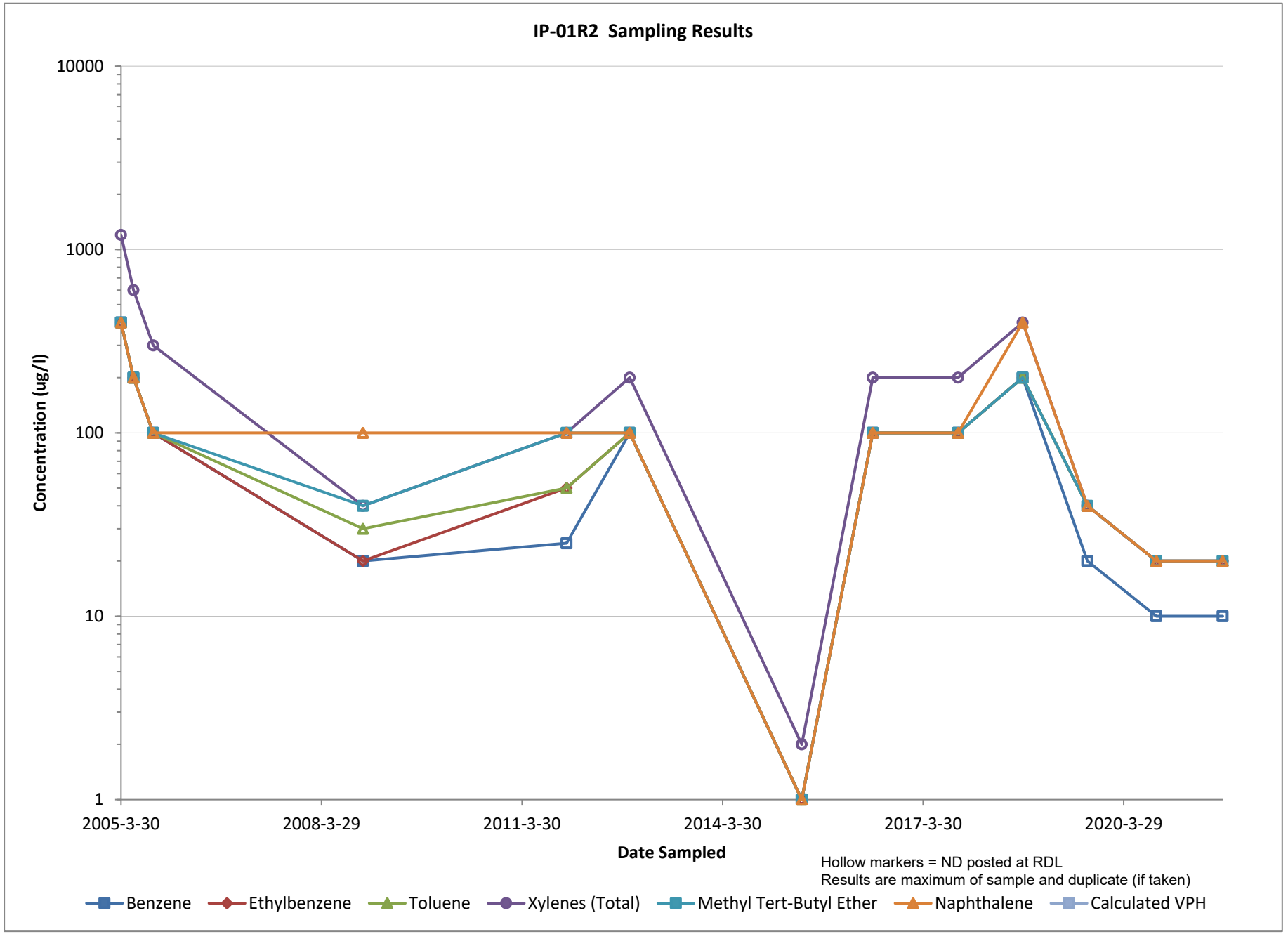

GZA-105R Sampling Results
1000
100
10
1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

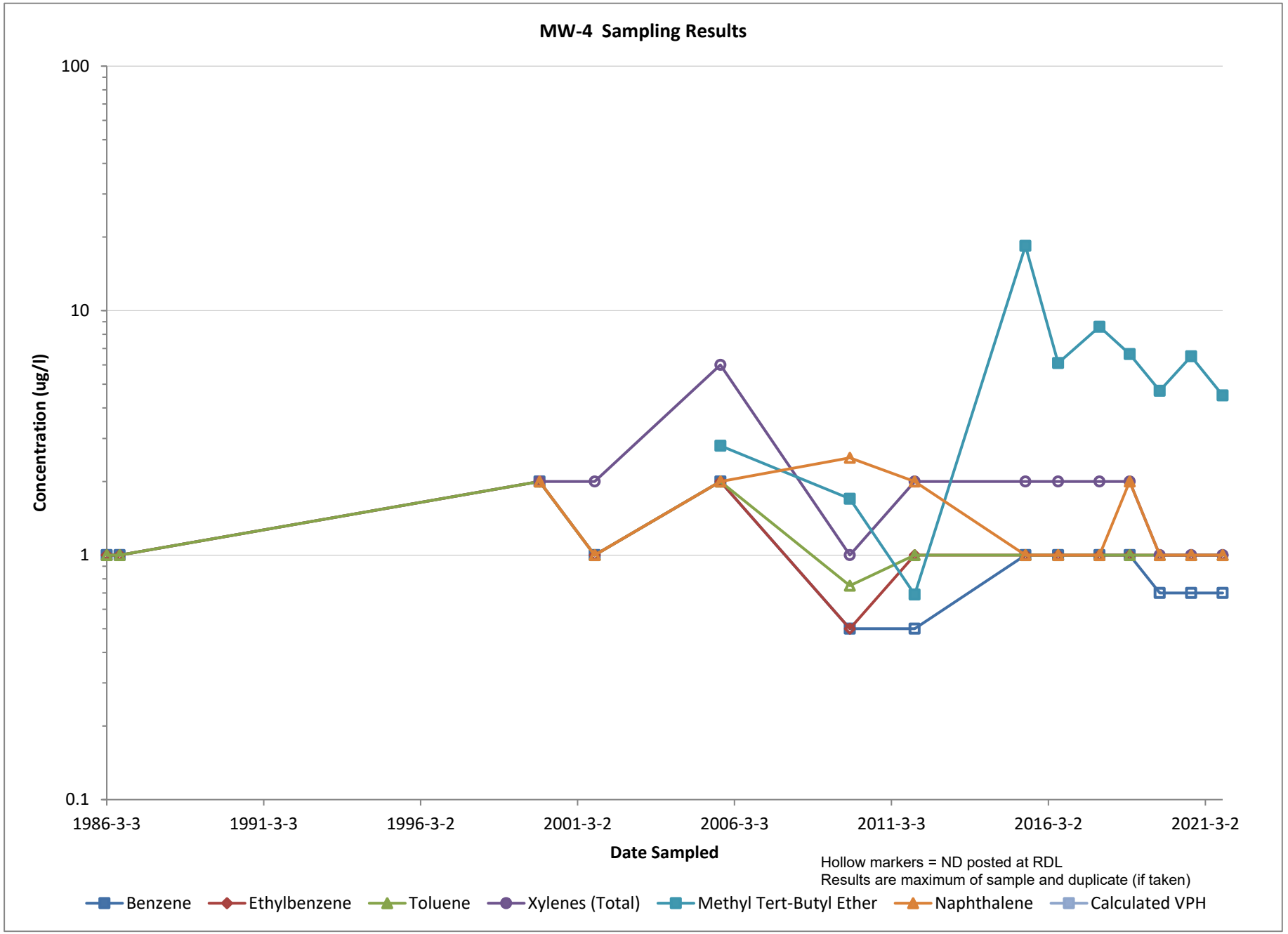

GZA-105S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

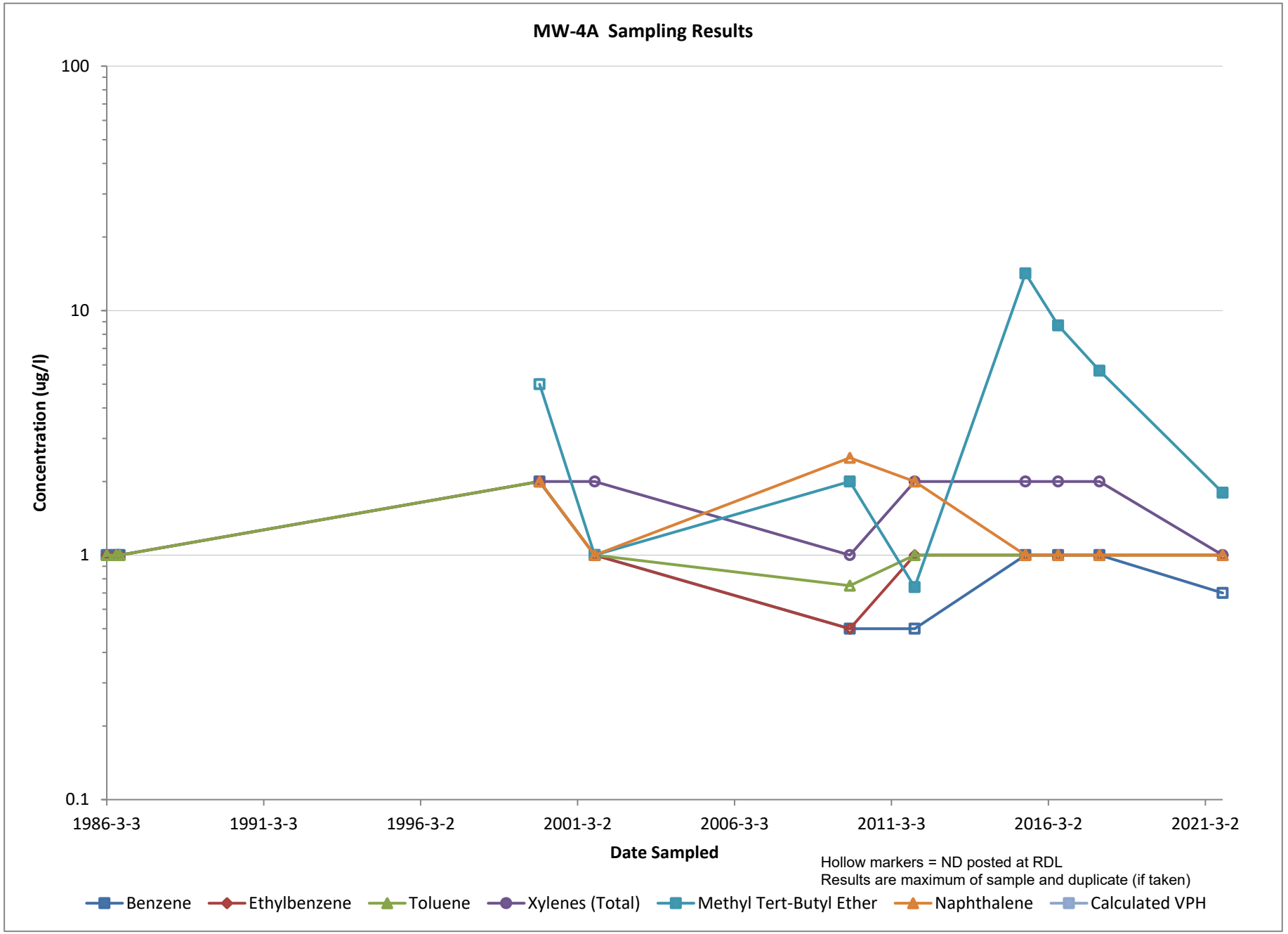

GZA-12 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

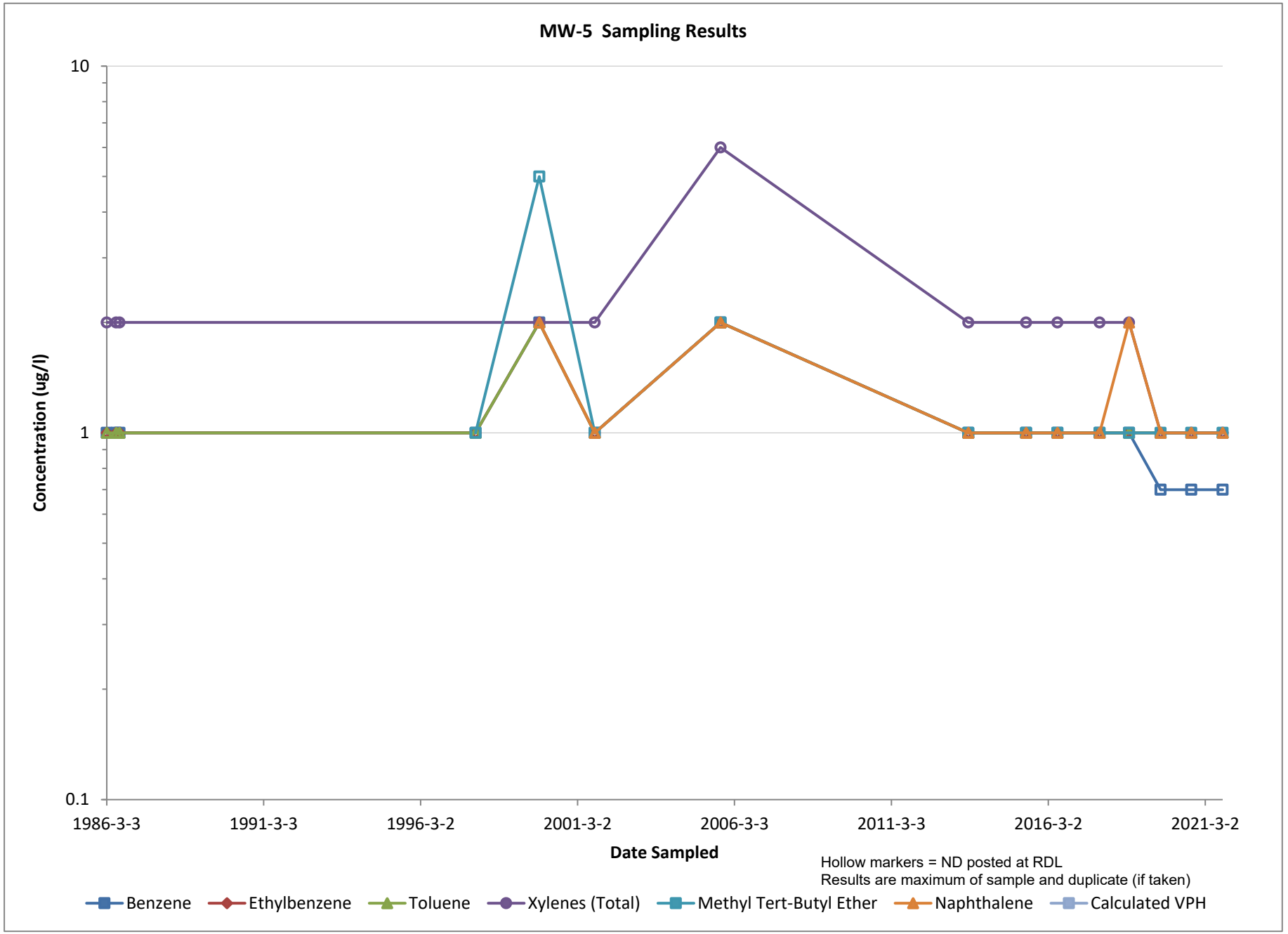

GZA-14 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

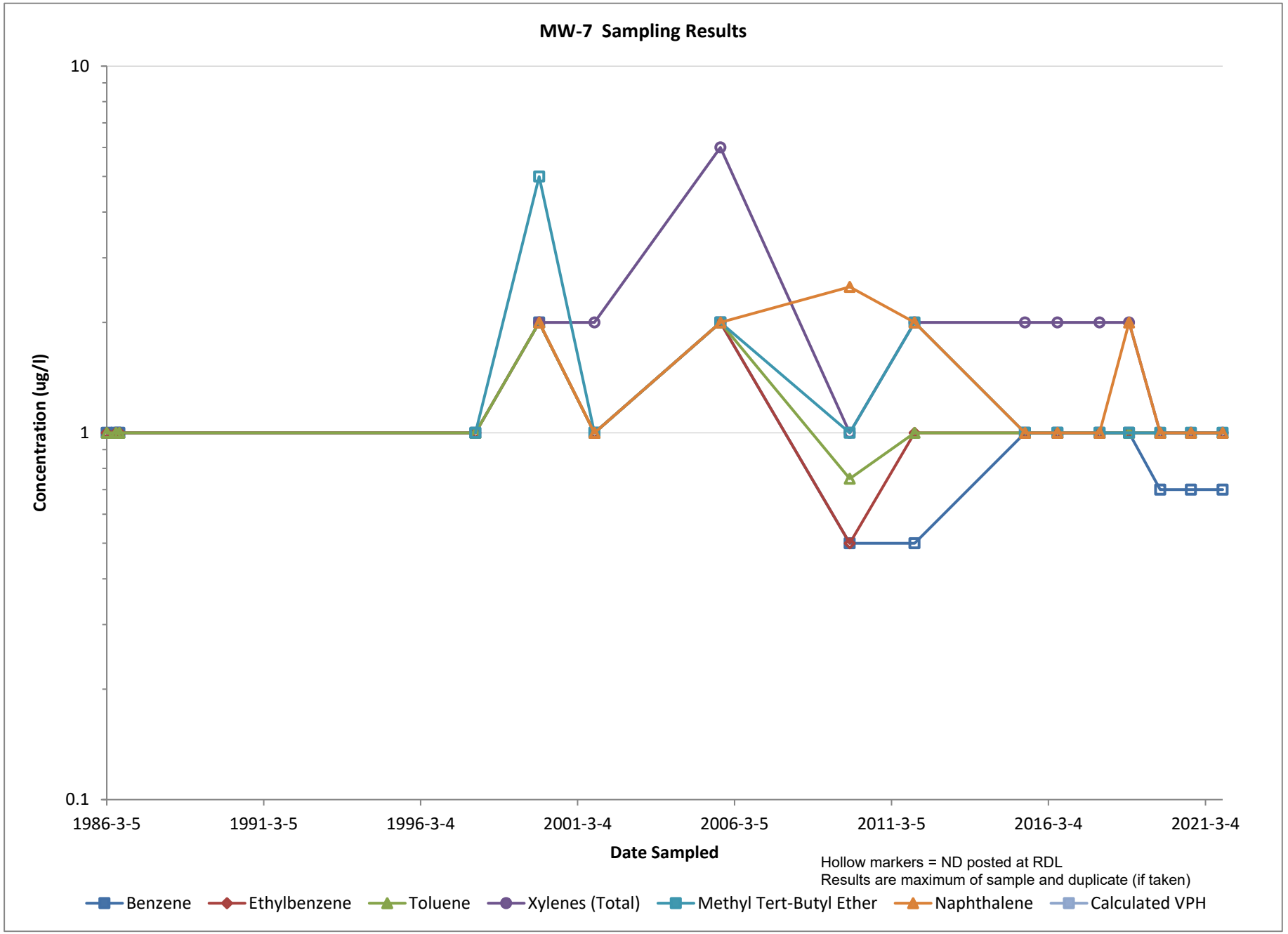

GZA-14A Sampling Results
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

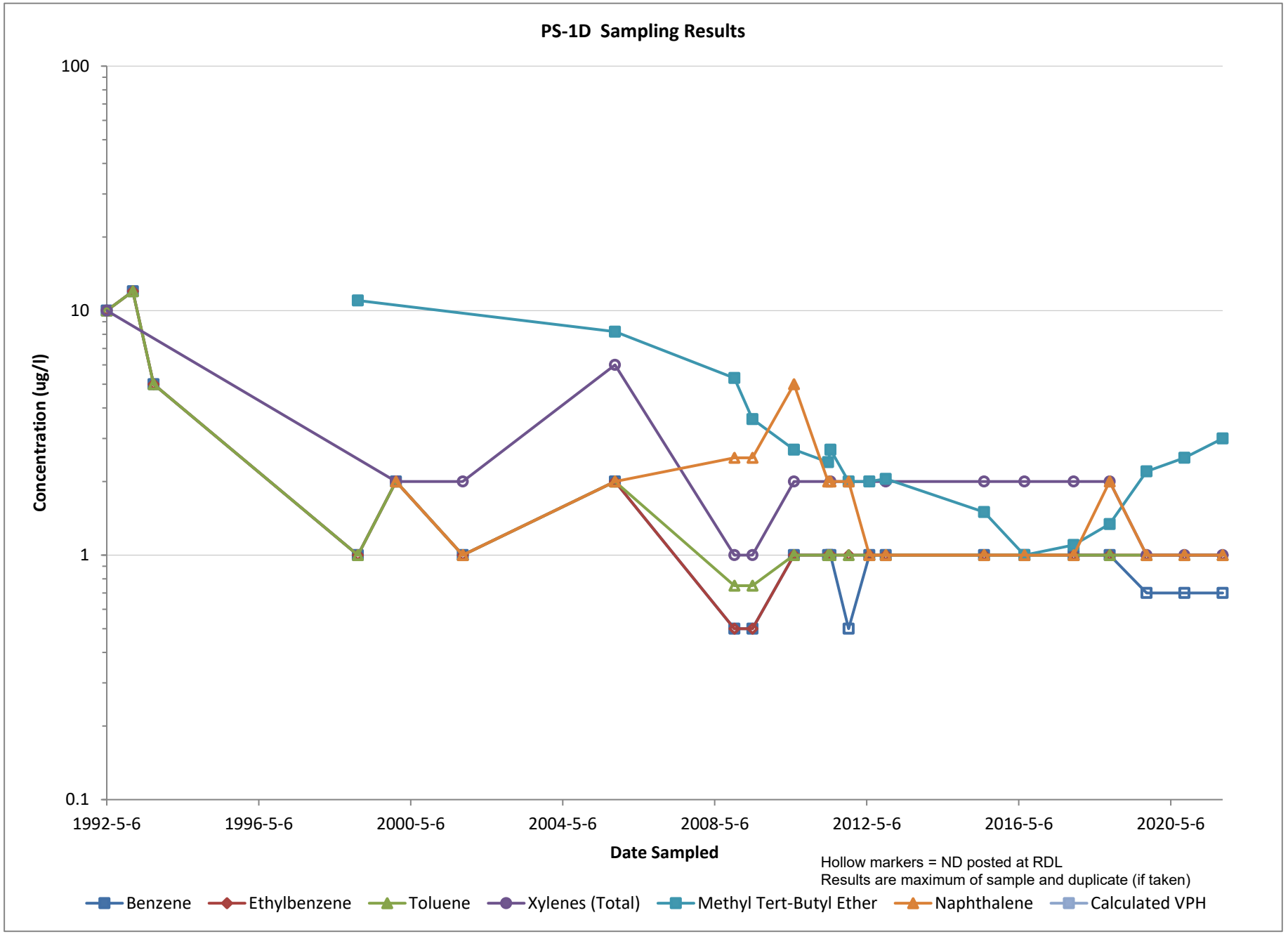

IP-01R2 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2005-3-30
2008-3-29
2011-3-30
2014-3-30
2017-3-30
2020-3-29
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

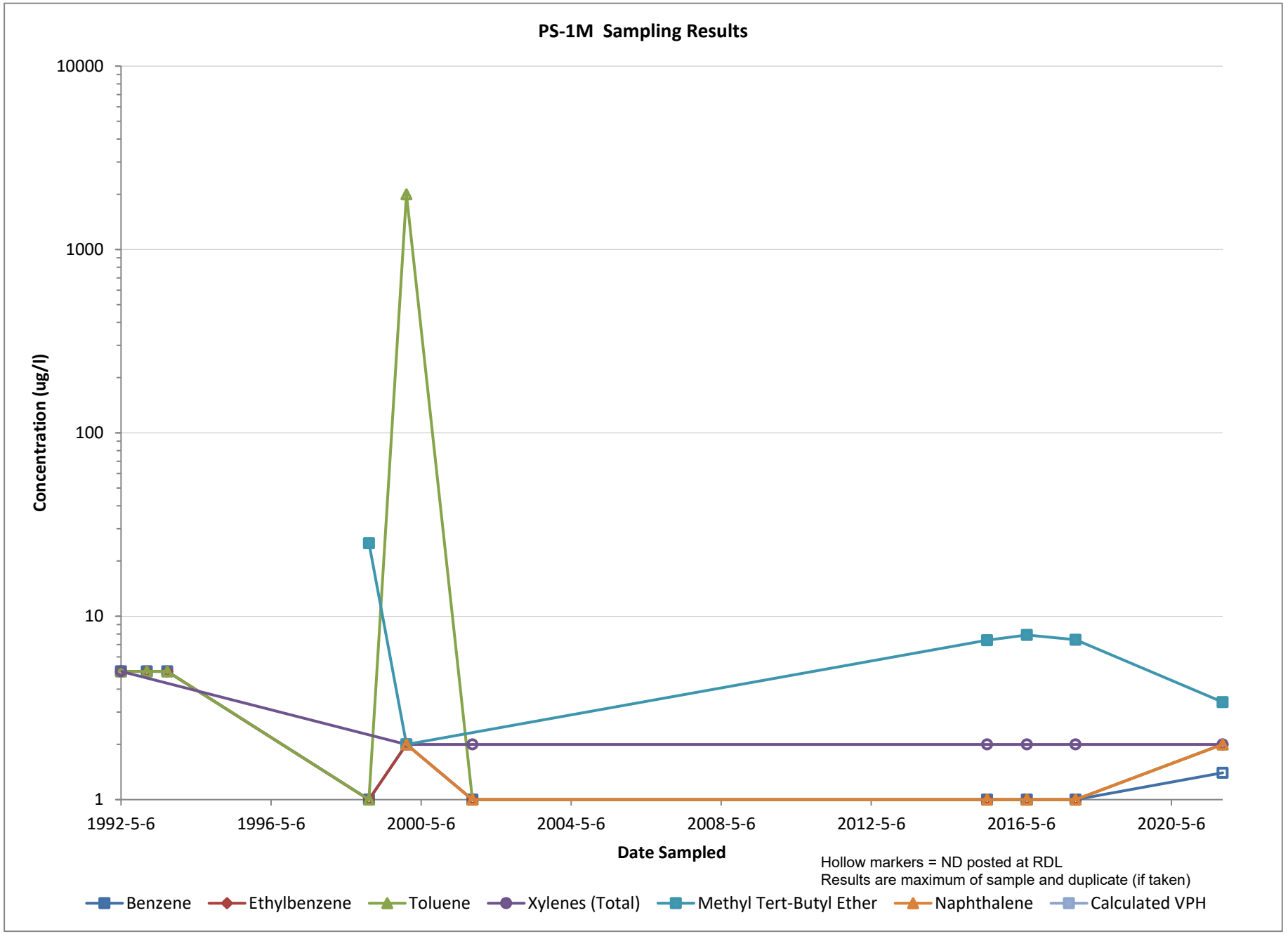

MW-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1986-3-3
1991-3-3
1996-3-2
2001-3-2
2006-3-3
2011-3-3
2016-3-2
2021-3-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

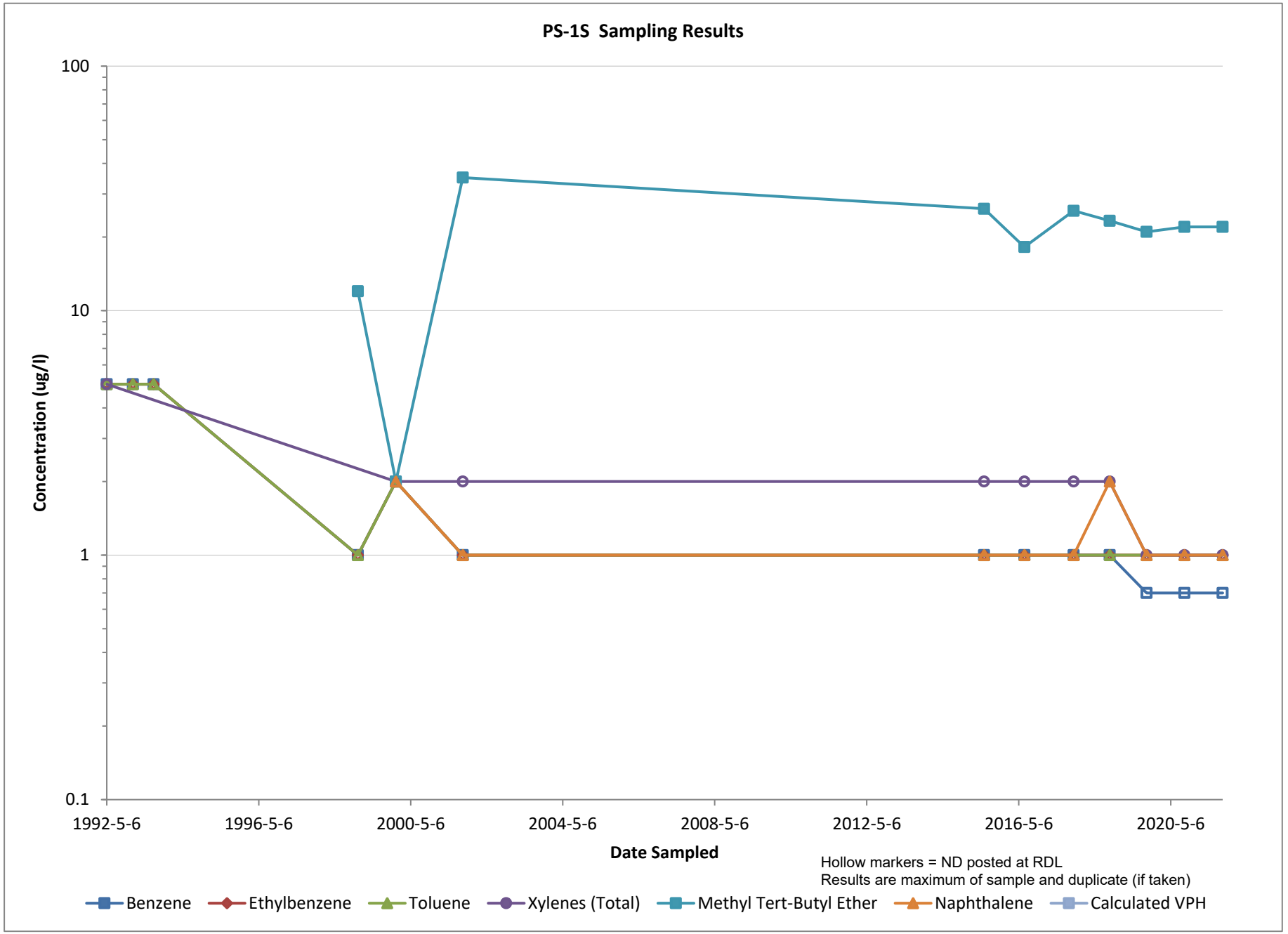

MW-4A Sampling Results
100
10
1
0.1
Concentration (ug/l)
1986-3-3
1991-3-3
1996-3-2
2001-3-2
2006-3-3
2011-3-3
2016-3-2
2021-3-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

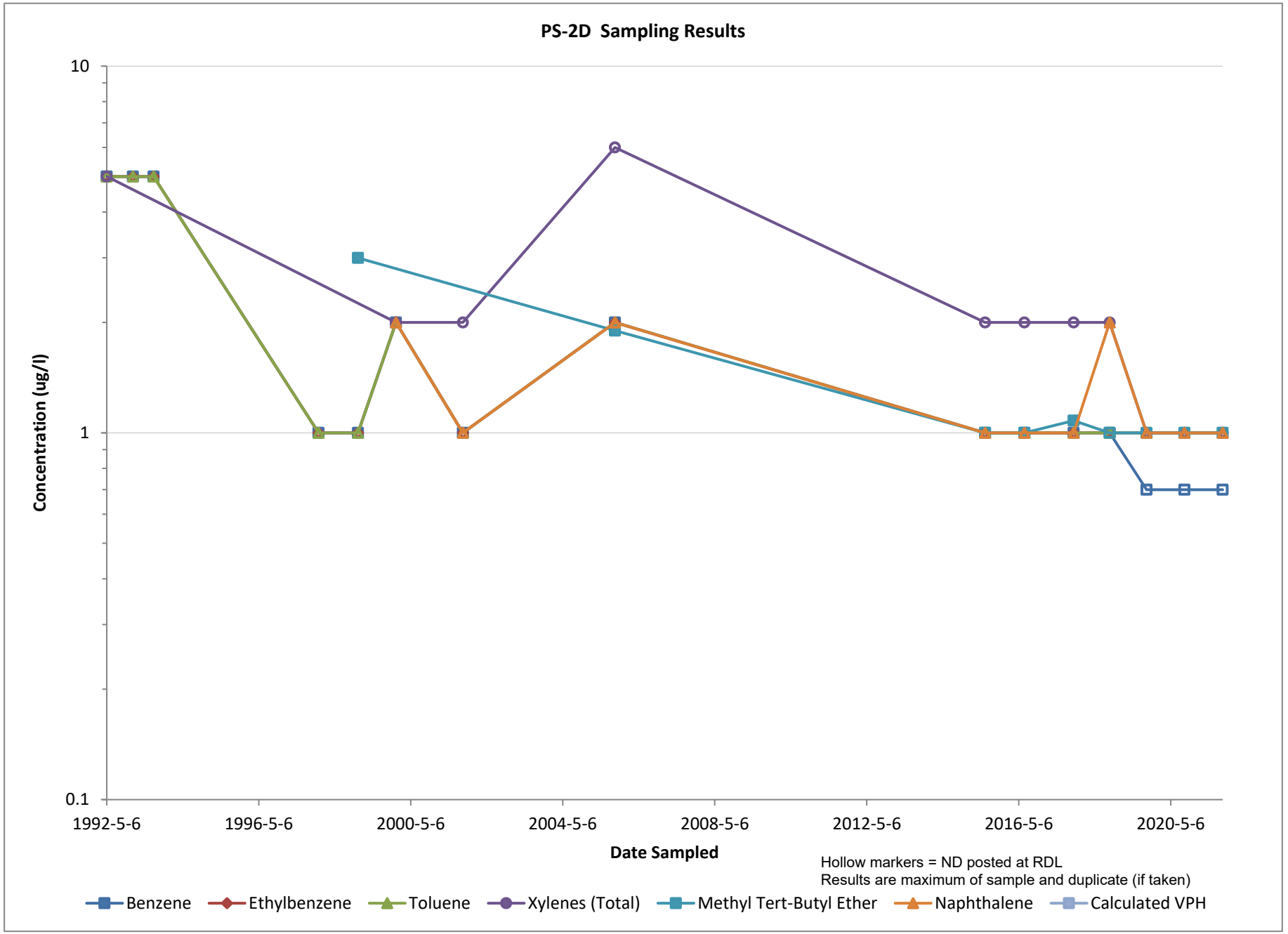

MW-5 Sampling Results
10
1
0.1
Concentration (ug/l)
1986-3-3
1991-3-3
1996-3-2
2001-3-2
2006-3-3
2011-3-3
2016-3-2
2021-3-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

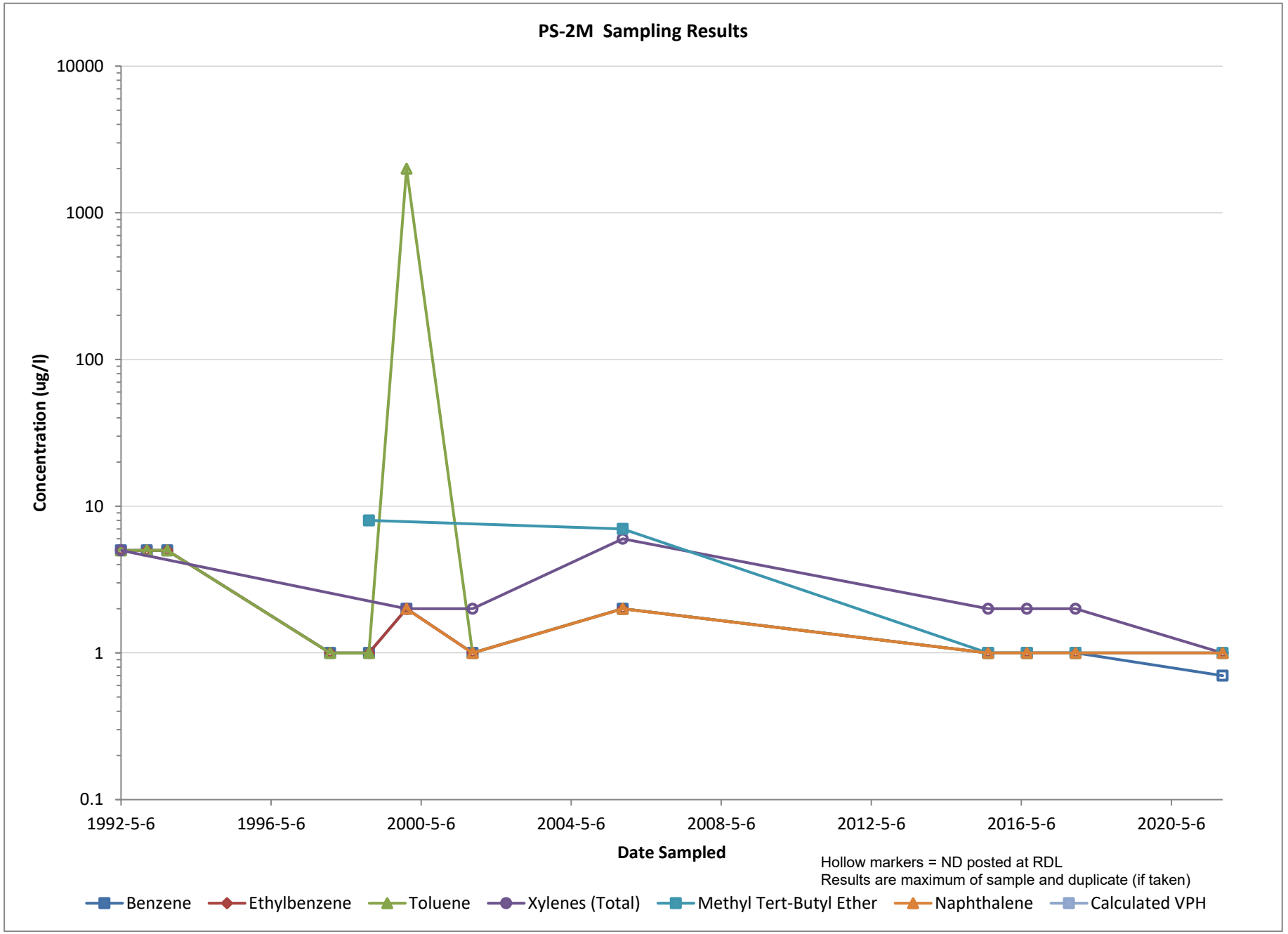

MW-7 Sampling Results
10
1
0.1
Concentration (ug/l)
1986-3-5
1991-3-5
1996-3-4
2001-3-4
2006-3-5
2011-3-5
2016-3-4
2021-3-4
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

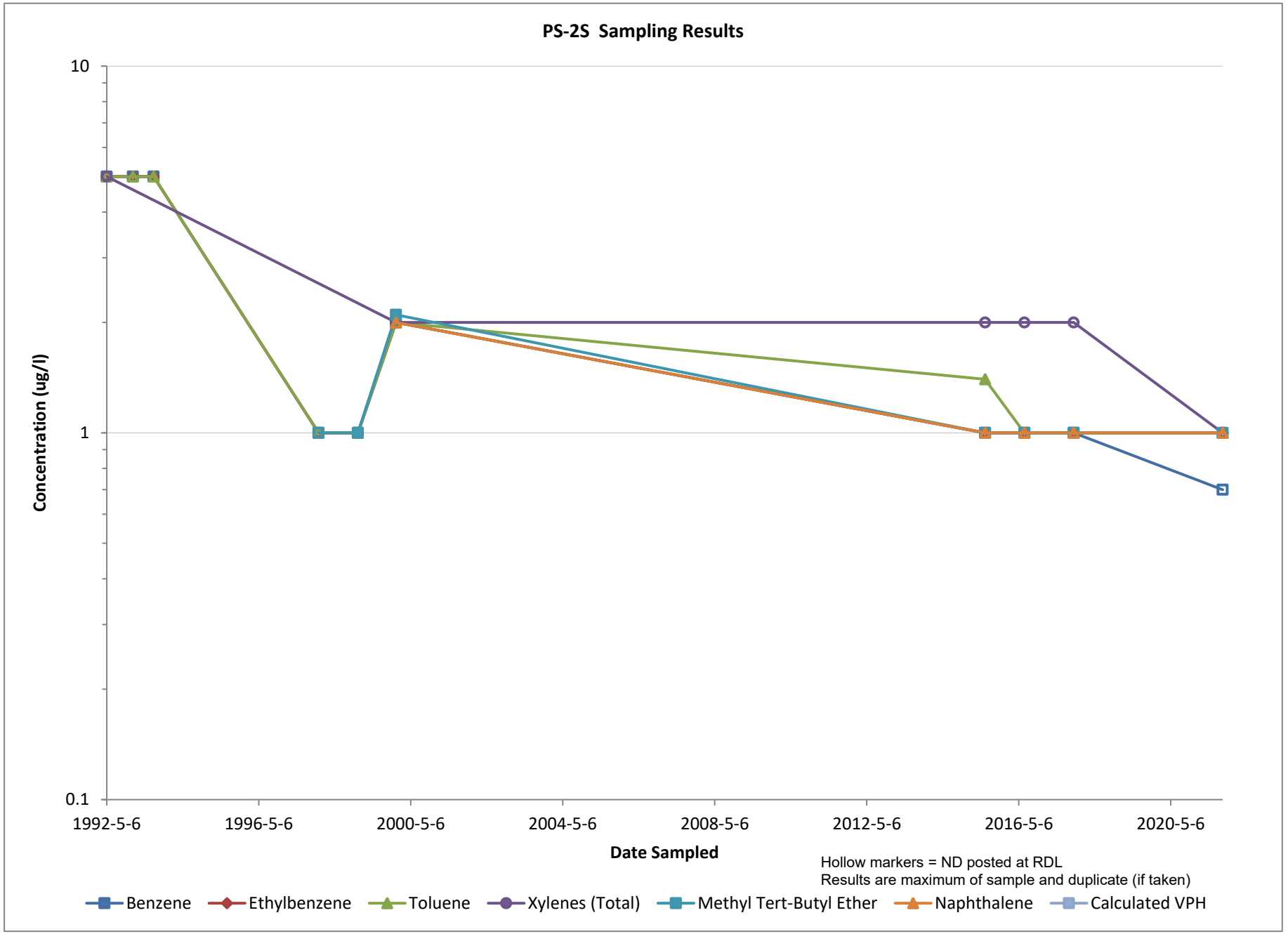

PS-1D Sampling Results
100
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

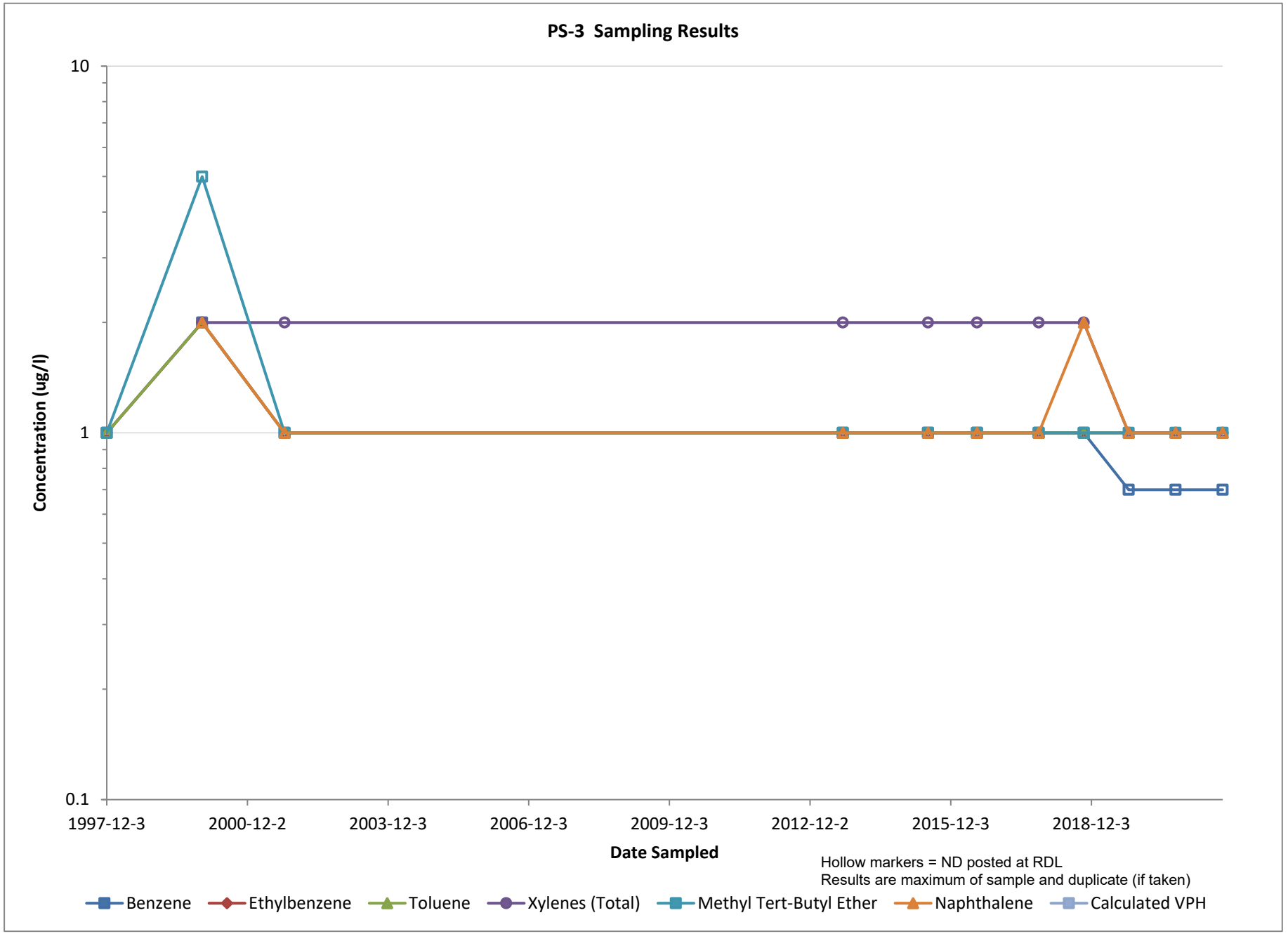

PS-1M Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

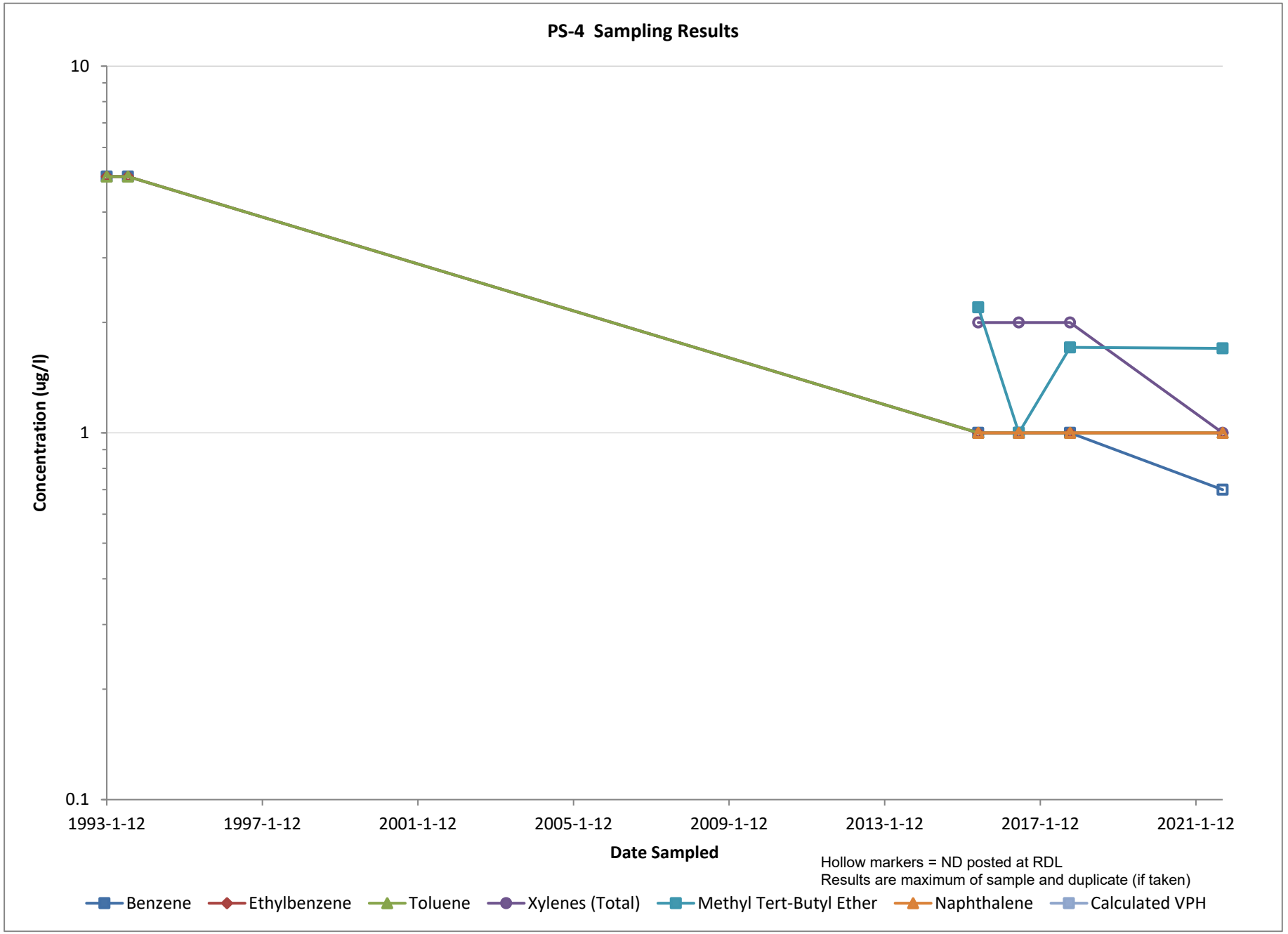

PS-1S Sampling Results
100
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

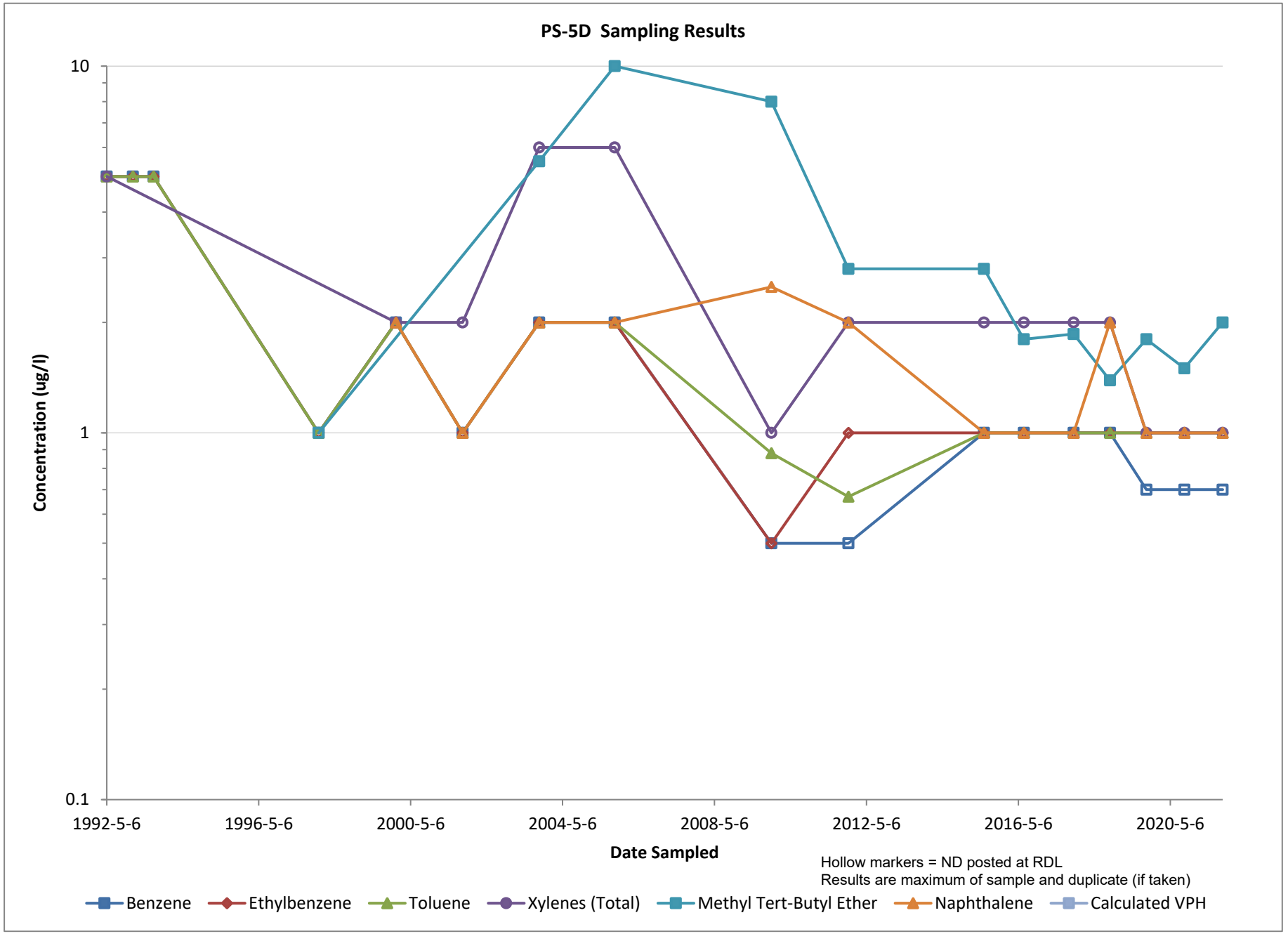

PS-2D Sampling Results
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

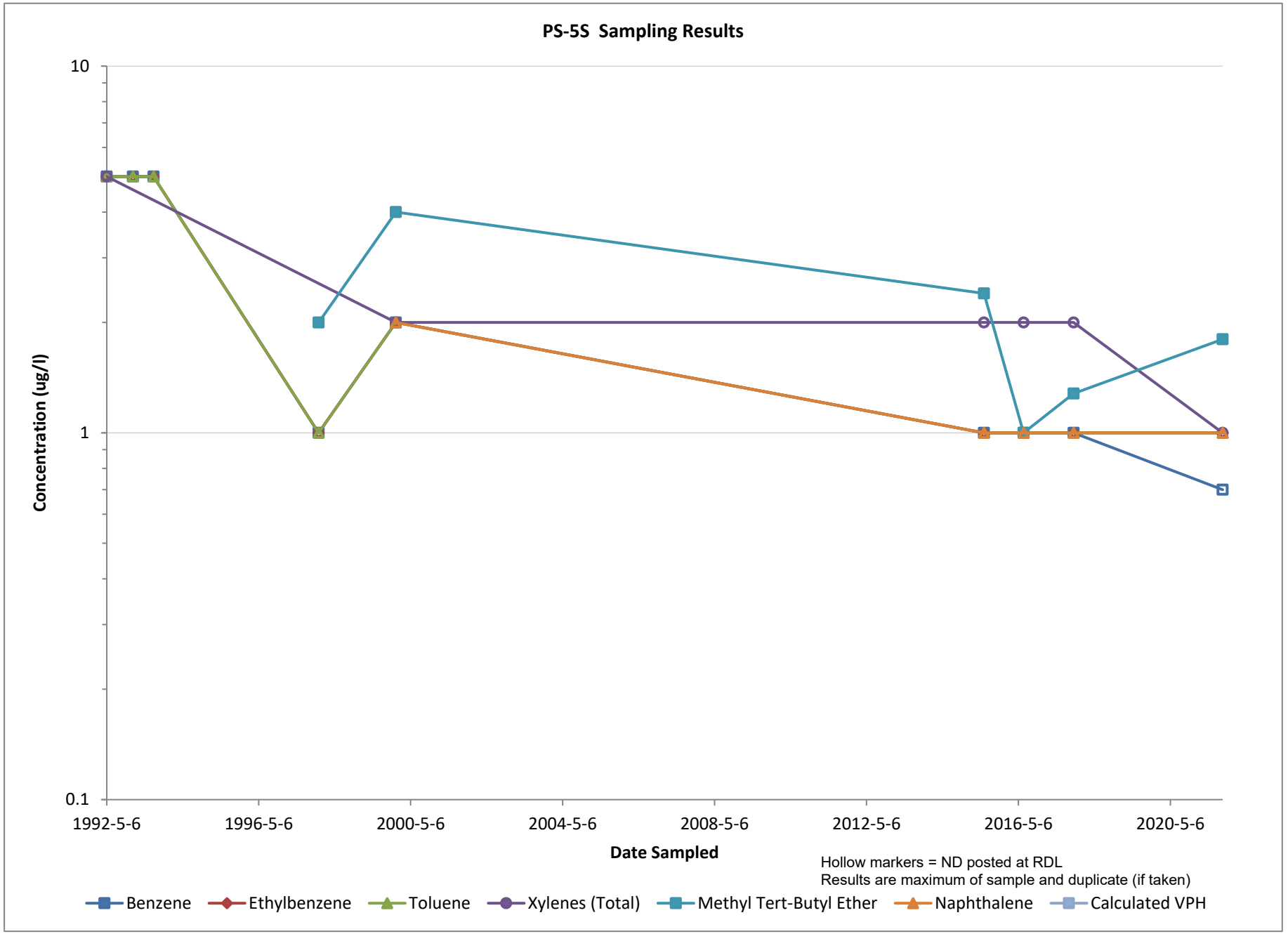

PS-2M Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

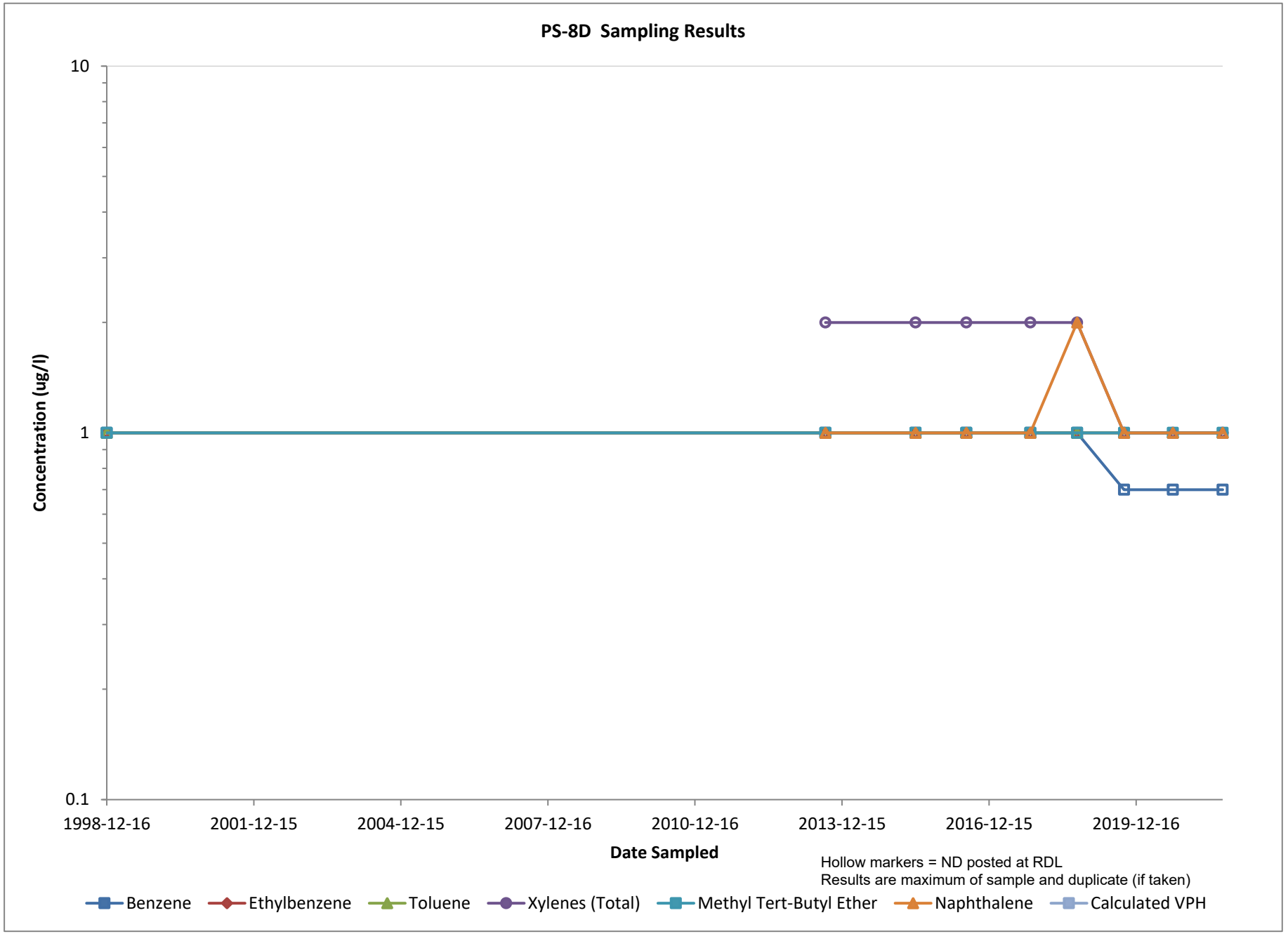

PS-2S Sampling Results
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

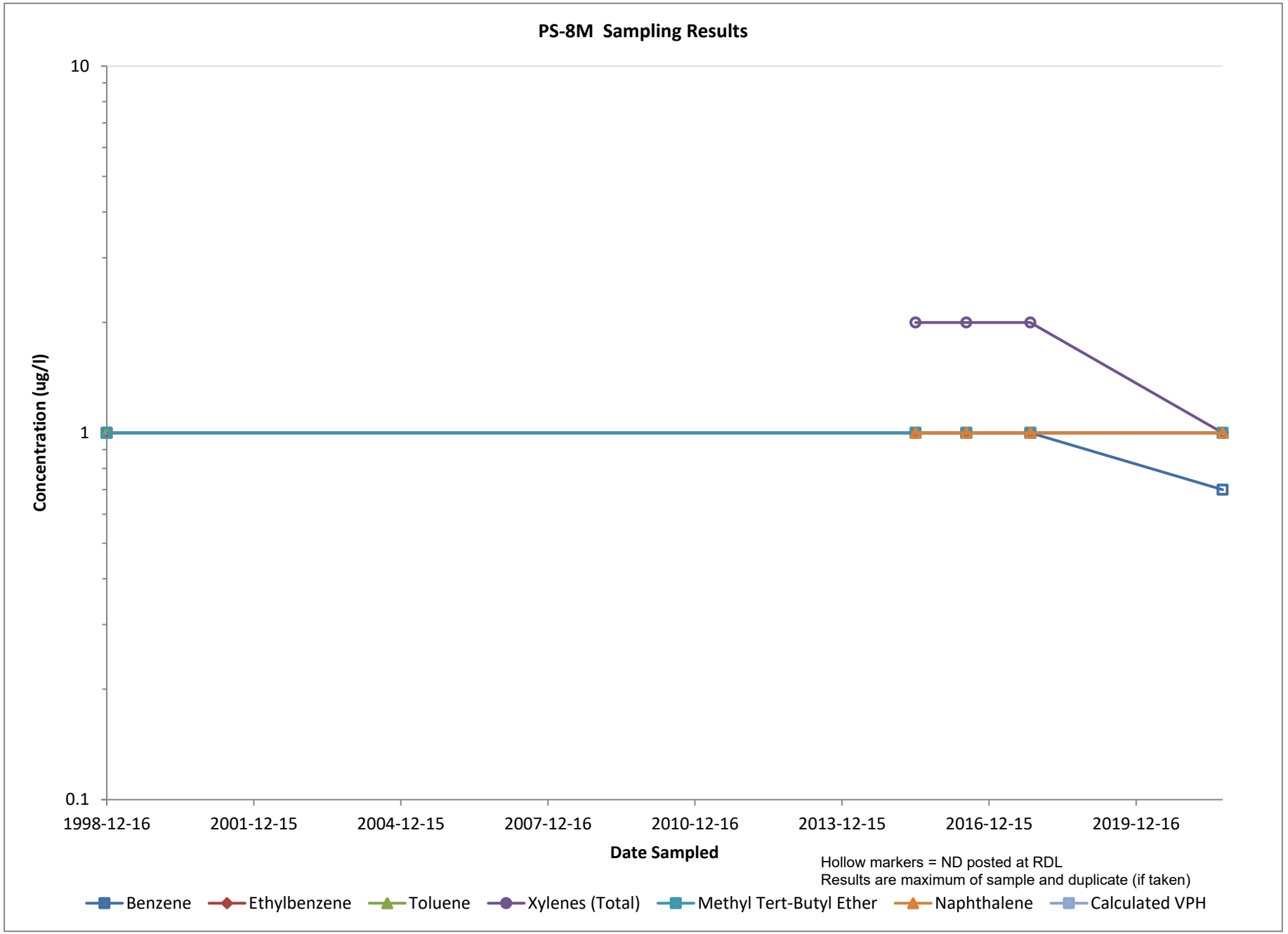

PS-3 Sampling Results
10
1
0.1
Concentration (ug/l)
1997-12-3
2000-12-2
2003-12-3
2006-12-3
2009-12-3
2012-12-2
2015-12-3
2018-12-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

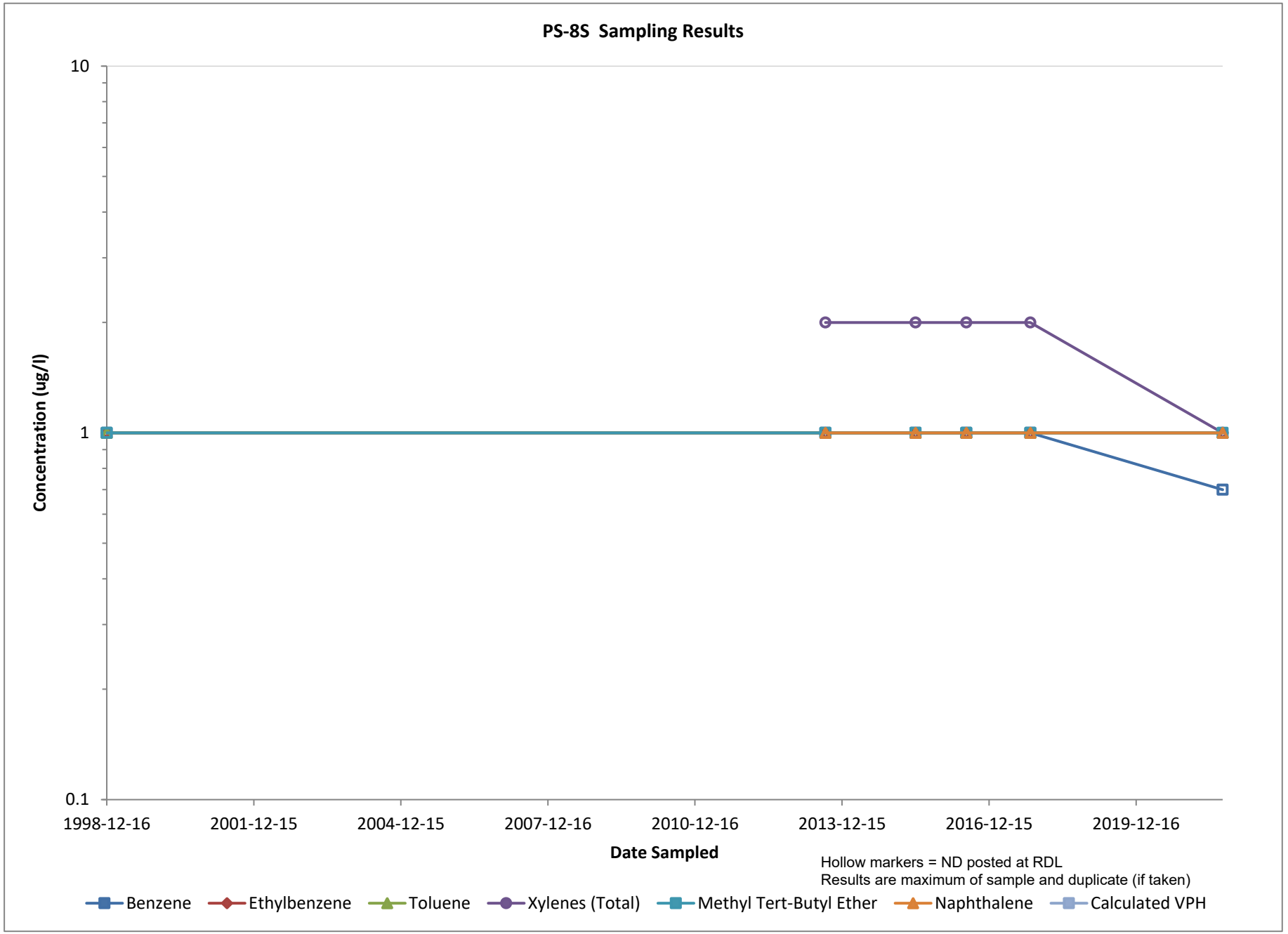

PS-4 Sampling Results
10
1
0.1
Concentration (ug/l)
1993-1-12
1997-1-12
2001-1-12
2005-1-12
2009-1-12
2013-1-12
2017-1-12
2021-1-12
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

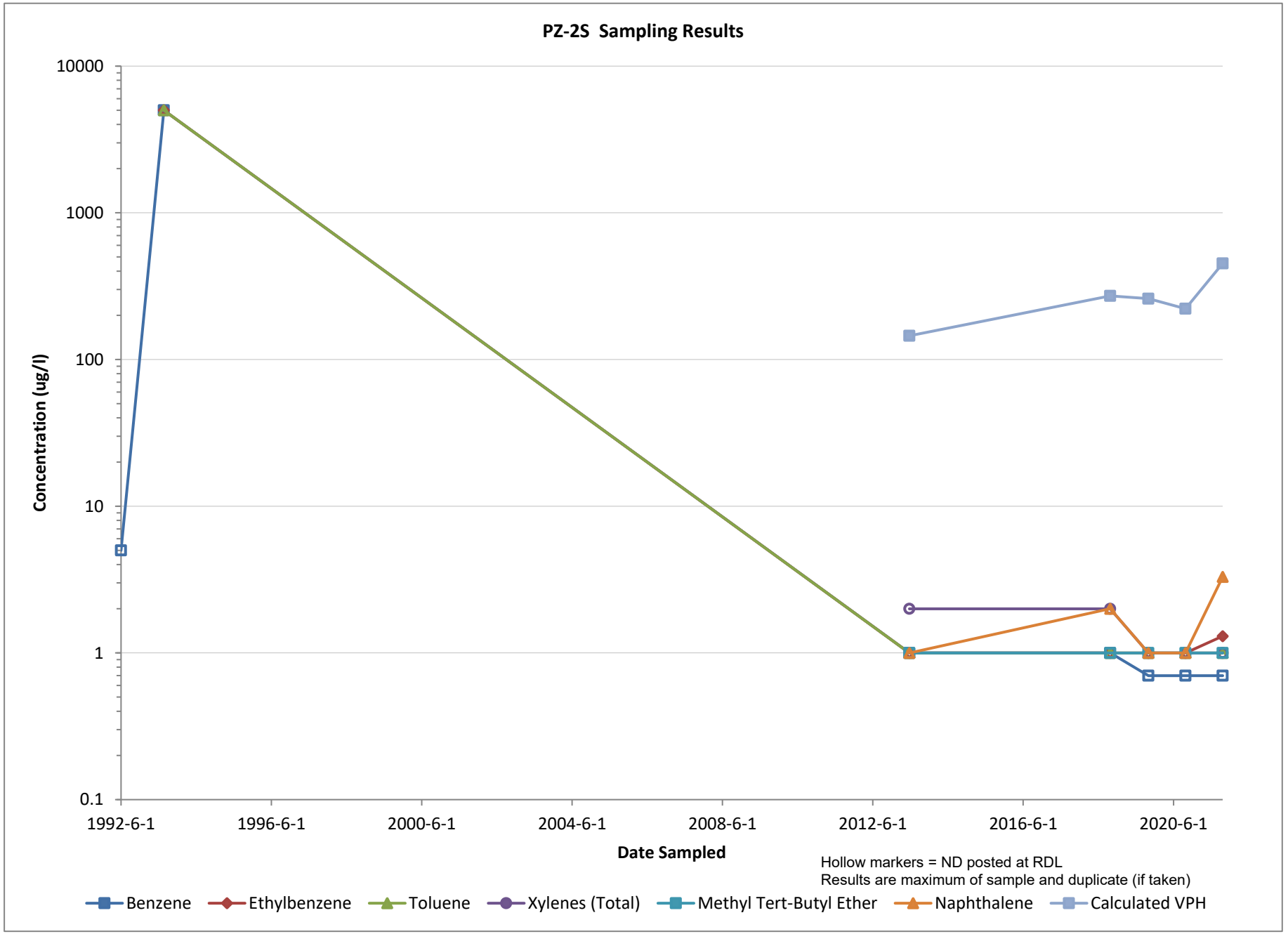

PS-5D Sampling Results
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

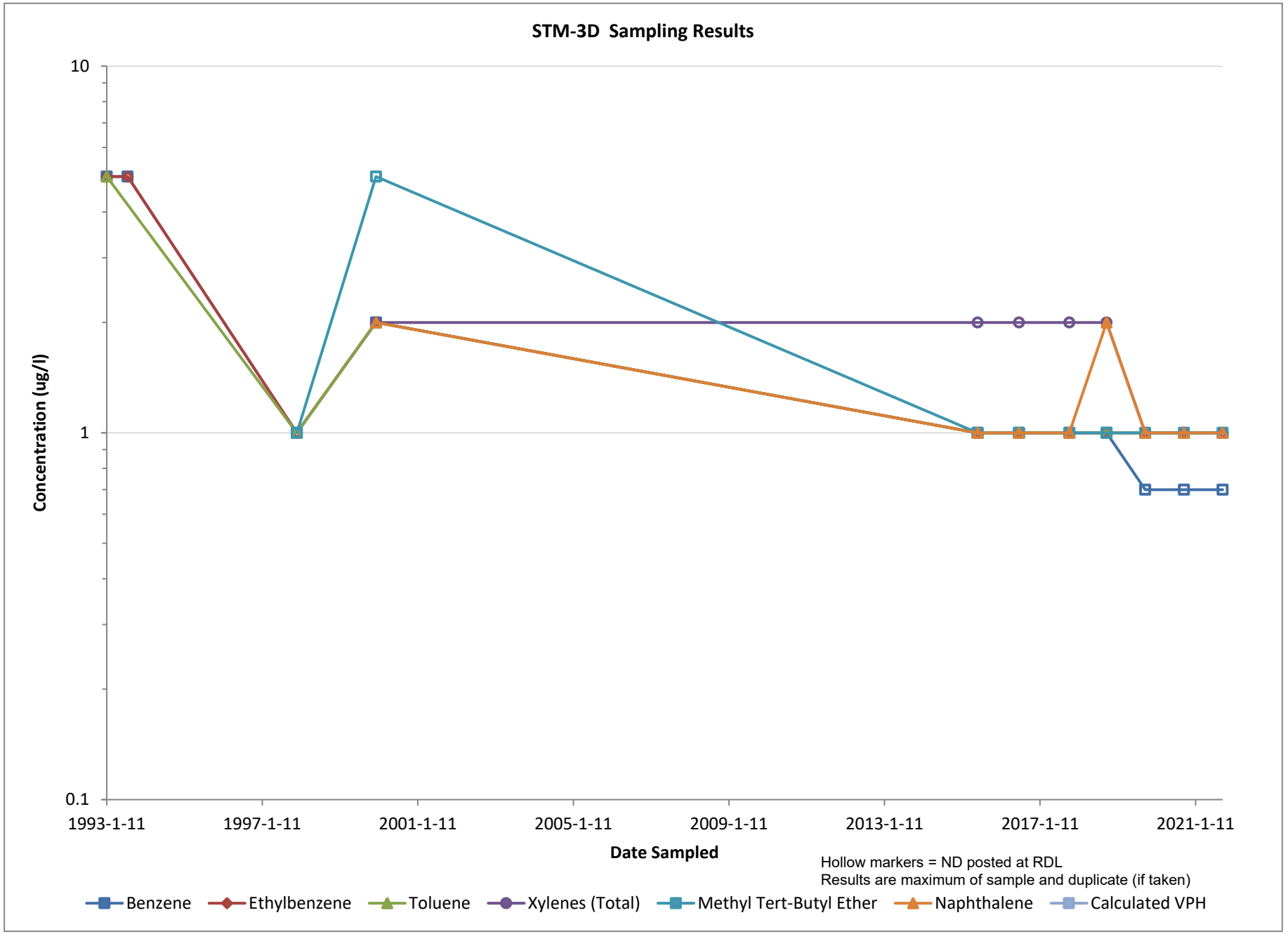

PS-5S Sampling Results
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

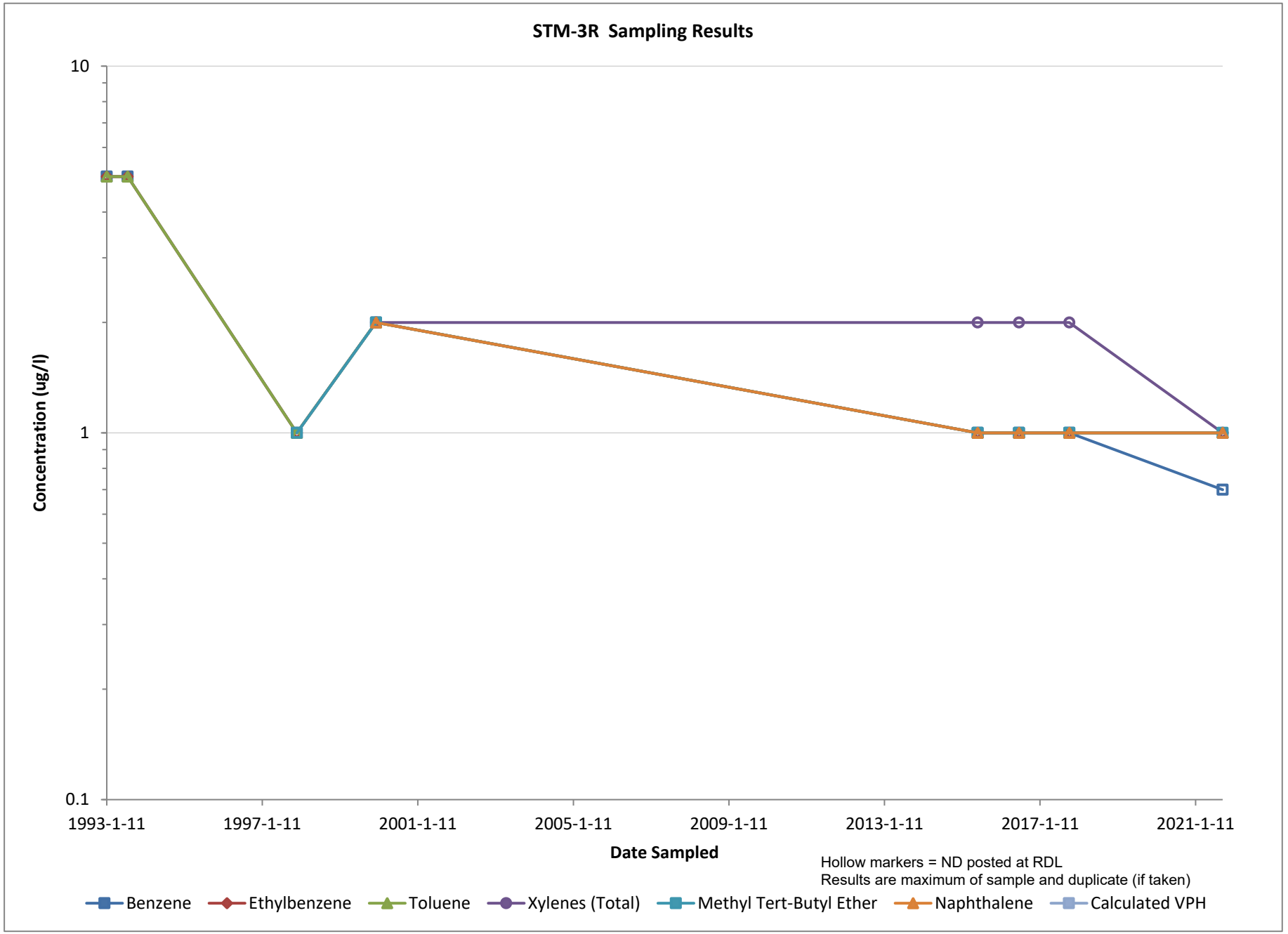

PS-8D Sampling Results
10
1
0.1
Concentration (ug/l)
1998-12-16
2001-12-15
2004-12-15
2007-12-16
2010-12-16
2013-12-15
2016-12-15
2019-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

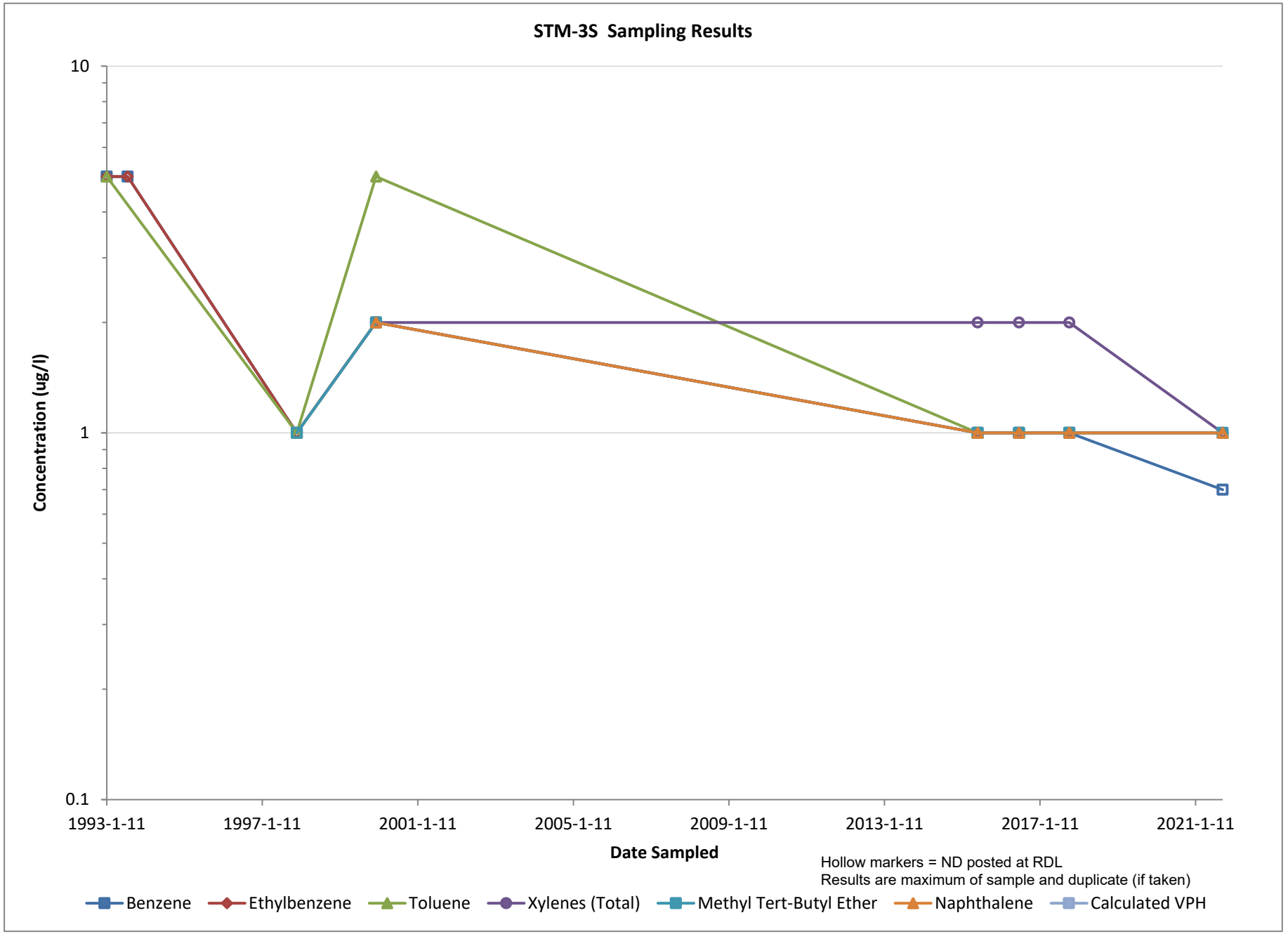

PS-8M Sampling Results
10
1
0.1
Concentration (ug/l)
1998-12-16
2001-12-15
2004-12-15
2007-12-16
2010-12-16
2013-12-15
2016-12-15
2019-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

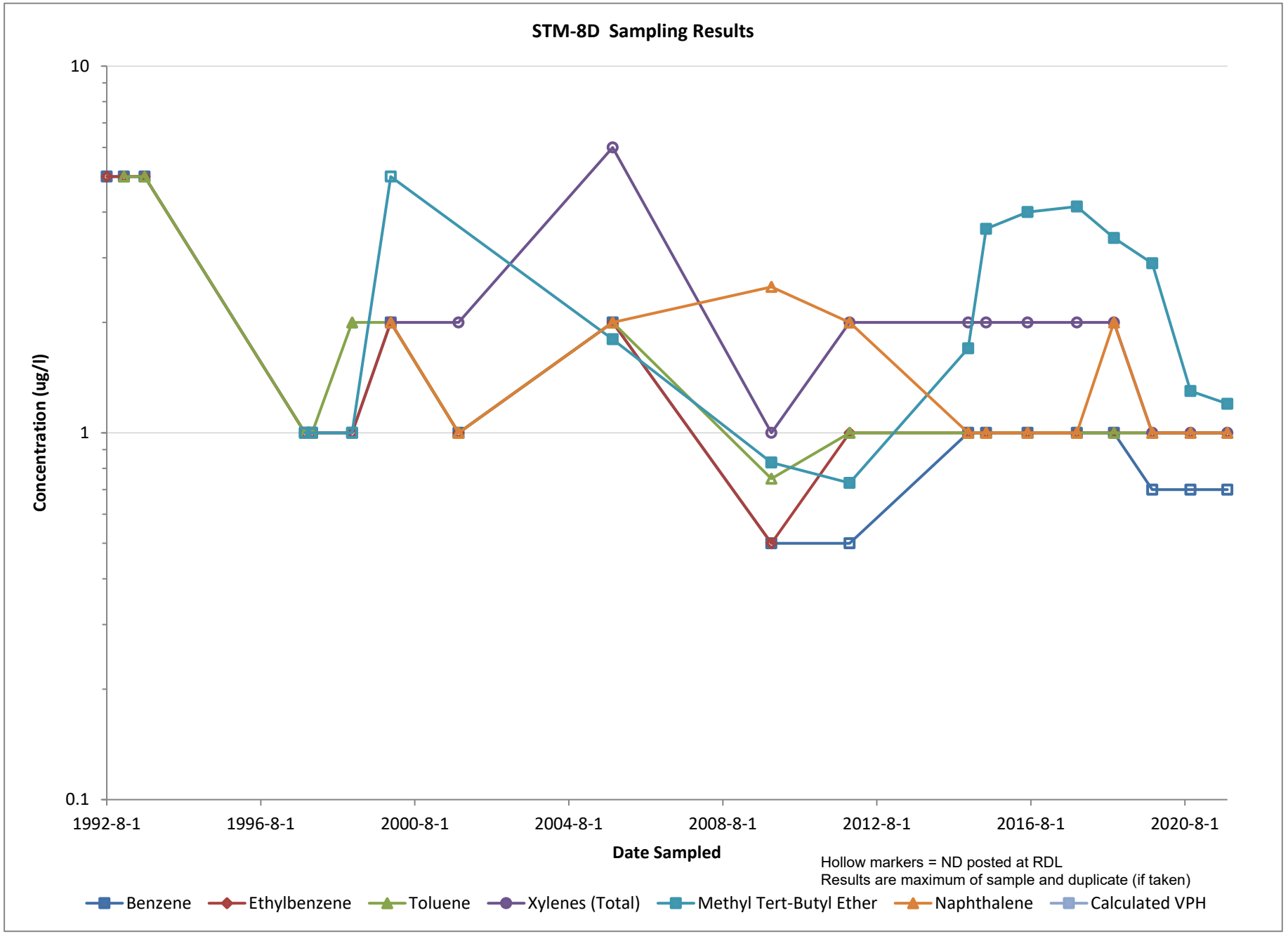

PS-8S Sampling Results
10
1
0.1
Concentration (ug/l)
1998-12-16
2001-12-15
2004-12-15
2007-12-16
2010-12-16
2013-12-15
2016-12-15
2019-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

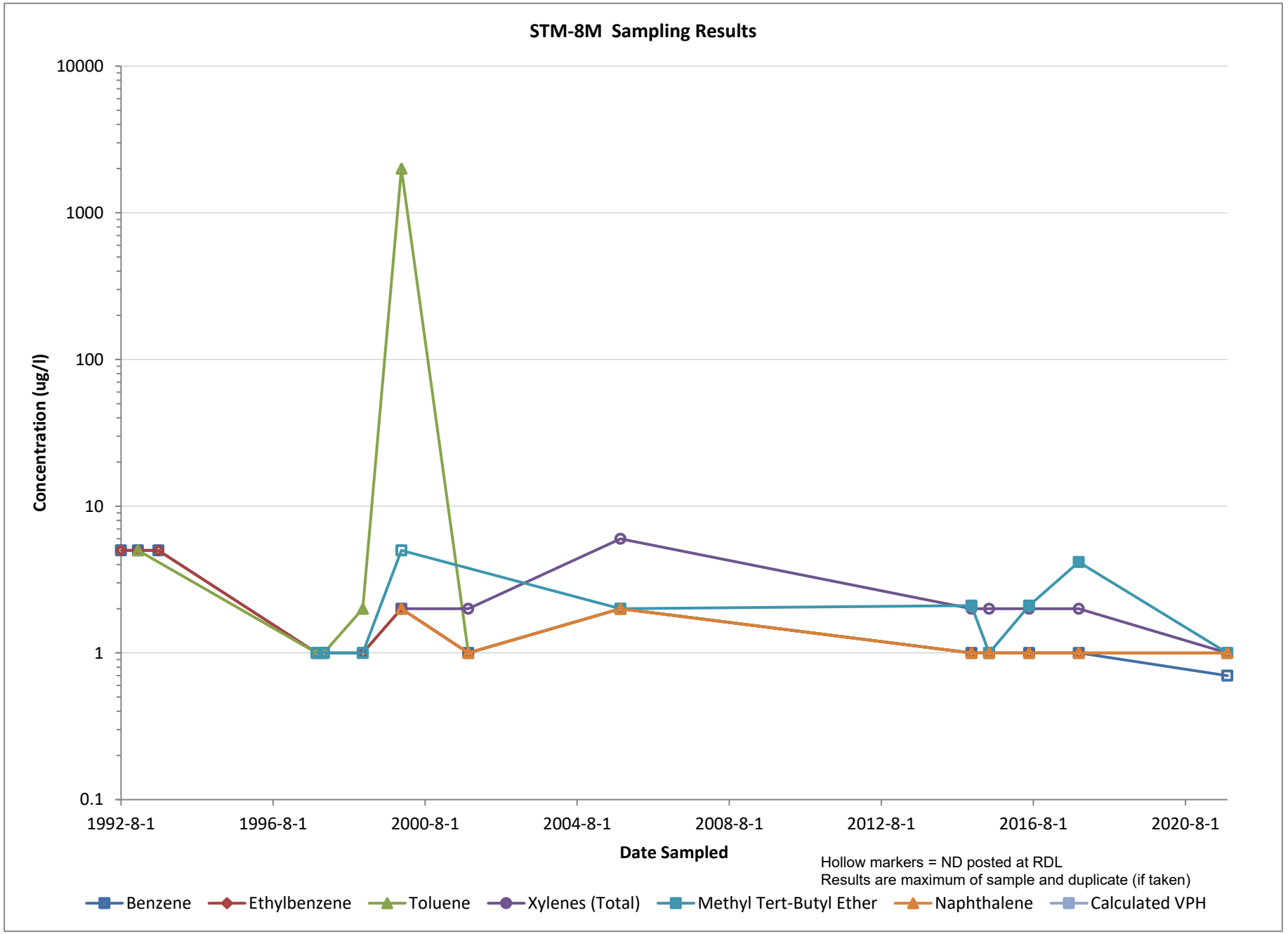

PZ-2S Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1992-6-1
1996-6-1
2000-6-1
2004-6-1
2008-6-1
2012-6-1
2016-6-1
2020-6-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

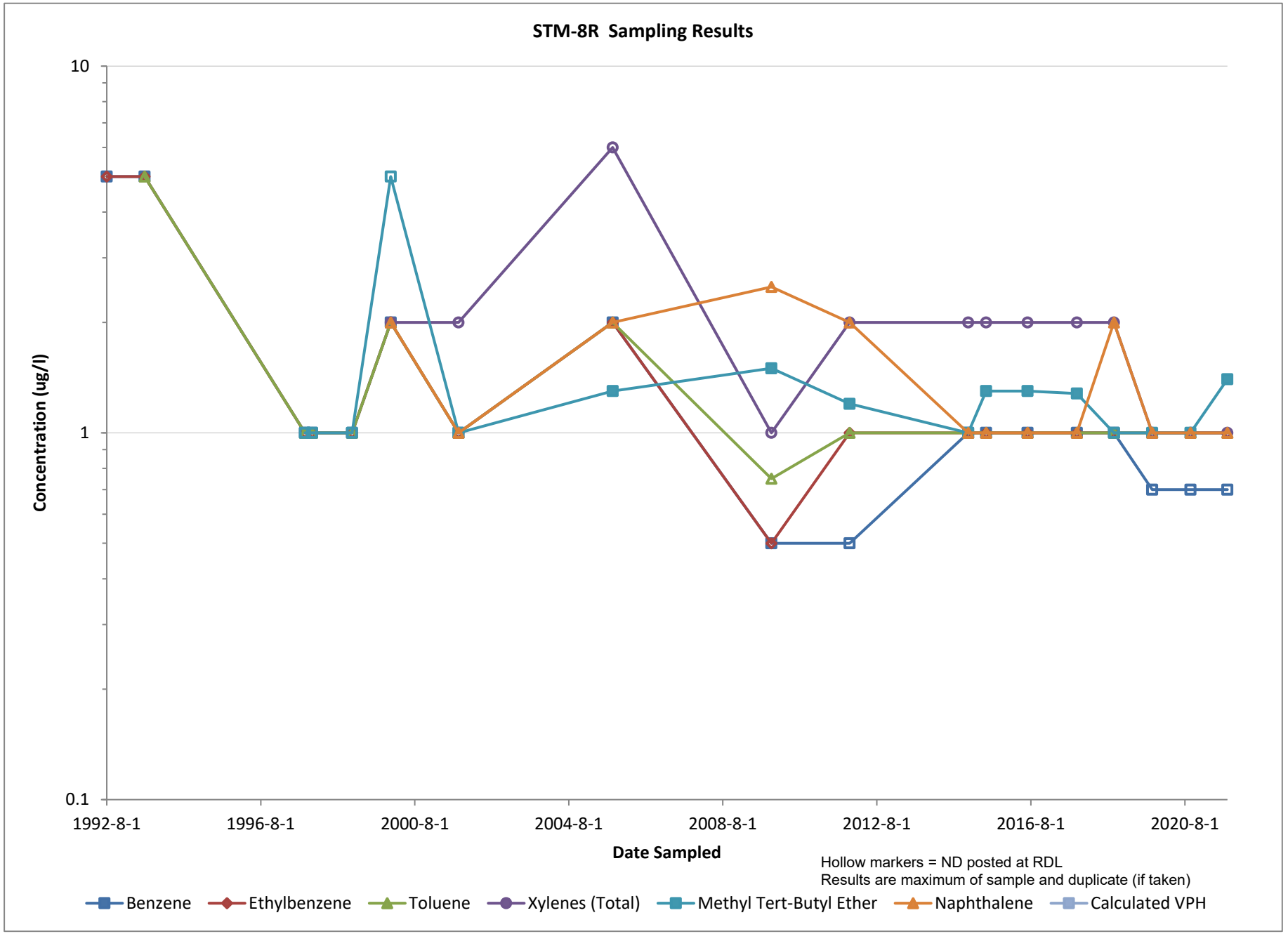

STM-3D Sampling Results
10
1
0.1
Concentration (ug/l)
1993-1-11
1997-1-11
2001-1-11
2005-1-11
2009-1-11
2013-1-11
2017-1-11
2021-1-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

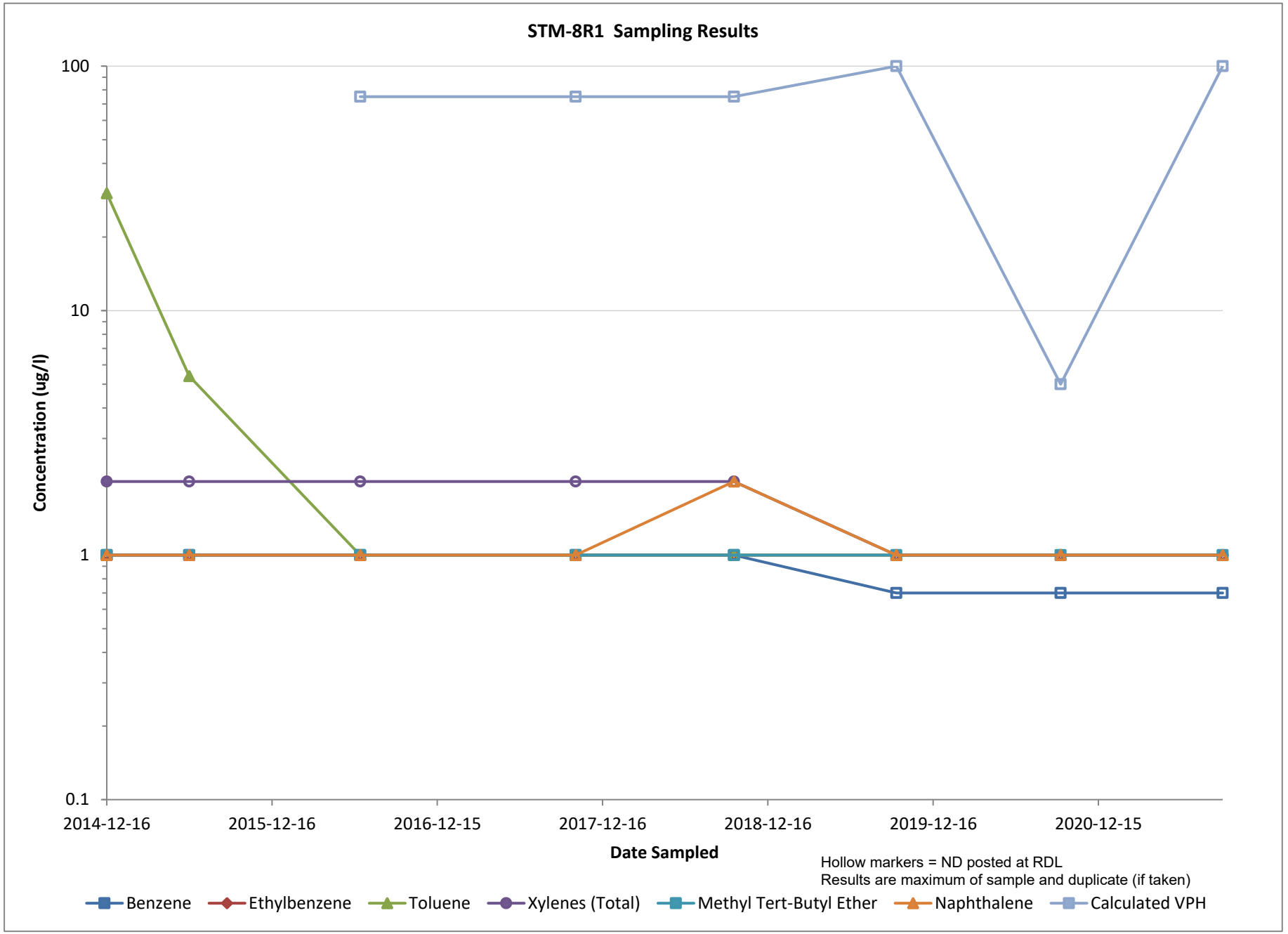

STM-3R Sampling Results
10
1
0.1
Concentration (ug/l)
1993-1-11
1997-1-11
2001-1-11
2005-1-11
2009-1-11
2013-1-11
2017-1-11
2021-1-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

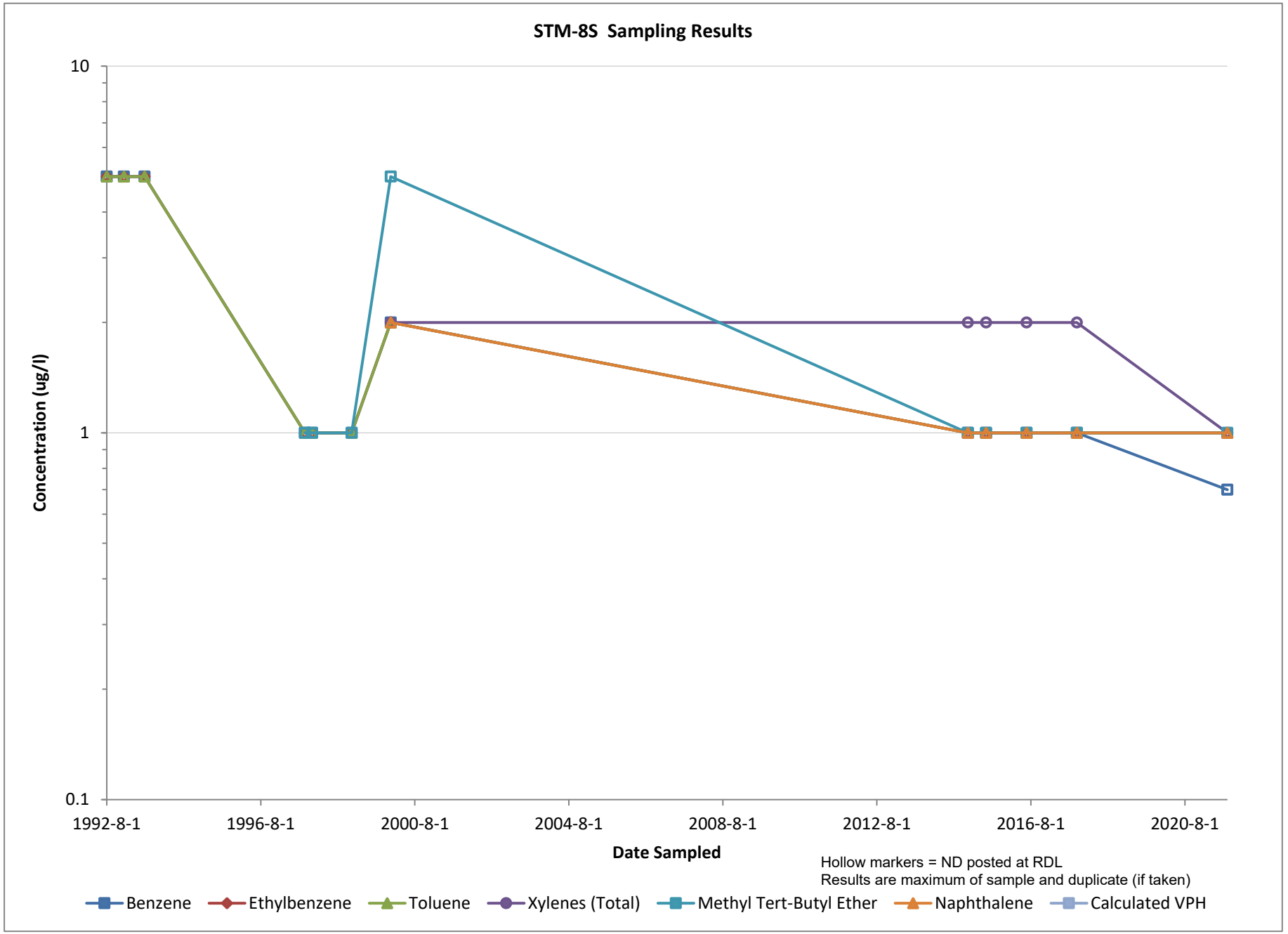

STM-3S Sampling Results
10
1
0.1
Concentration (ug/l)
1993-1-11
1997-1-11
2001-1-11
2005-1-11
2009-1-11
2013-1-11
2017-1-11
2021-1-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

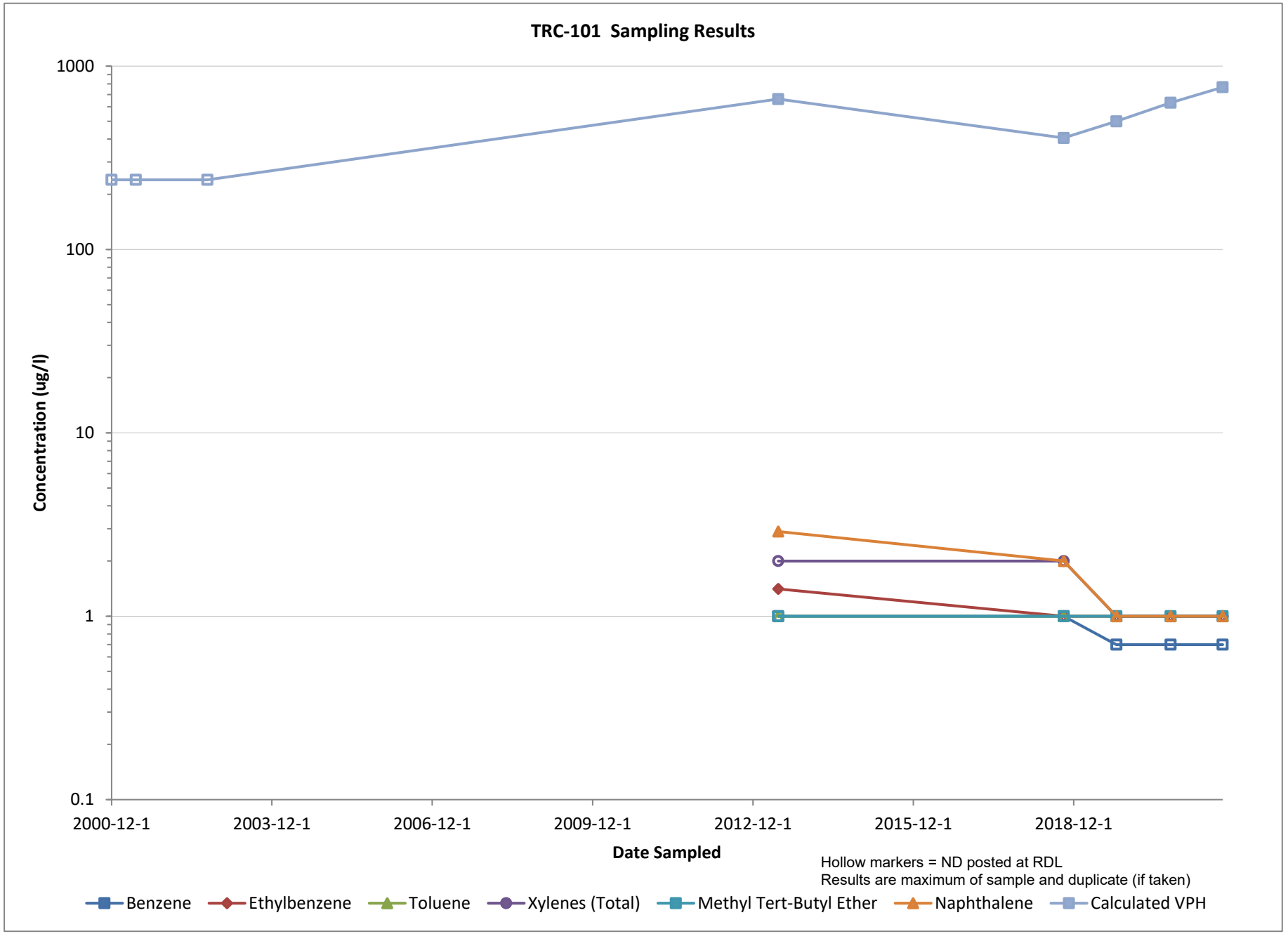

STM-8D Sampling Results
10
1
0.1
Concentration (ug/l)
1992-8-1
1996-8-1
2000-8-1
2004-8-1
2008-8-1
2012-8-1
2016-8-1
2020-8-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

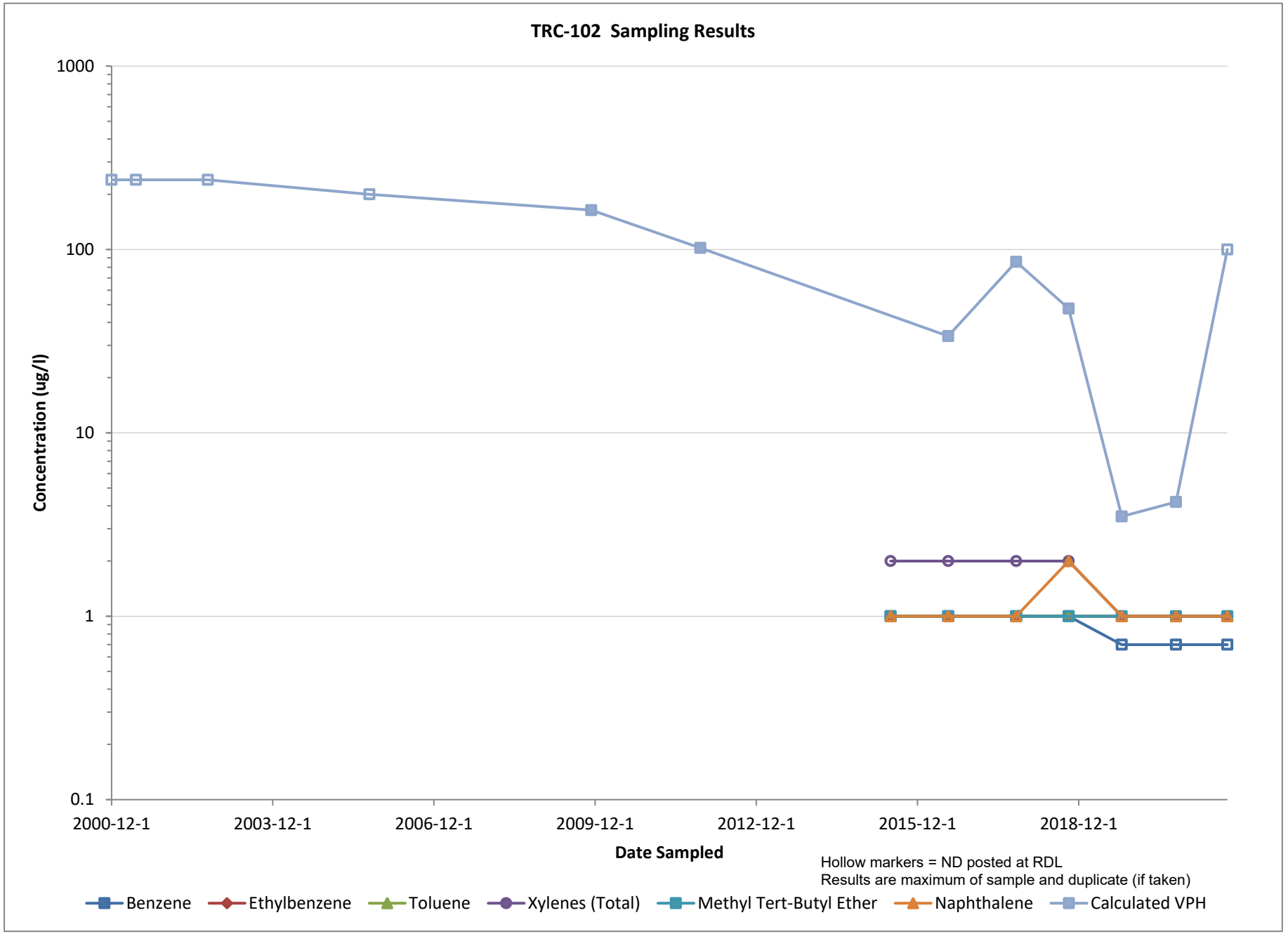

STM-8M Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1992-8-1
1996-8-1
2000-8-1
2004-8-1
2008-8-1
2012-8-1
2016-8-1
2020-8-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

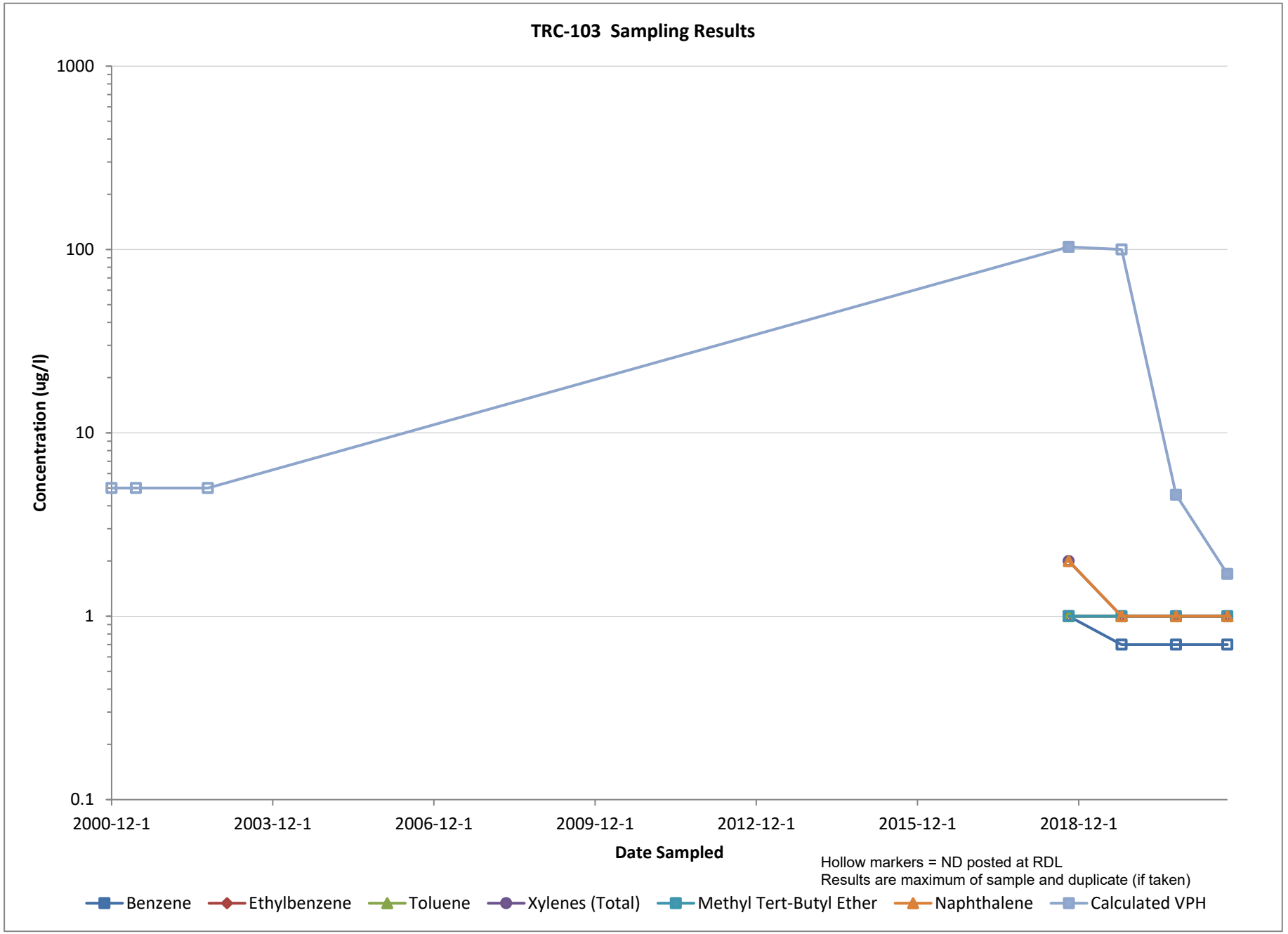

STM-8R Sampling Results
10
1
0.1
Concentration (ug/l)
1992-8-1
1996-8-1
2000-8-1
2004-8-1
2008-8-1
2012-8-1
2016-8-1
2020-8-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

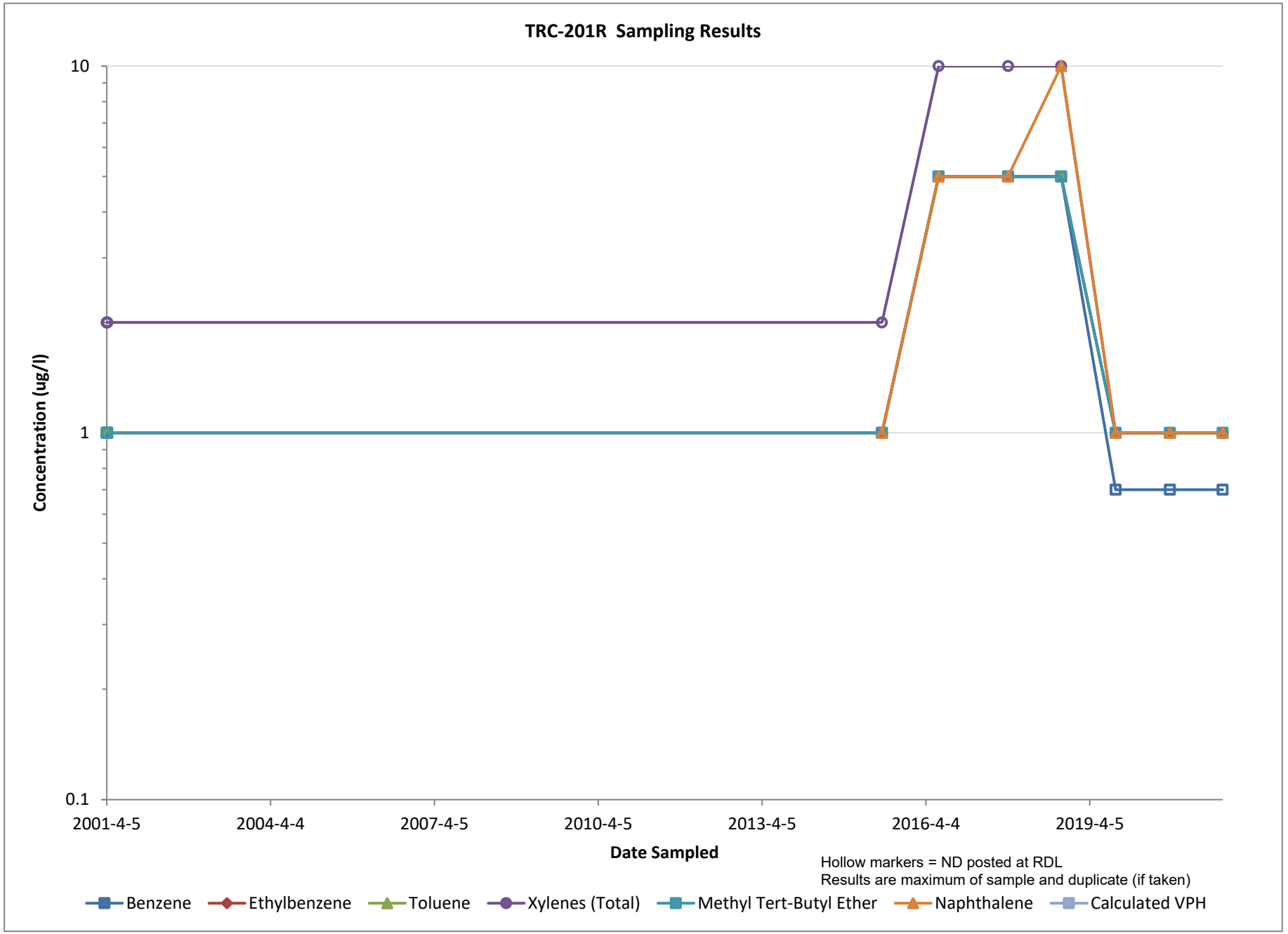

STM-8R1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-15
2017-12-16
2018-12-16
2019-12-16
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

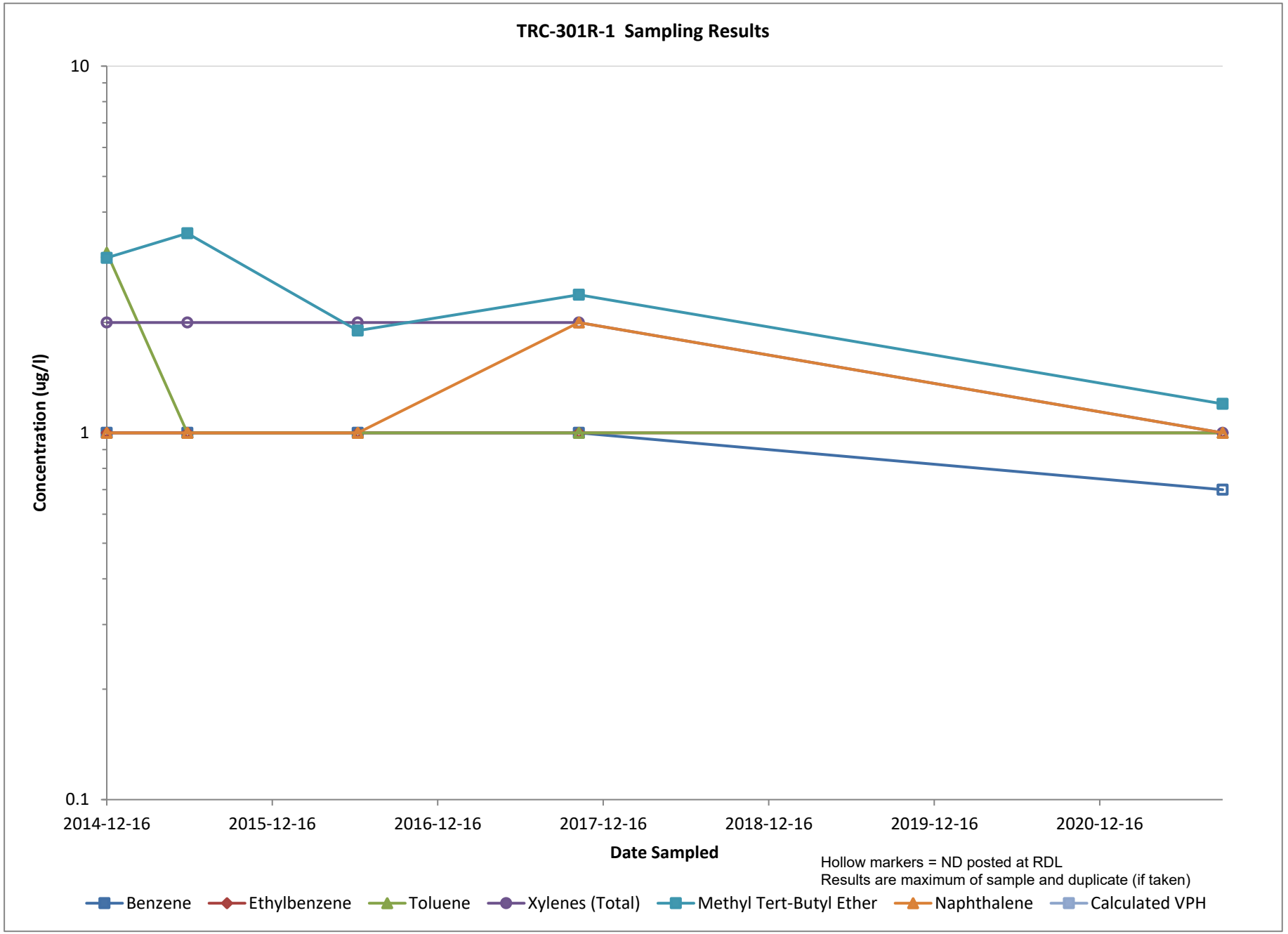

STM-8S Sampling Results
10
1
0.1
Concentration (ug/l)
1992-8-1
1996-8-1
2000-8-1
2004-8-1
2008-8-1
2012-8-1
2016-8-1
2020-8-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

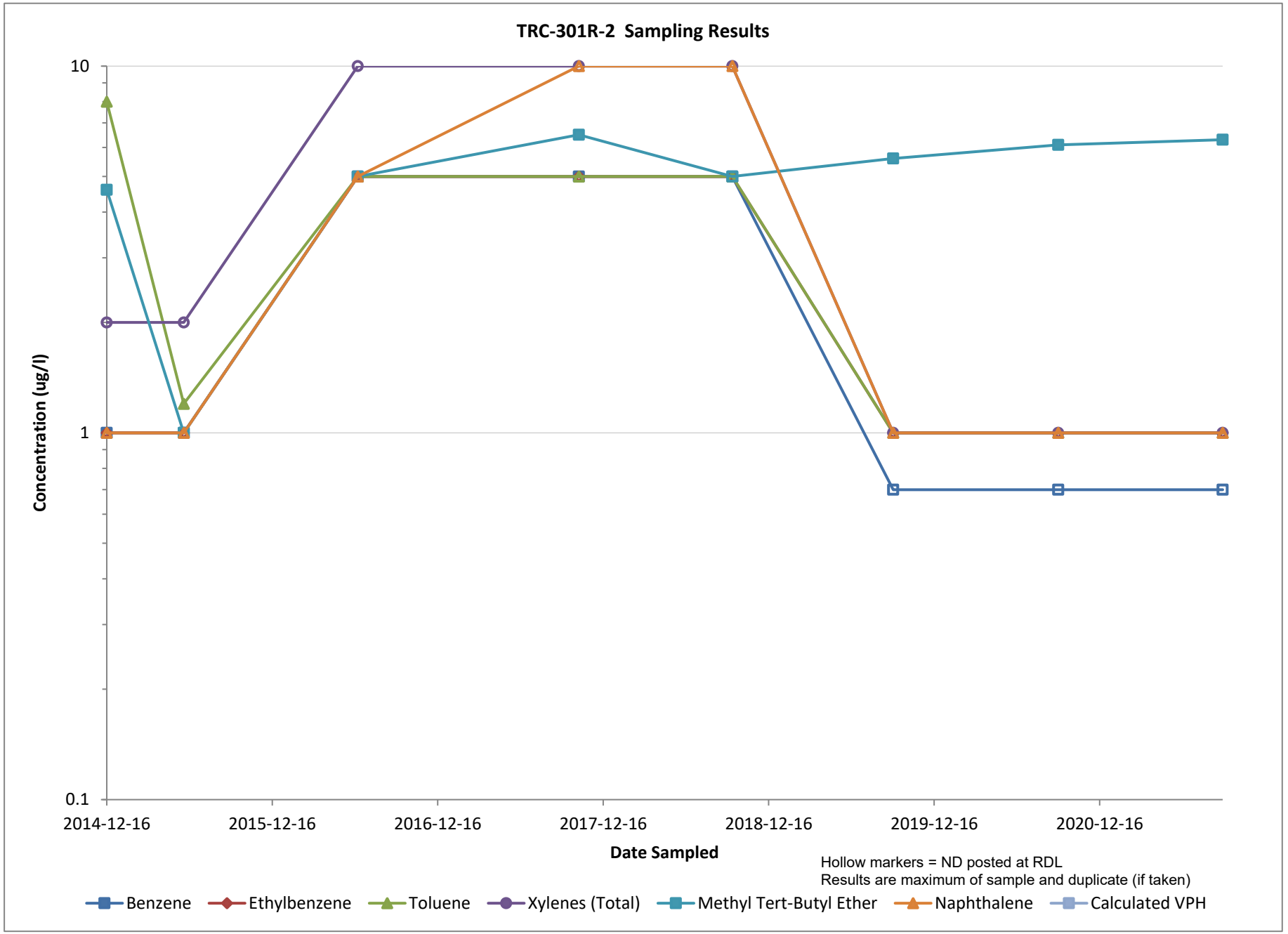

TRC-101 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2000-12-1
2003-12-1
2006-12-1
2009-12-1
2012-12-1
2015-12-1
2018-12-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

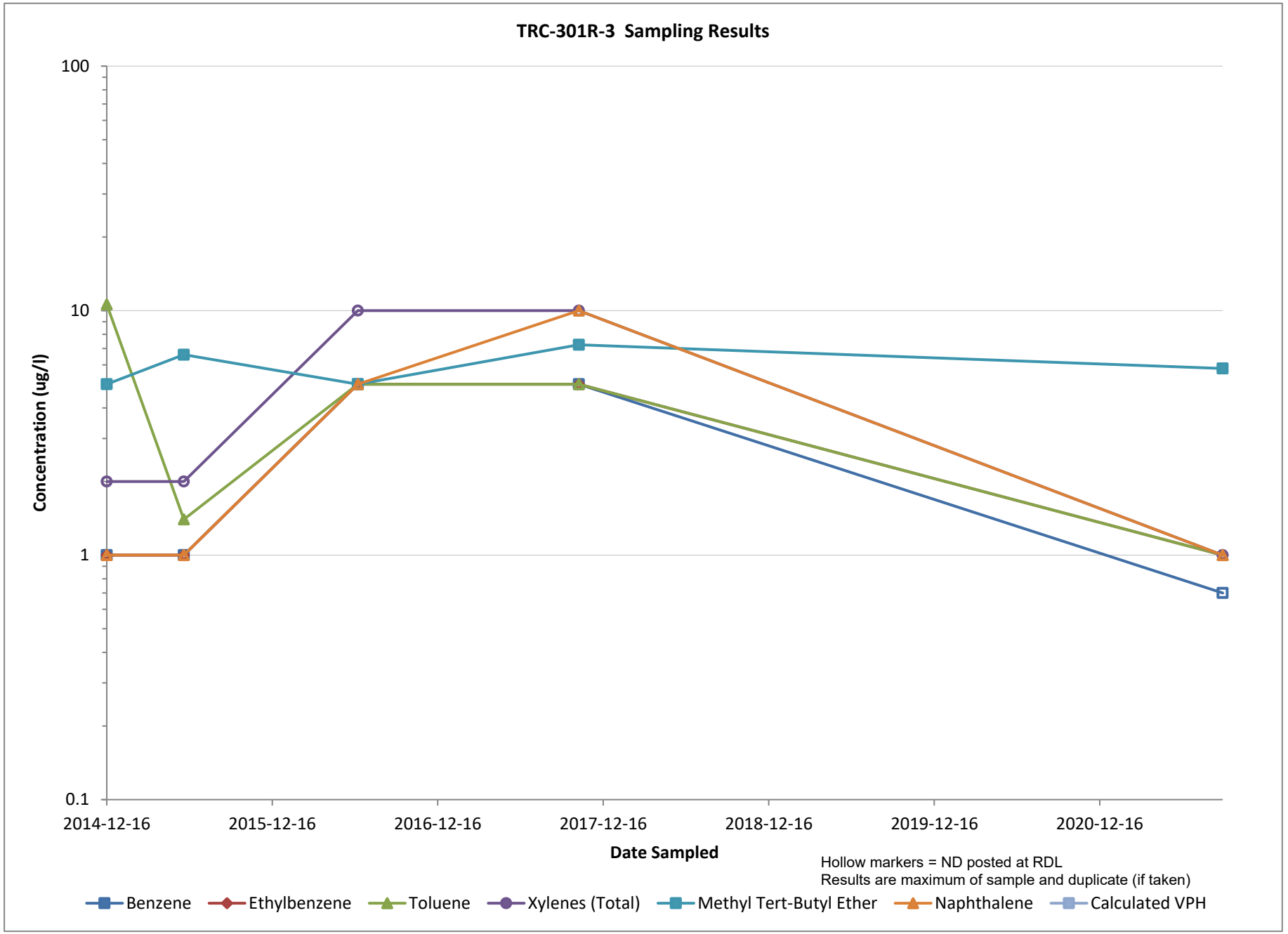

TRC-102 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2000-12-1
2003-12-1
2006-12-1
2009-12-1
2012-12-1
2015-12-1
2018-12-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

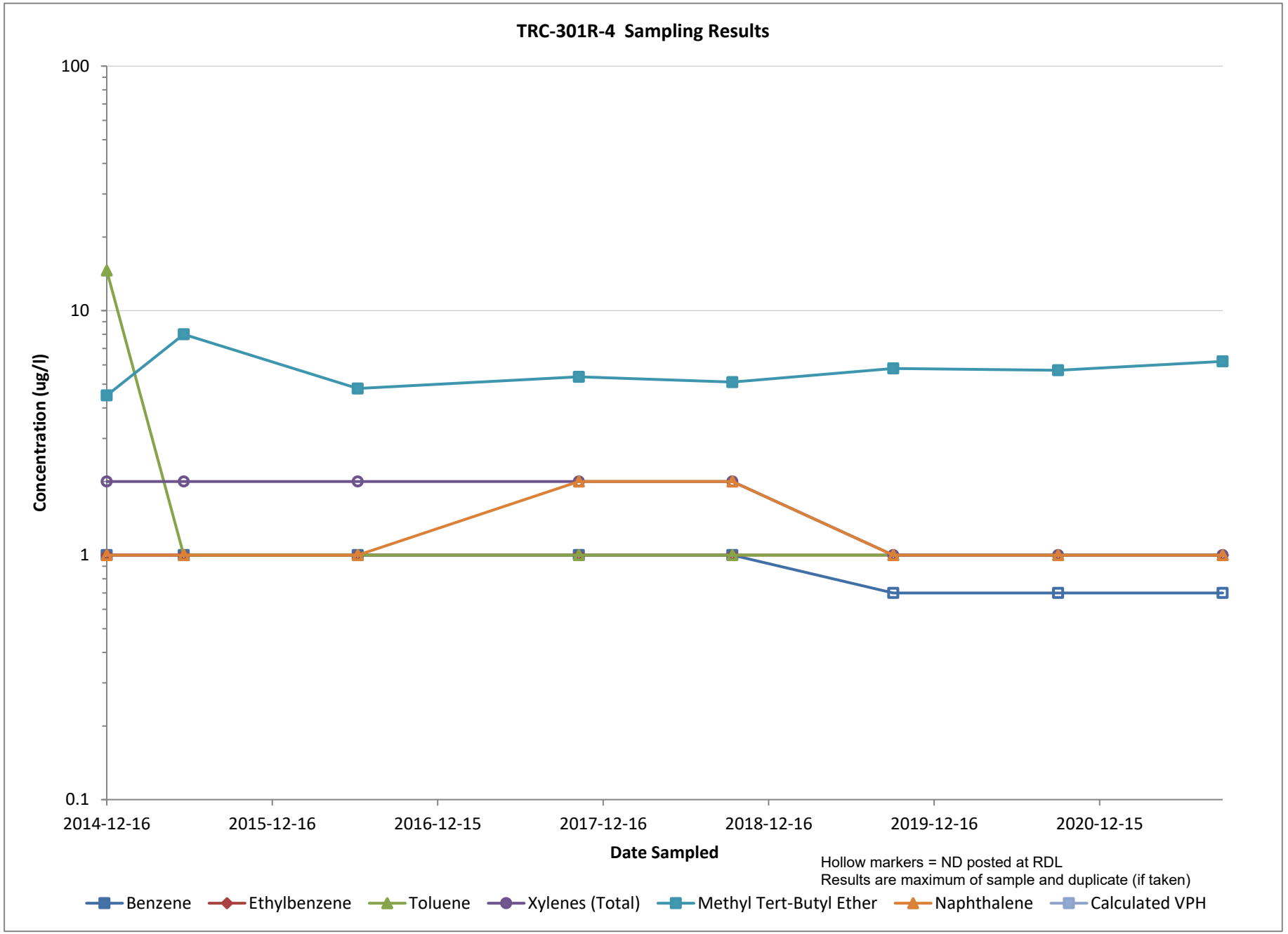

TRC-103 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2000-12-1
2003-12-1
2006-12-1
2009-12-1
2012-12-1
2015-12-1
2018-12-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

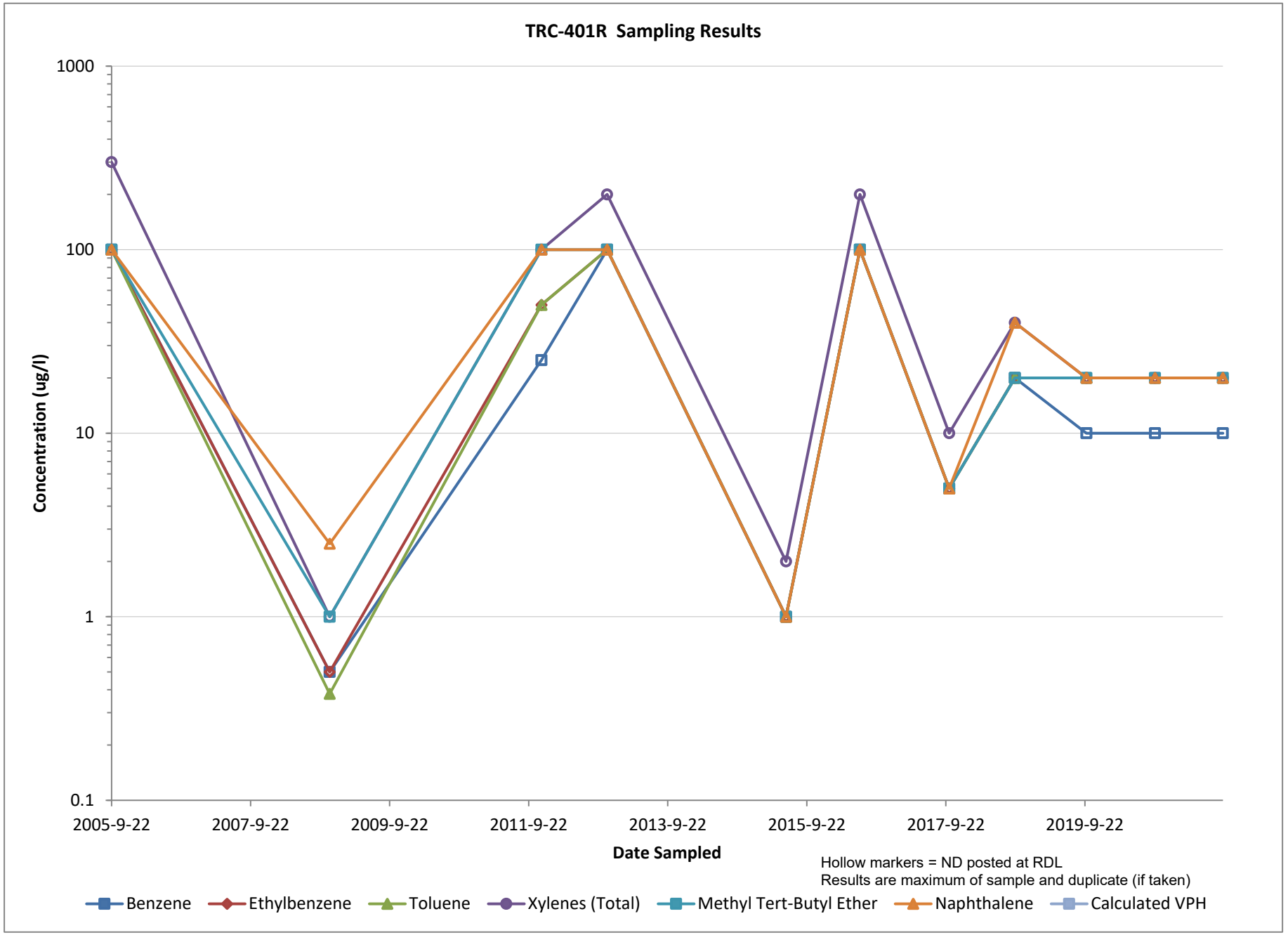

TRC-201R Sampling Results
10
1
0.1
Concentration (ug/l)
2001-4-5
2004-4-4
2007-4-5
2010-4-5
2013-4-5
2016-4-4
2019-4-5
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

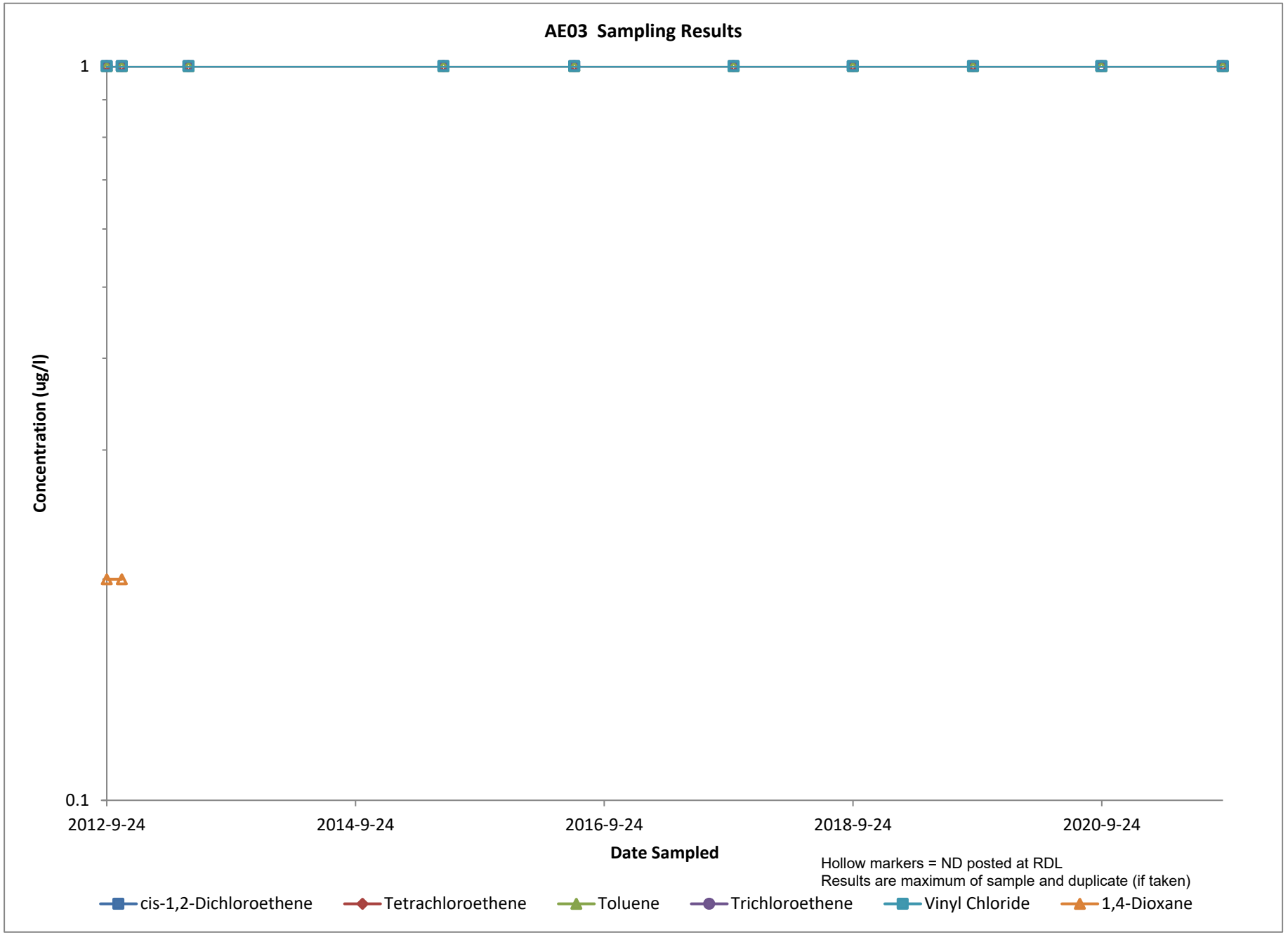

TRC-301R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

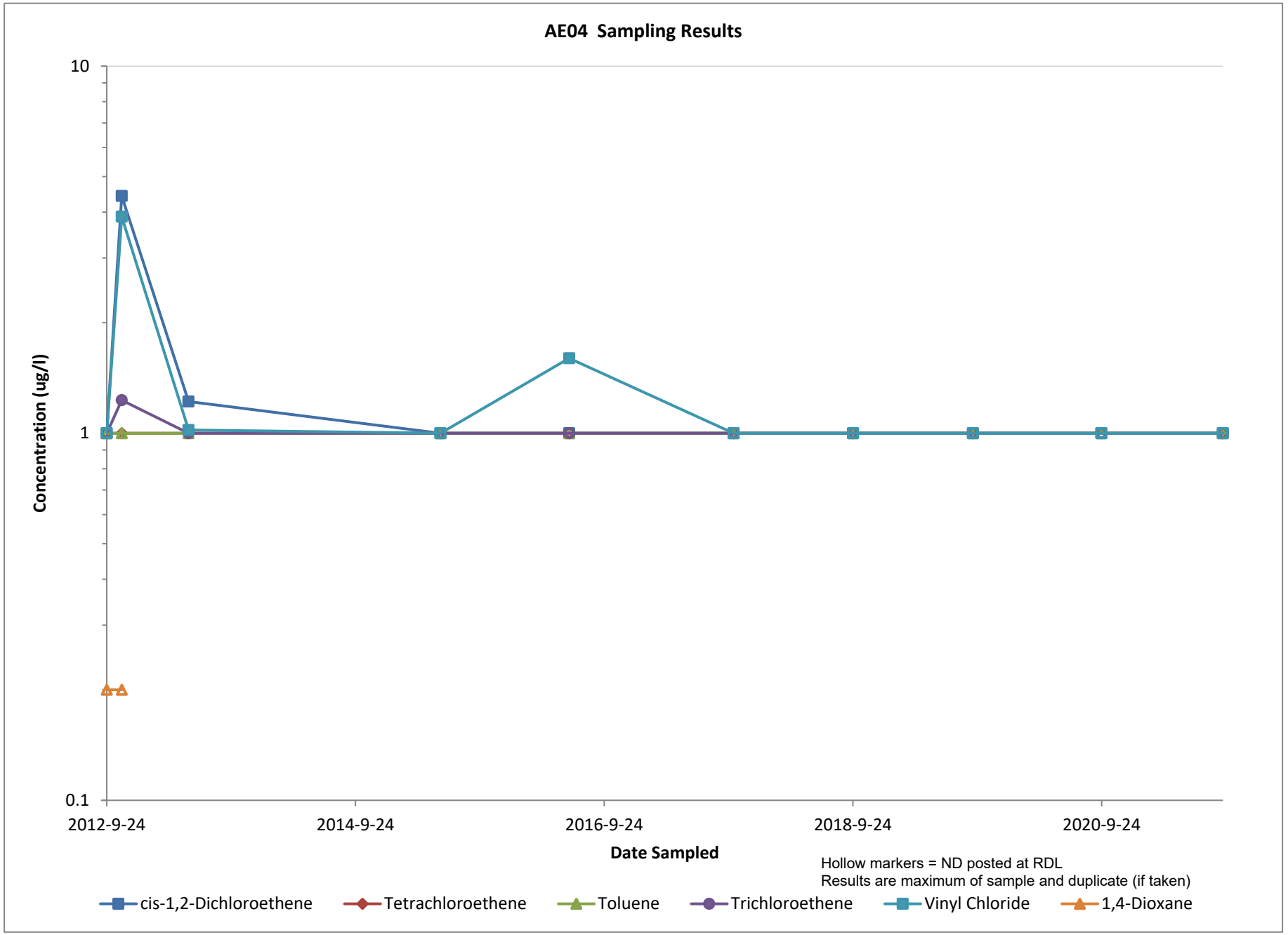

TRC-301R-2 Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

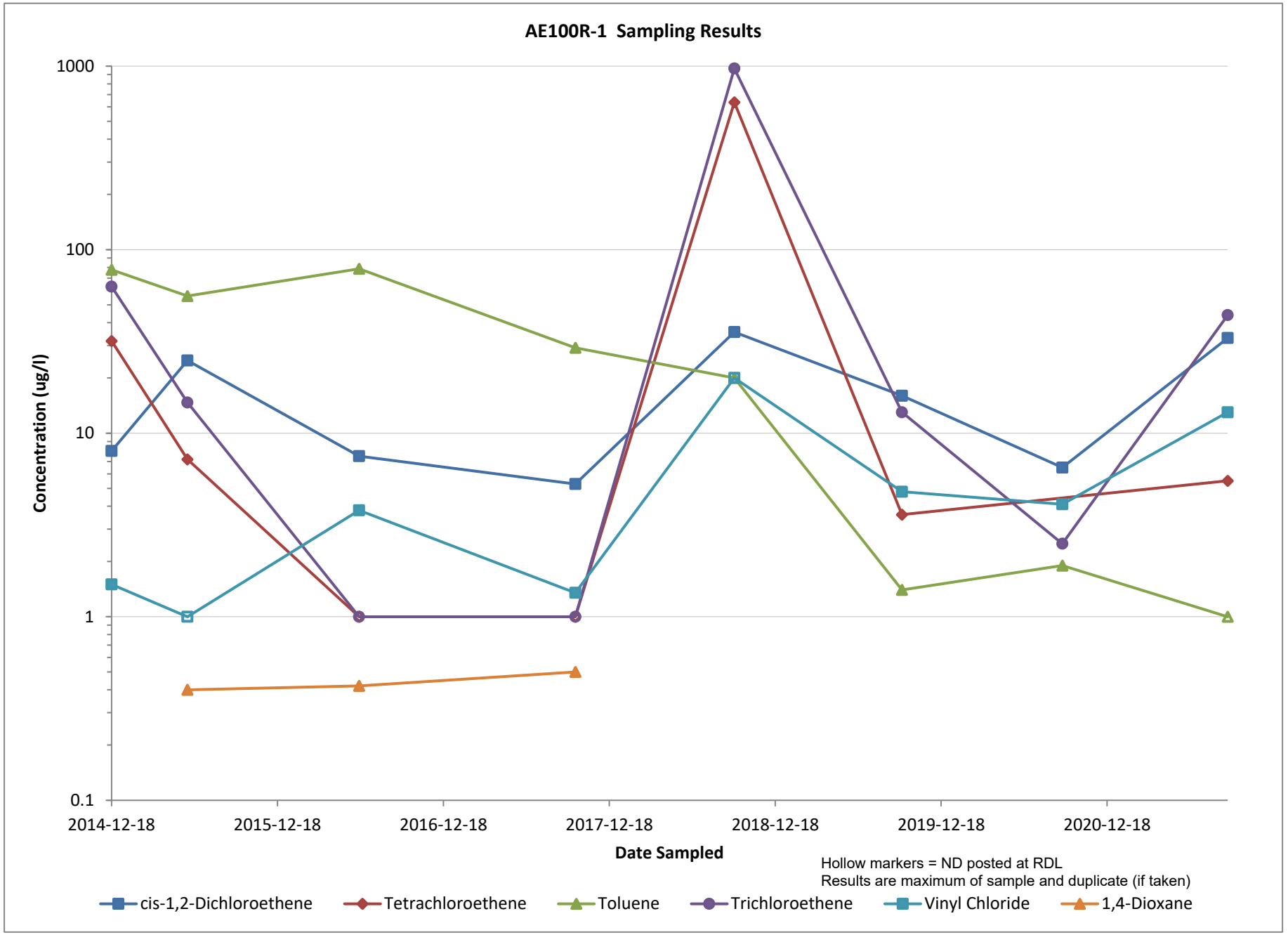

TRC-301R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

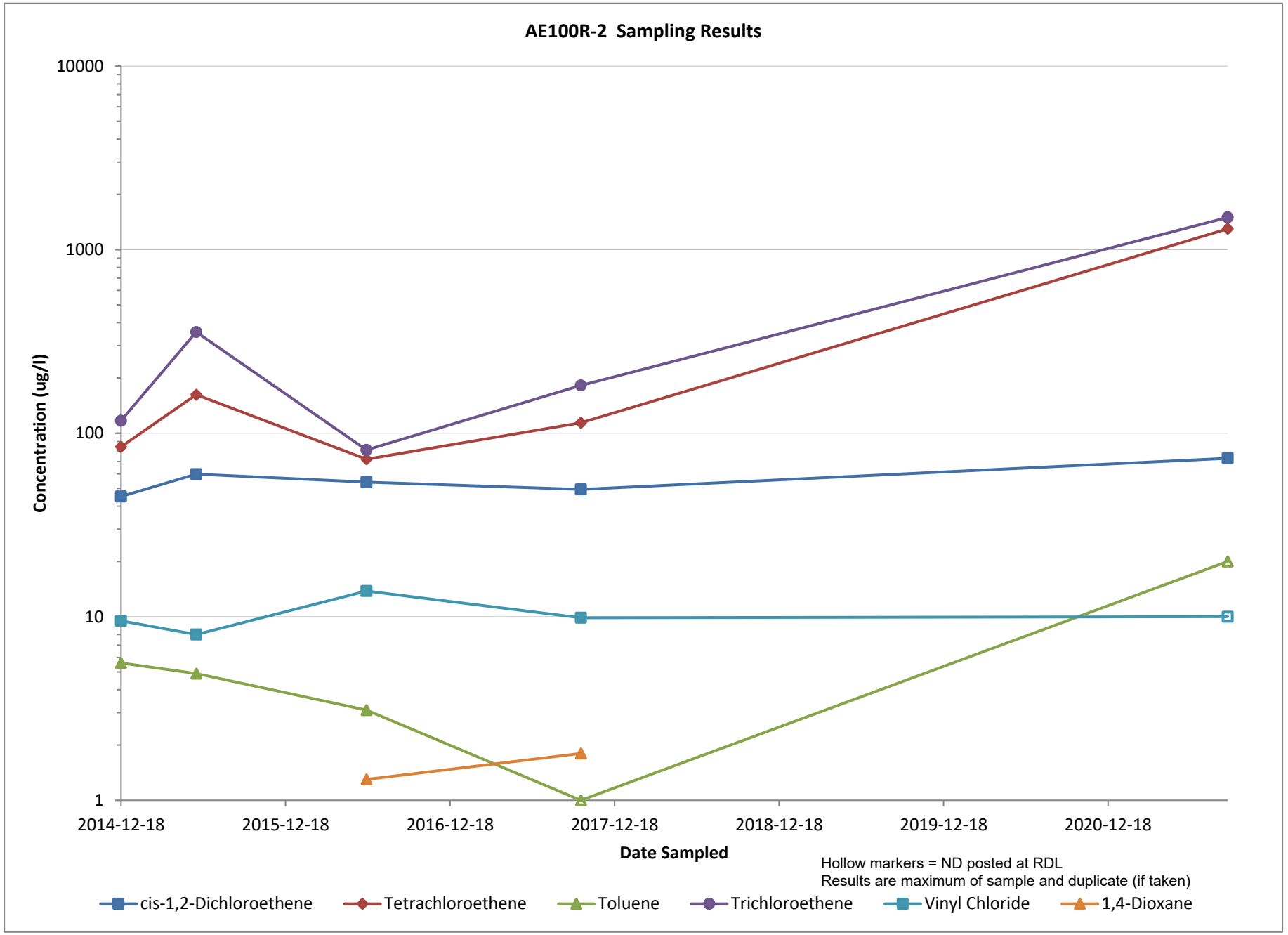

TRC-301R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-15
2017-12-16
2018-12-16
2019-12-16
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

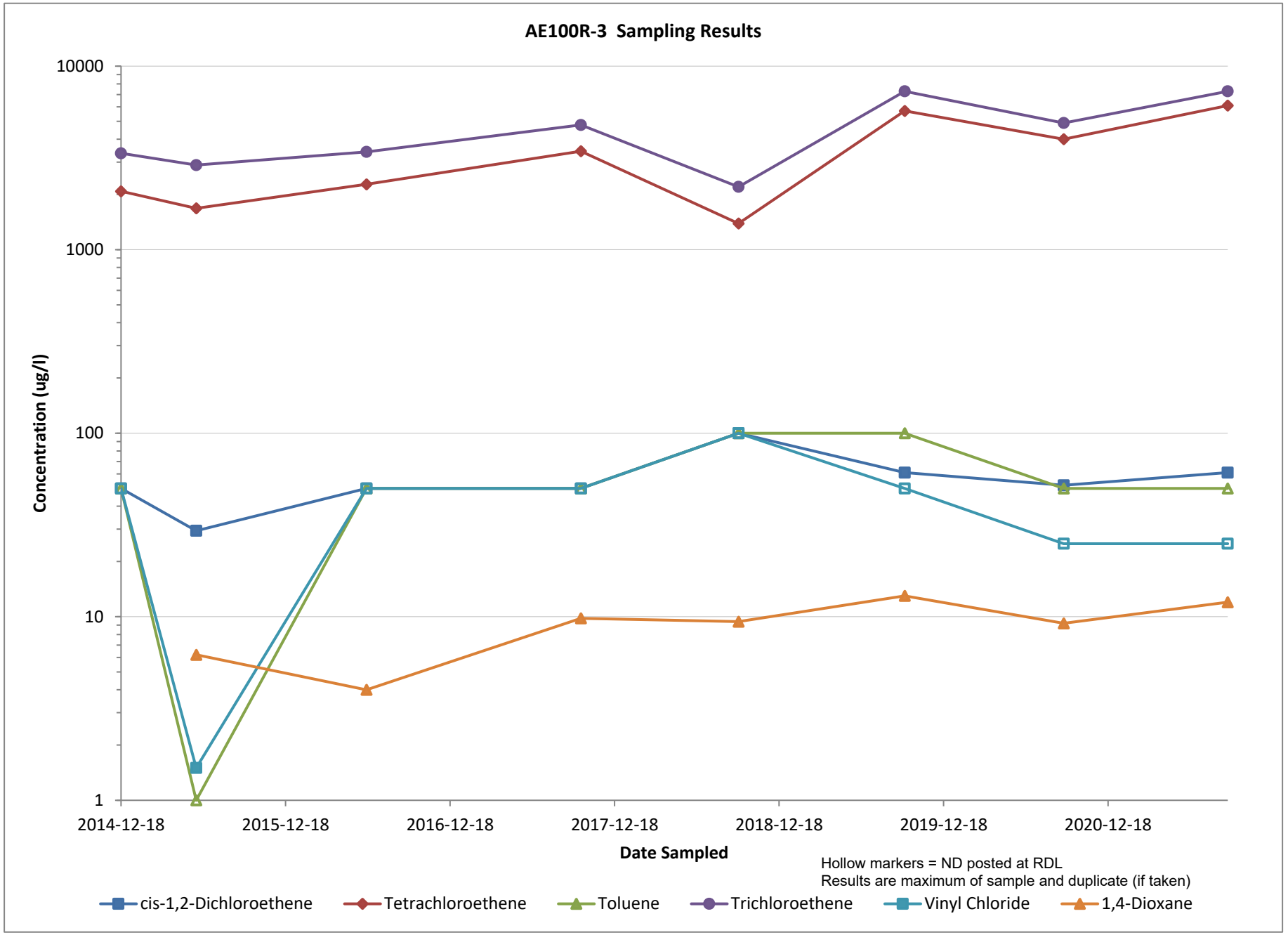

TRC-401R Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2005-9-22
2007-9-22
2009-9-22
2011-9-22
2013-9-22
2015-9-22
2017-9-22
2019-9-22
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

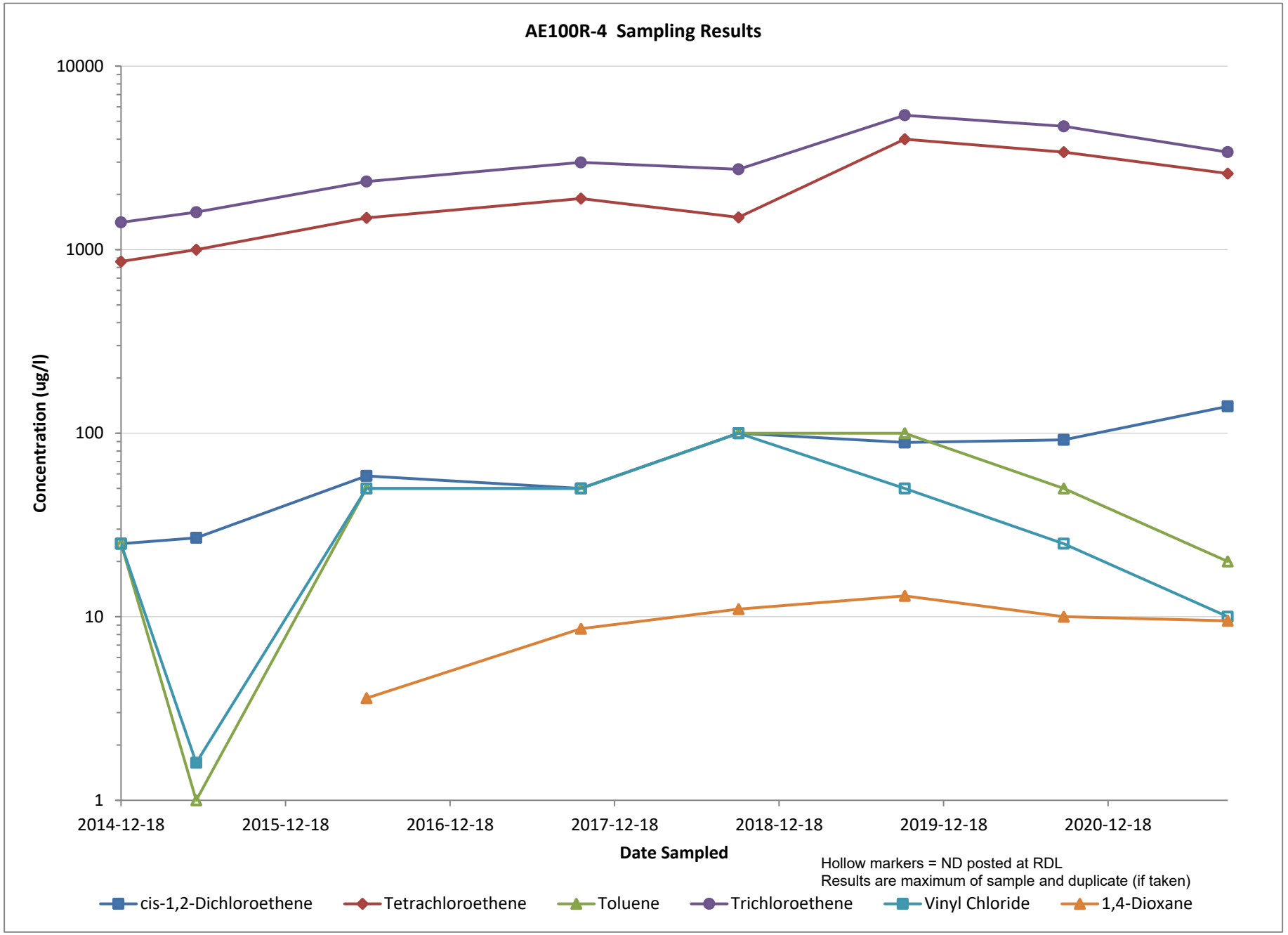

AE03 Sampling Results
1
0.1
Concentration (ug/l)
2012-9-24
2014-9-24
2016-9-24
2018-9-24
2020-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

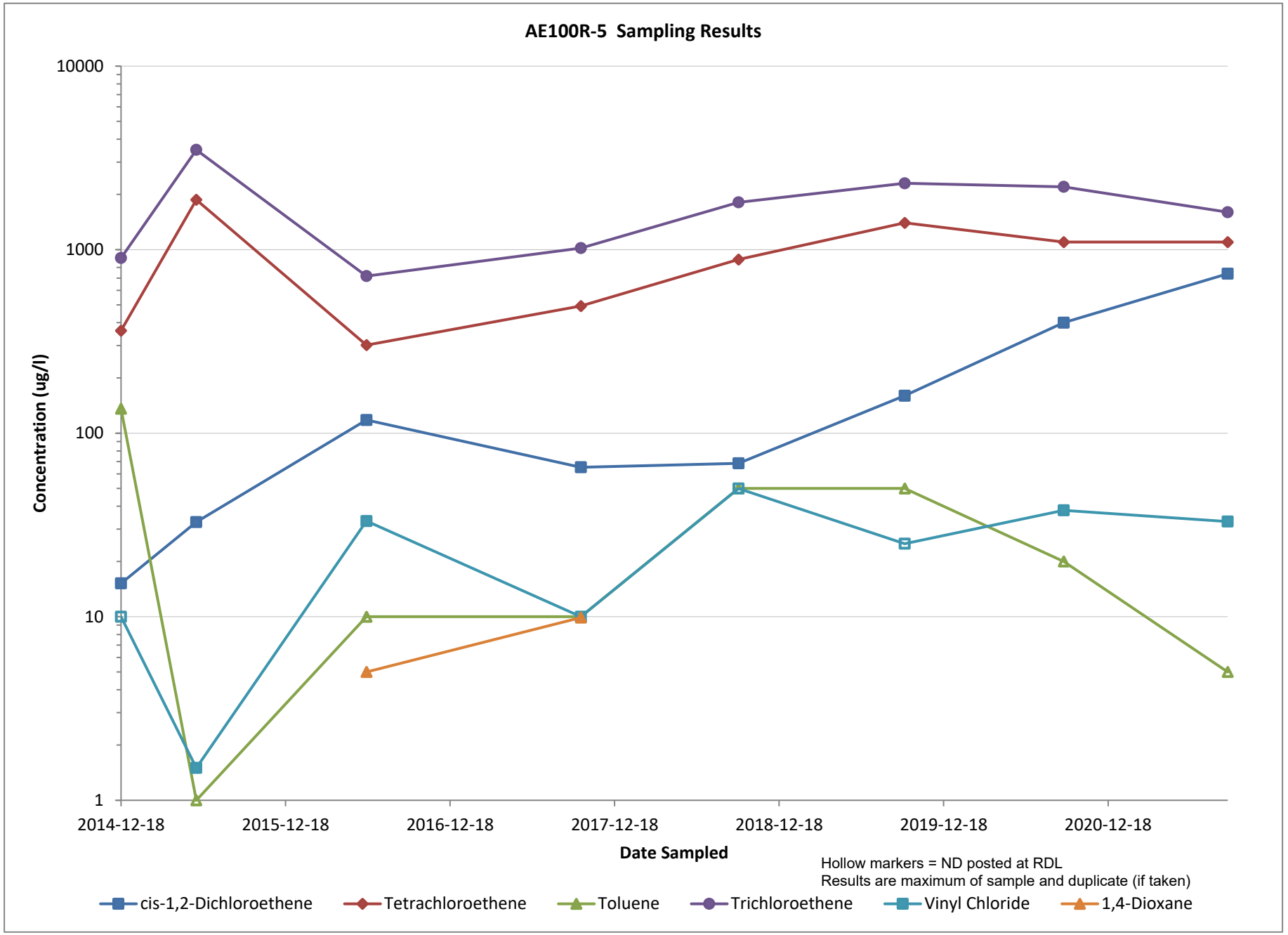

AE04 Sampling Results
10
1
0.1
Concentration (ug/l)
2012-9-24
2014-9-24
2016-9-24
2018-9-24
2020-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

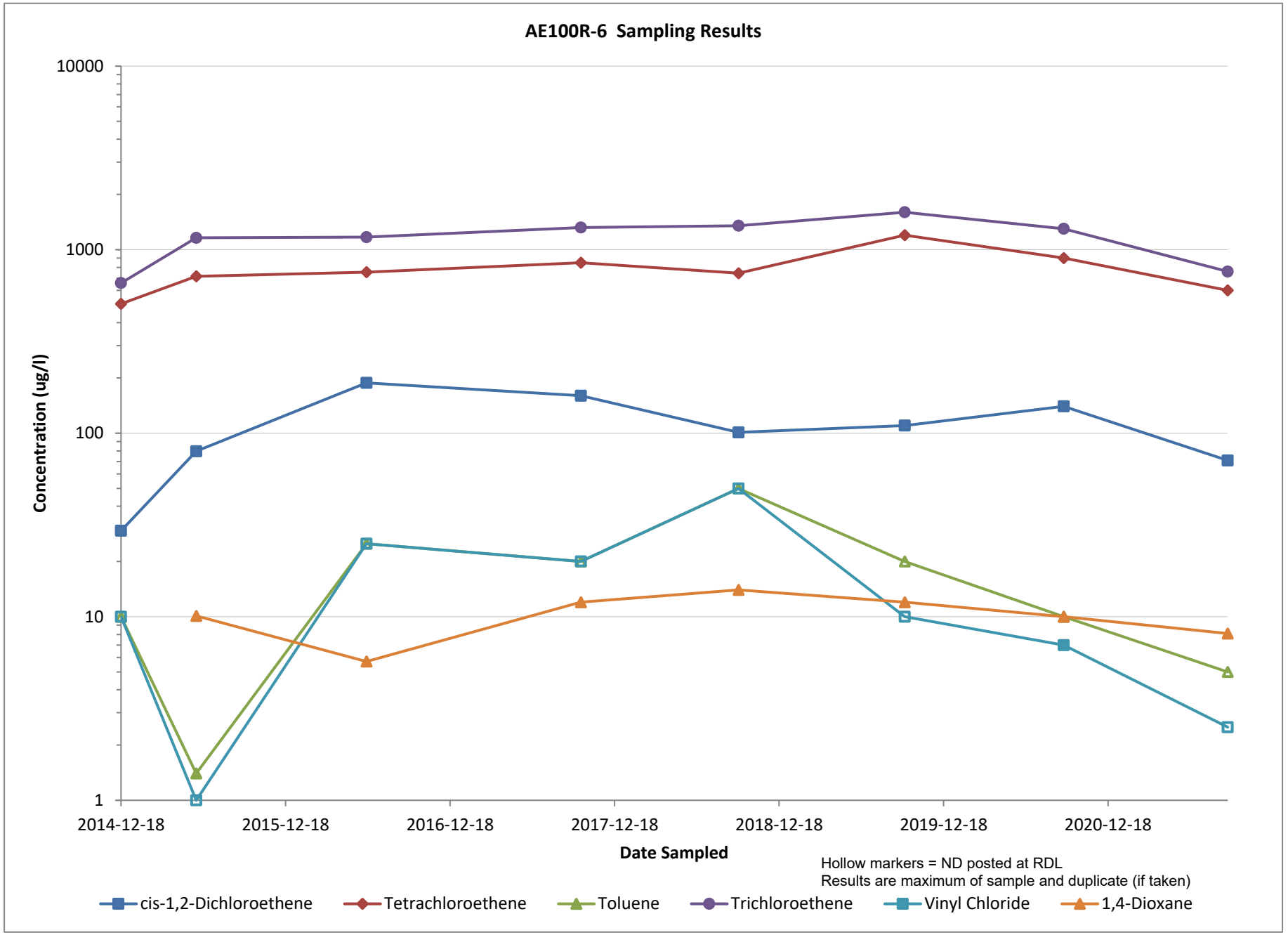

AE100R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

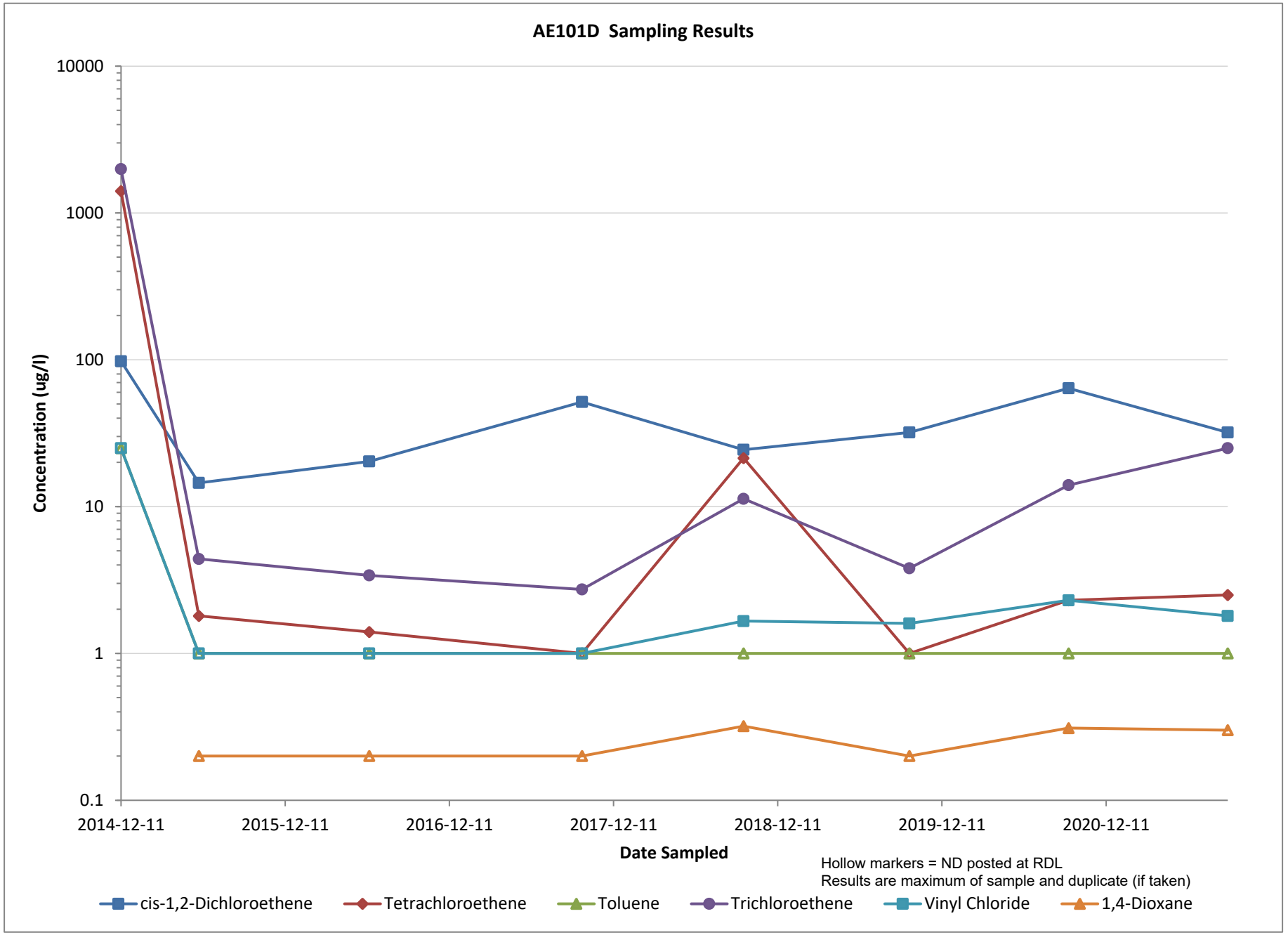

AE100R-2 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

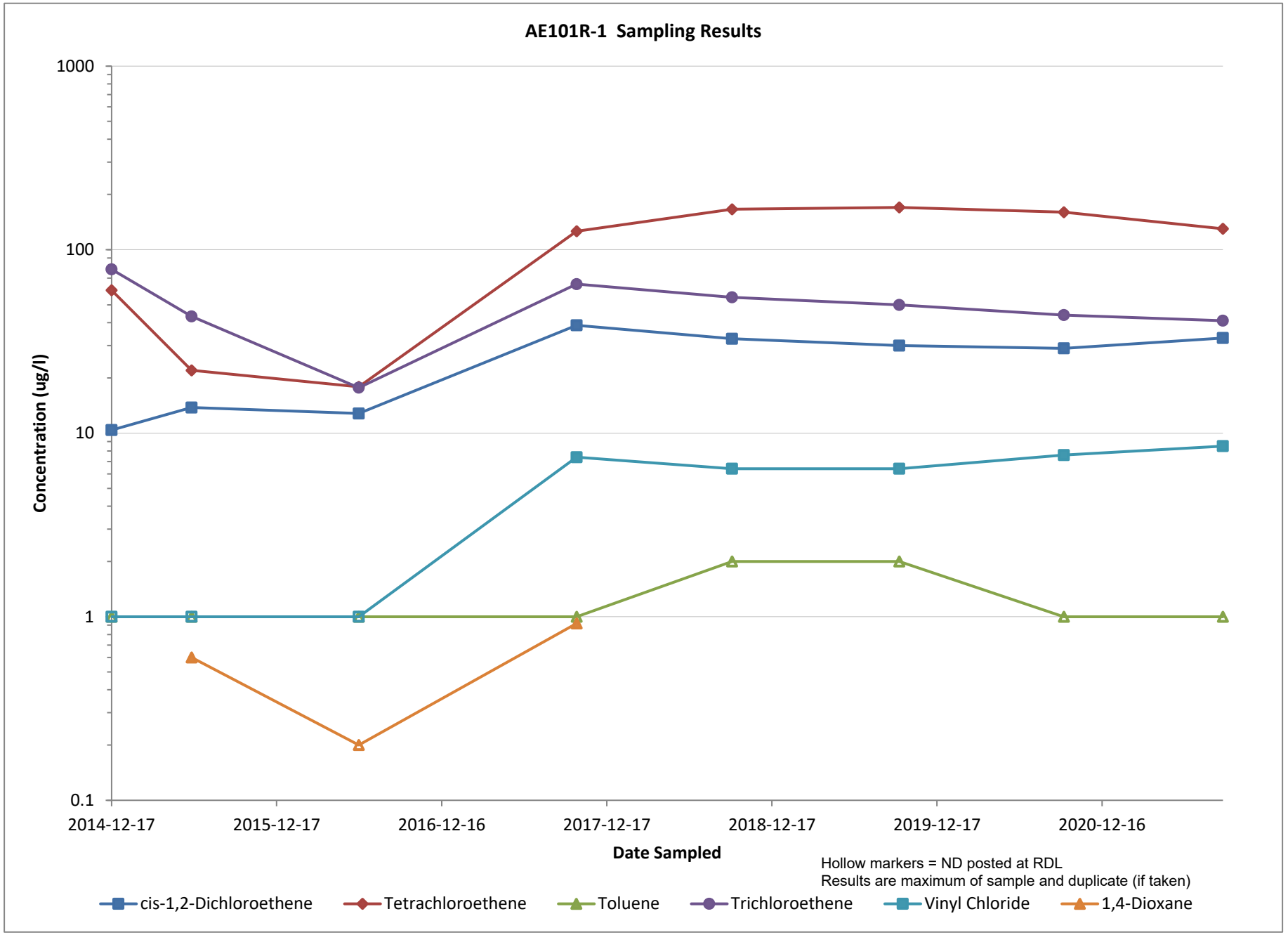

AE100R-3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

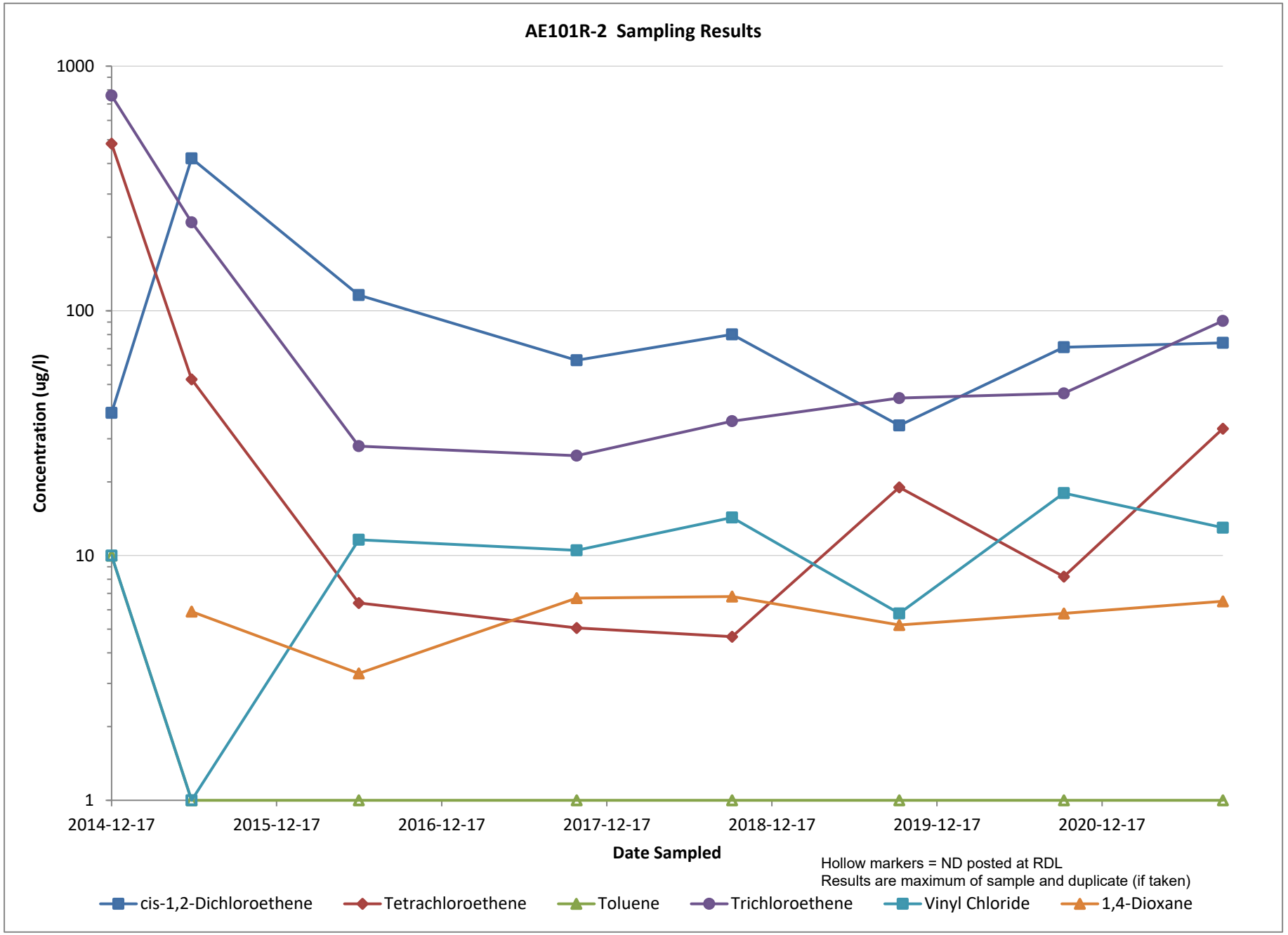

AE100R-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

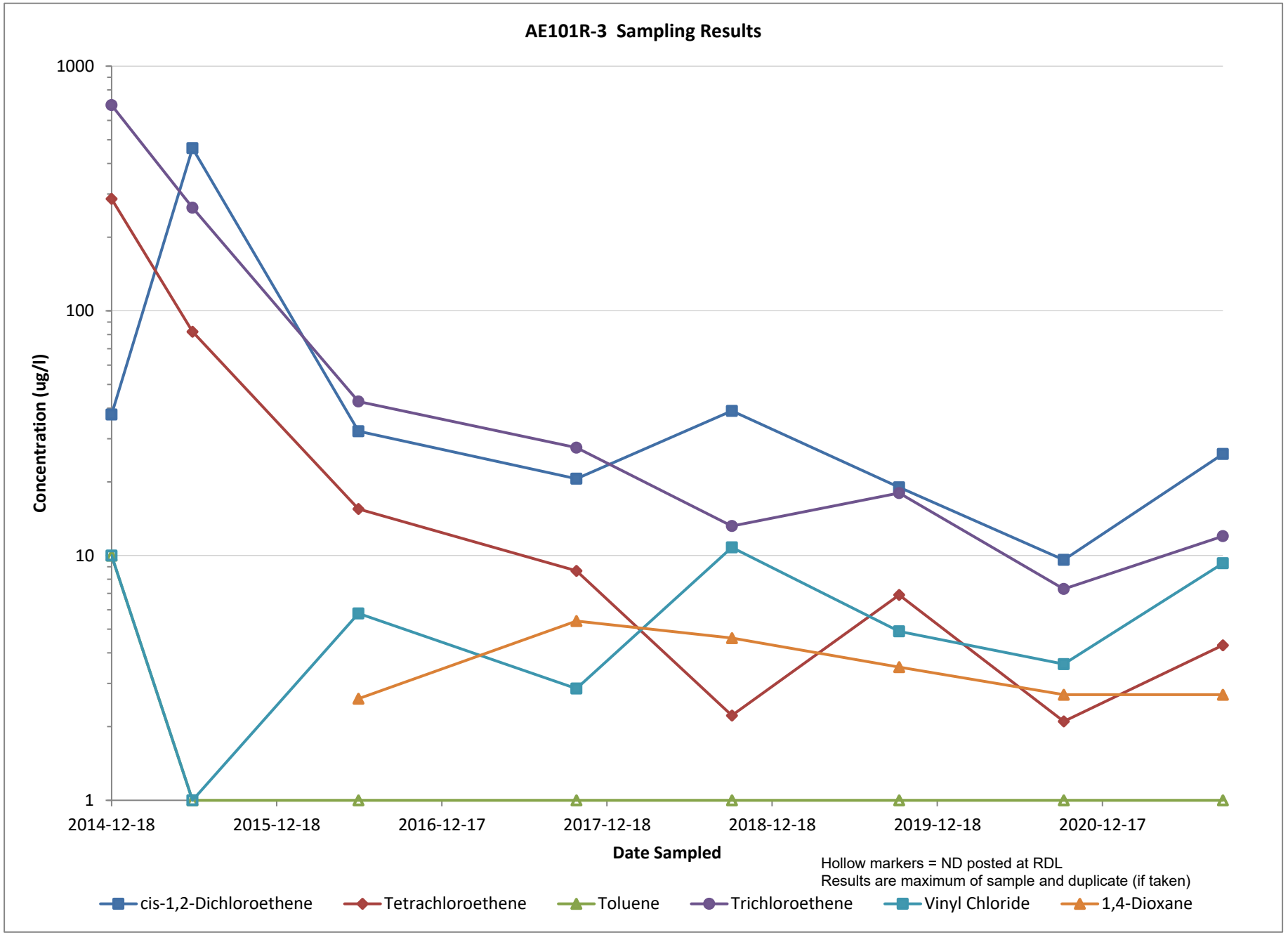

AE100R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

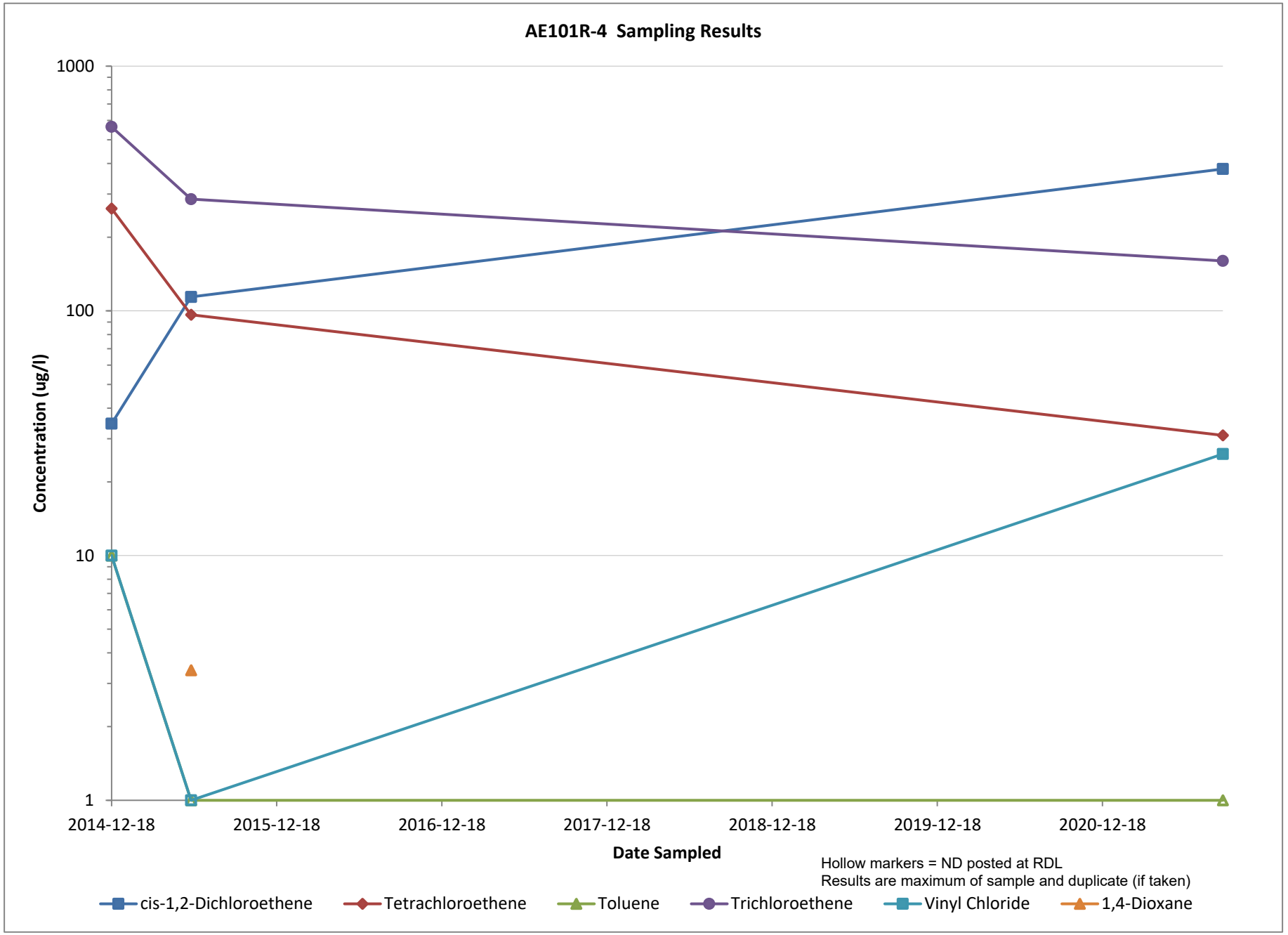

AE100R-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

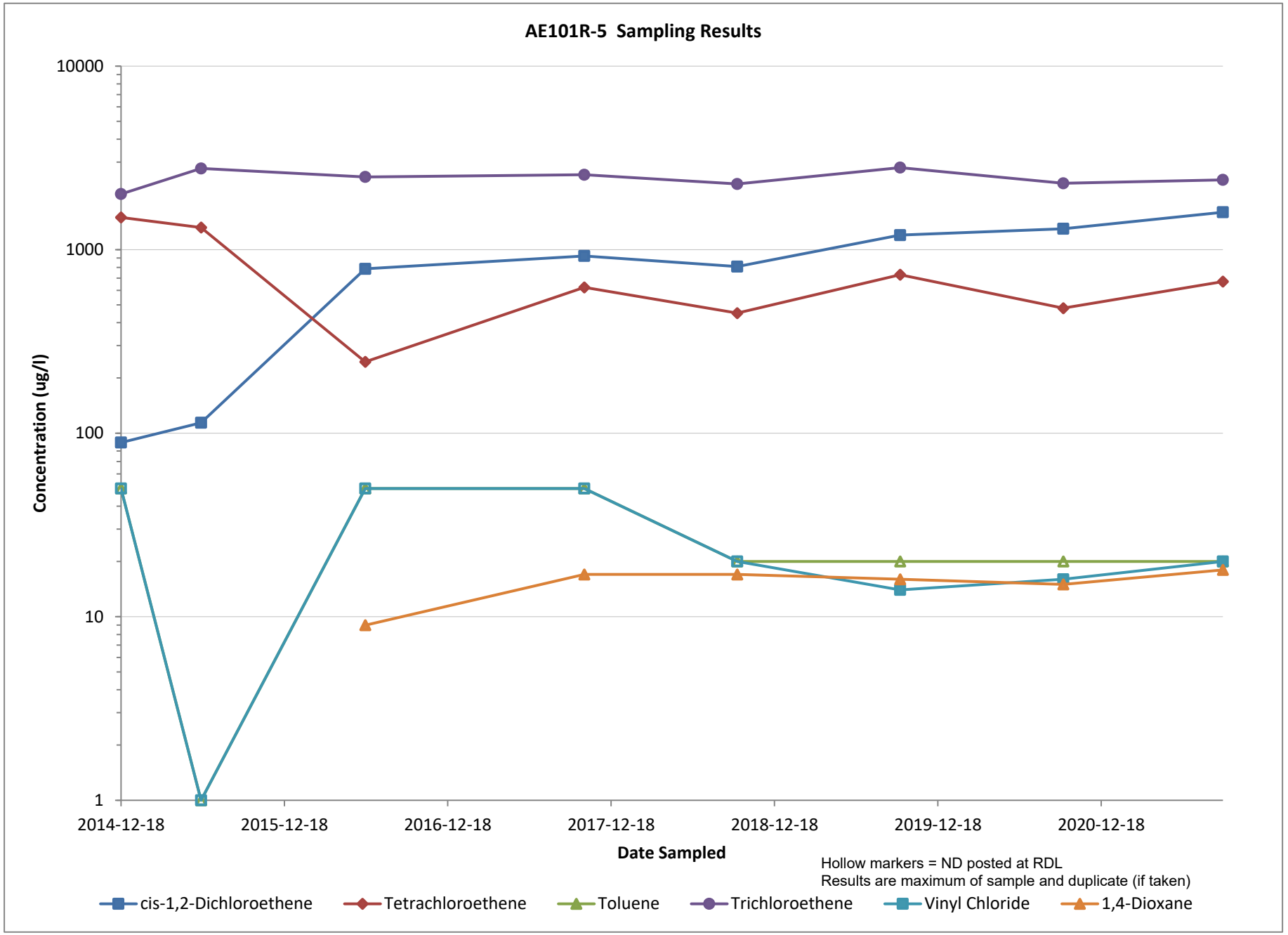

AE101D Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

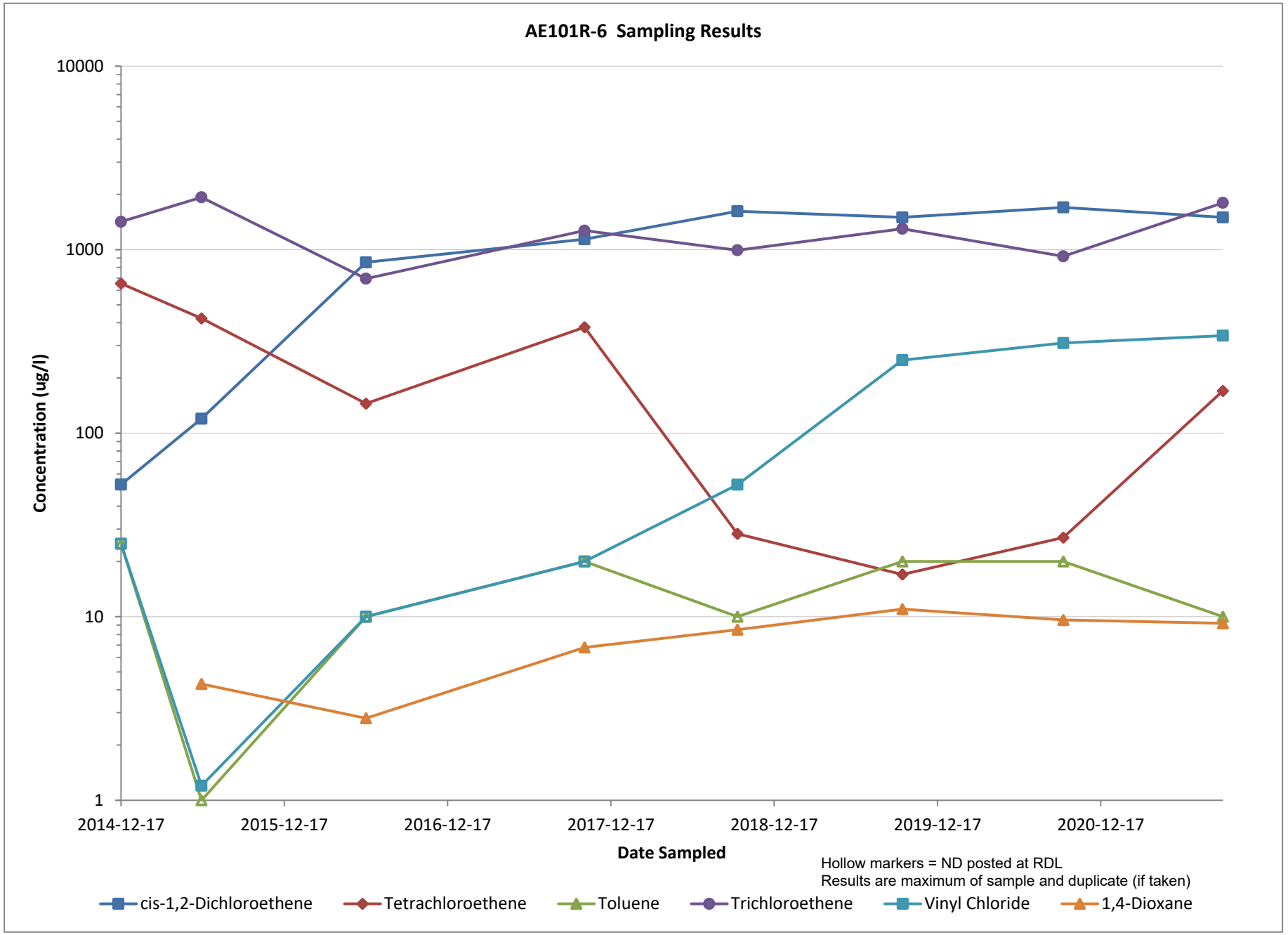

AE101R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-16
2017-12-17
2018-12-17
2019-12-17
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

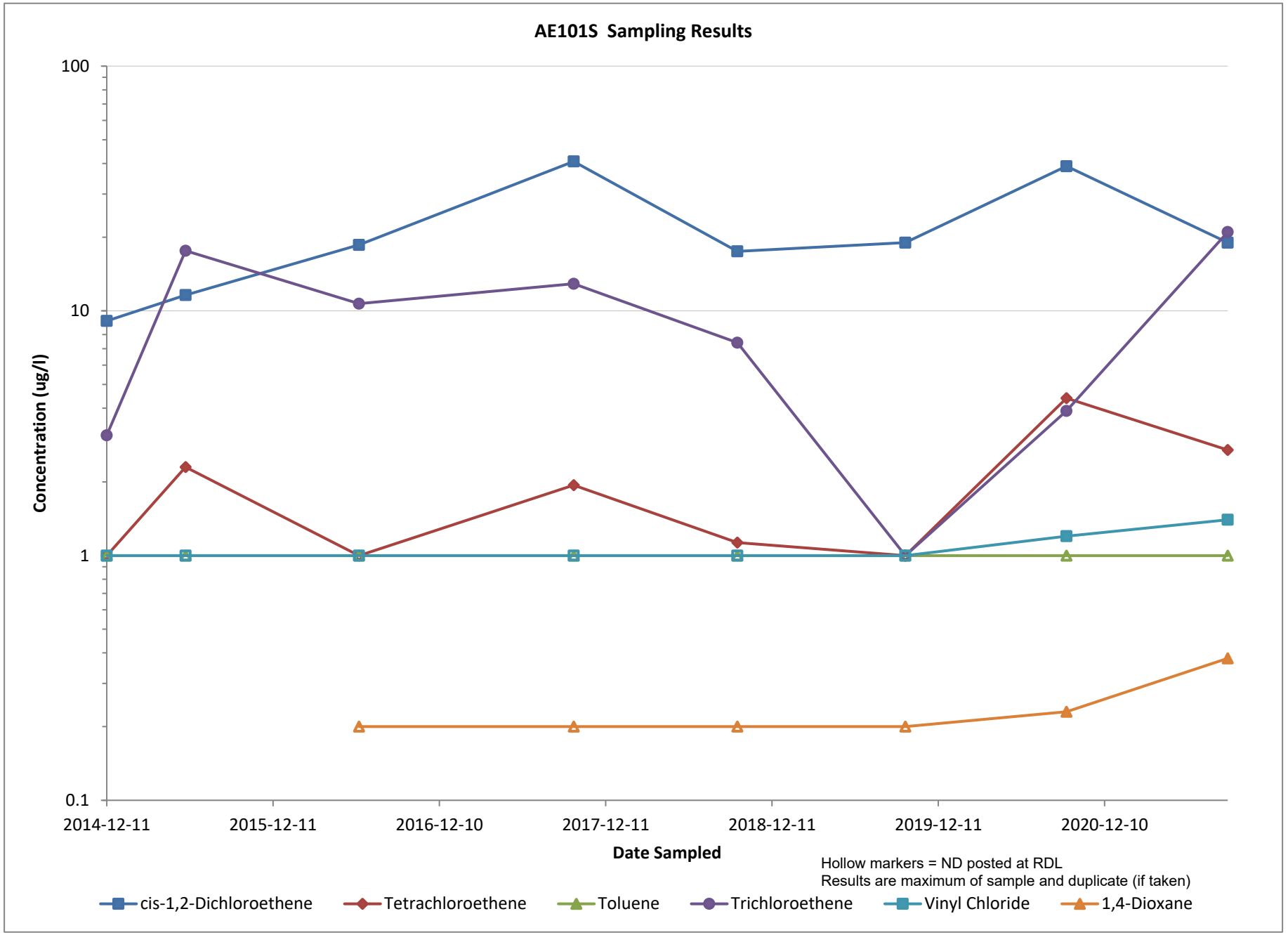

AE101R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

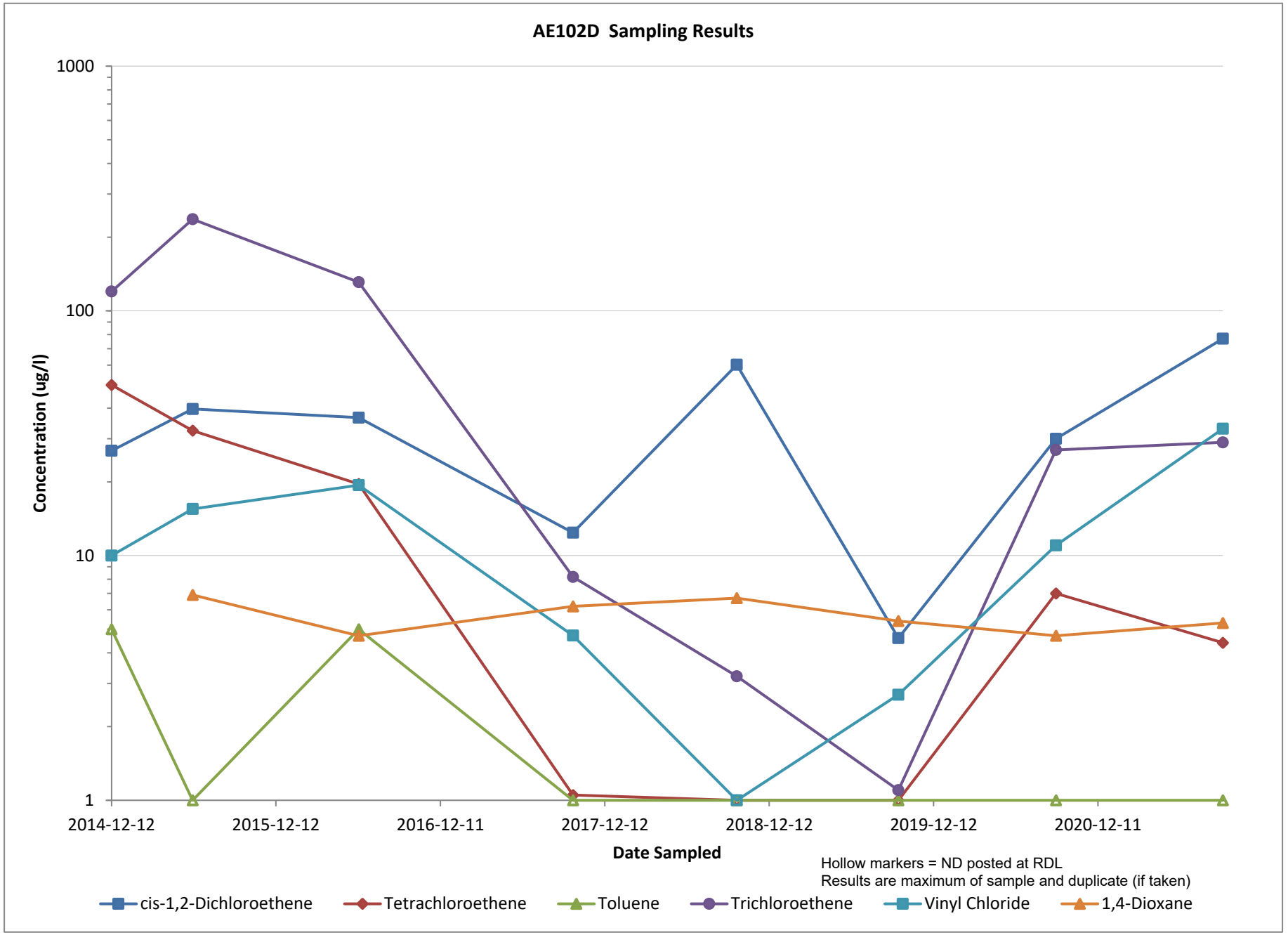

AE101R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-17
2017-12-18
2018-12-18
2019-12-18
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

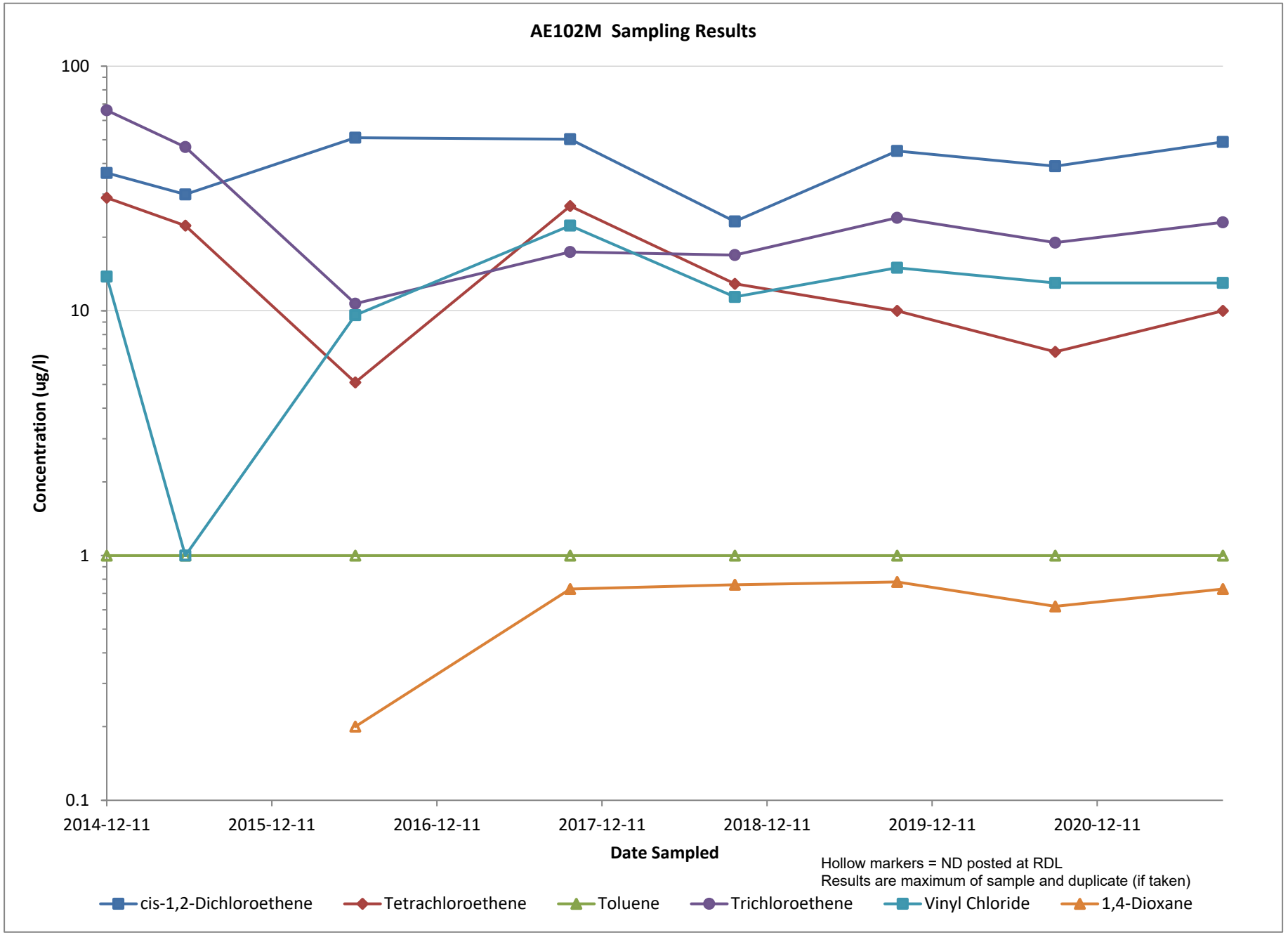

AE101R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

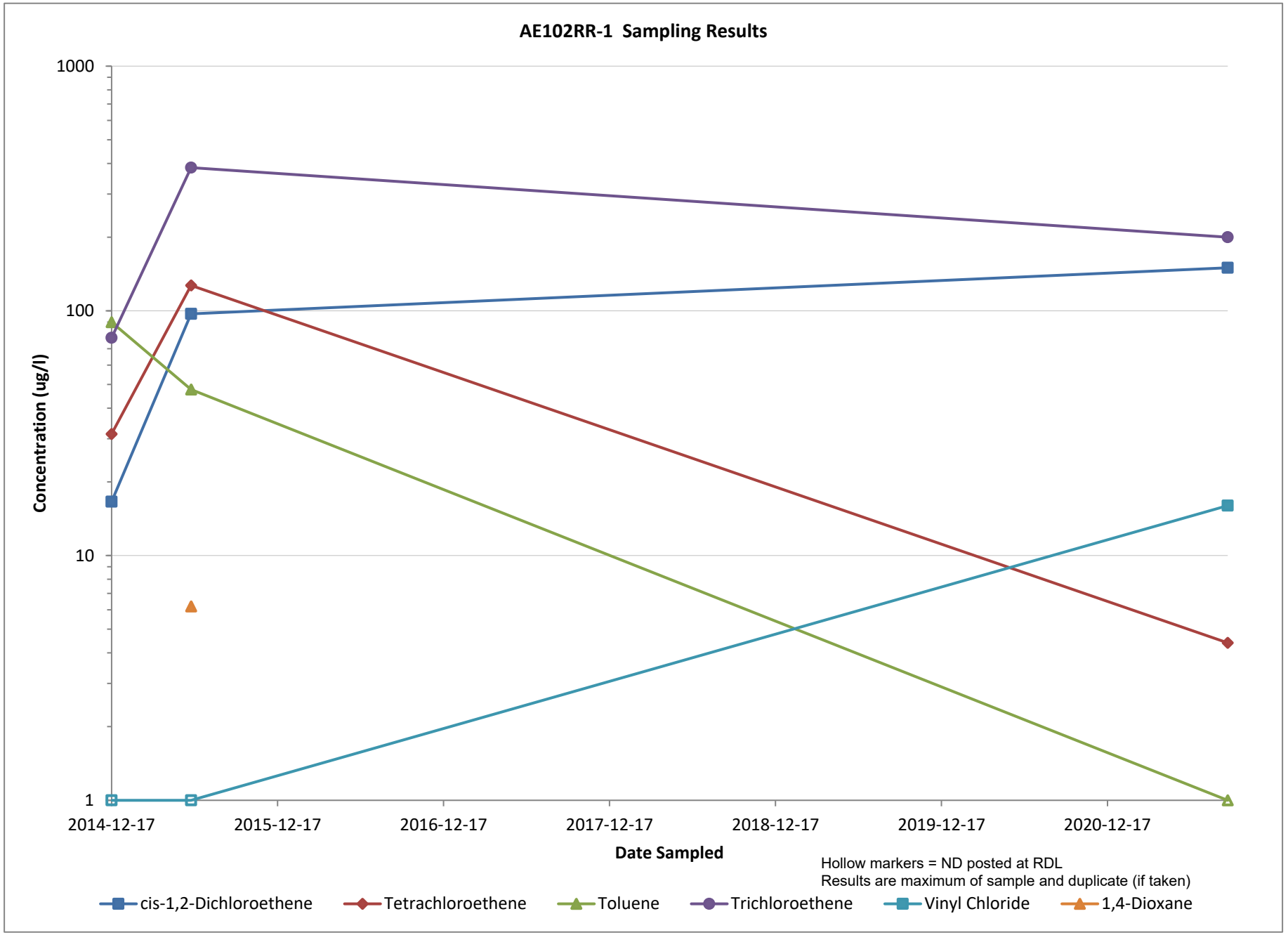

AE101R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

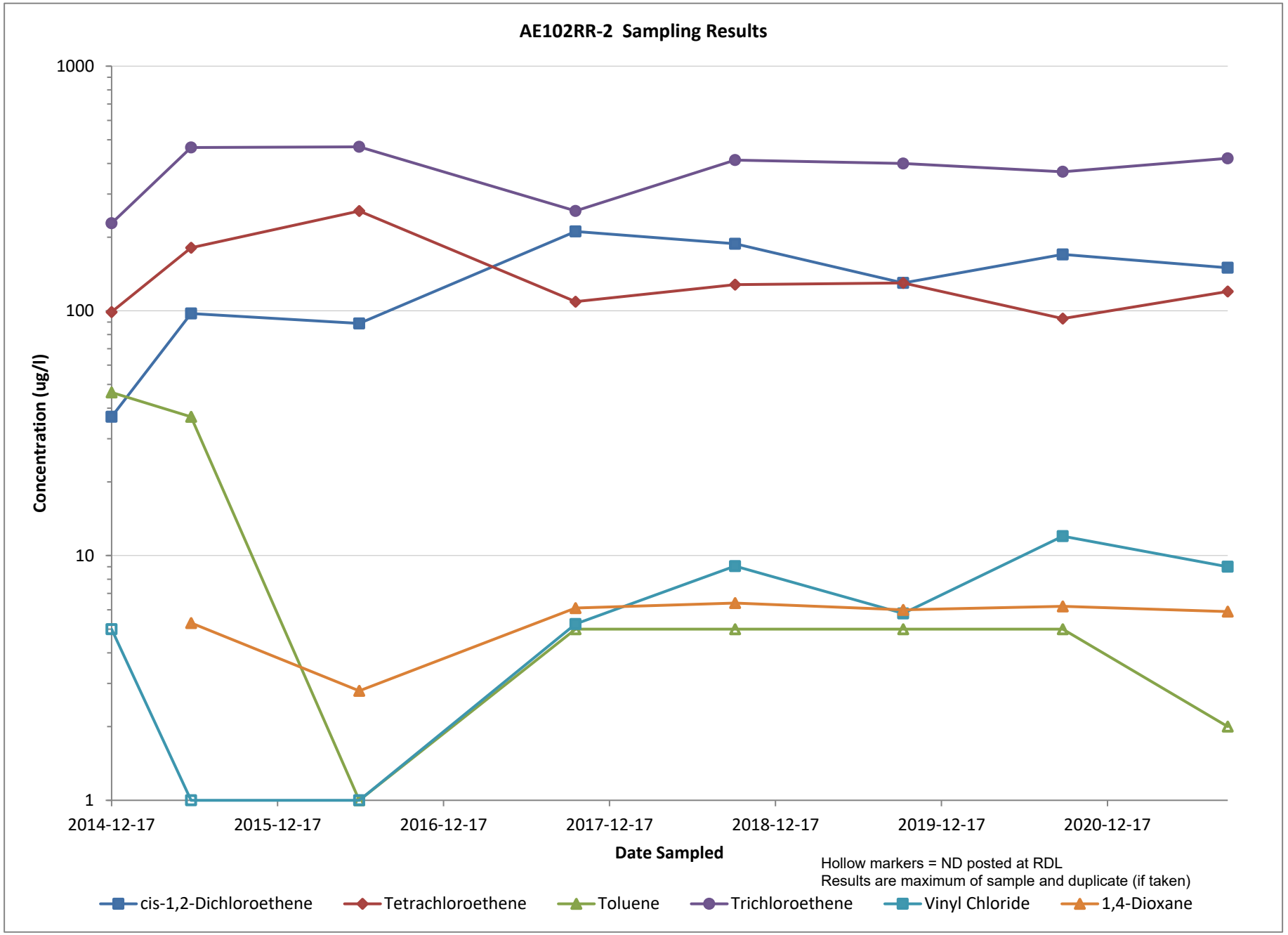

AE101R-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

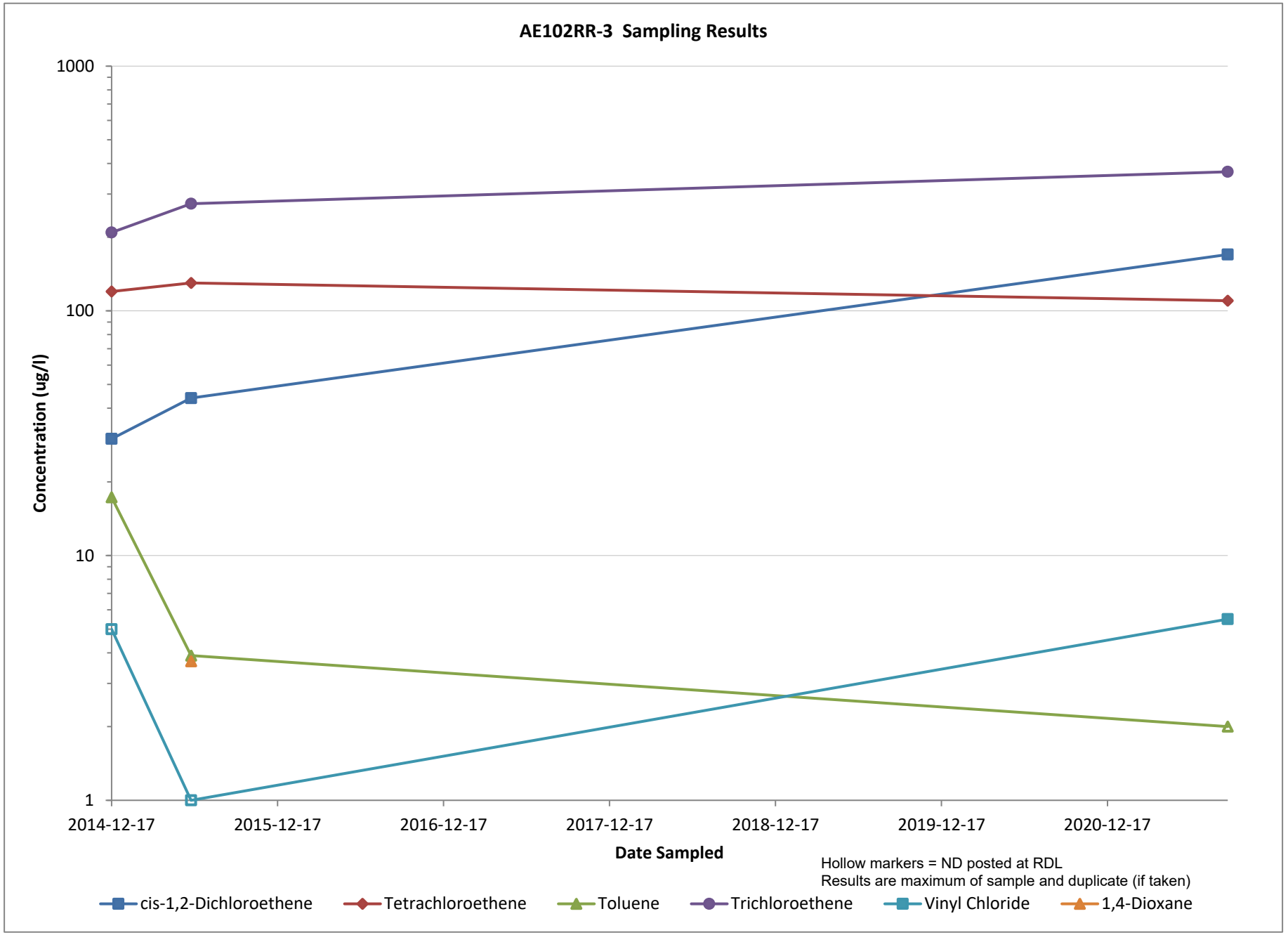

AE101S Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-10
2017-12-11
2018-12-11
2019-12-11
2020-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

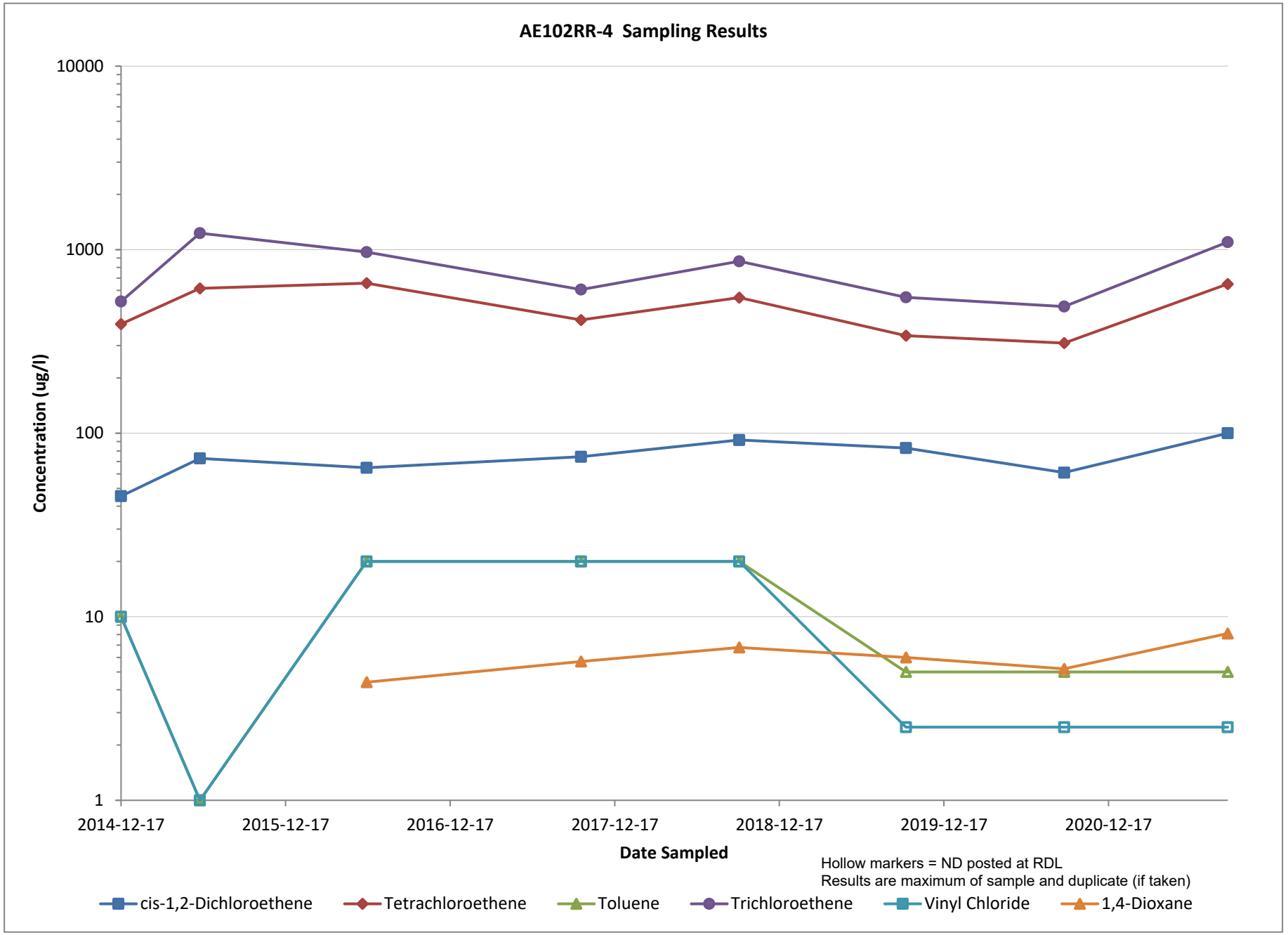

AE102D Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

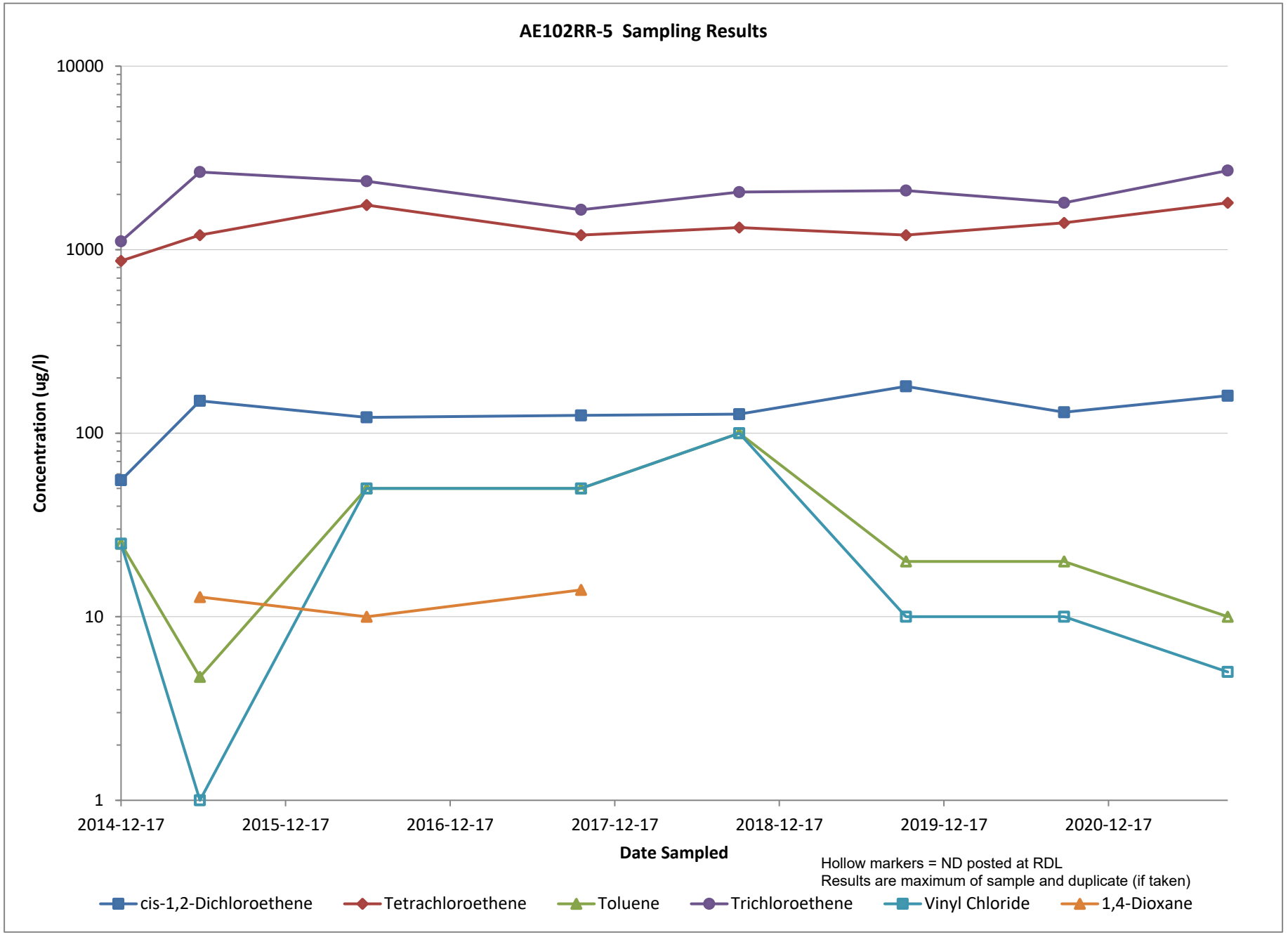

AE102M Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

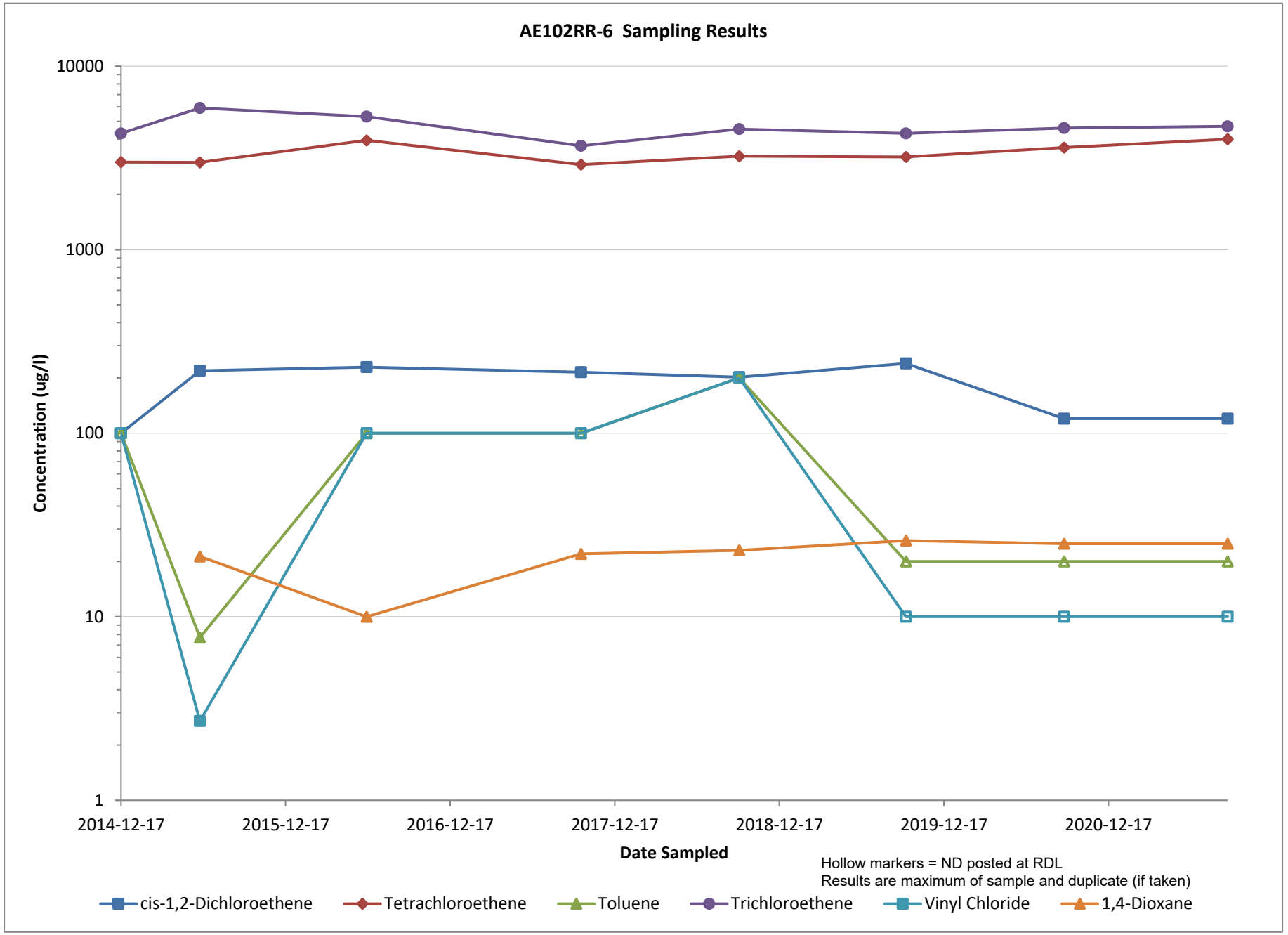

AE102RR-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

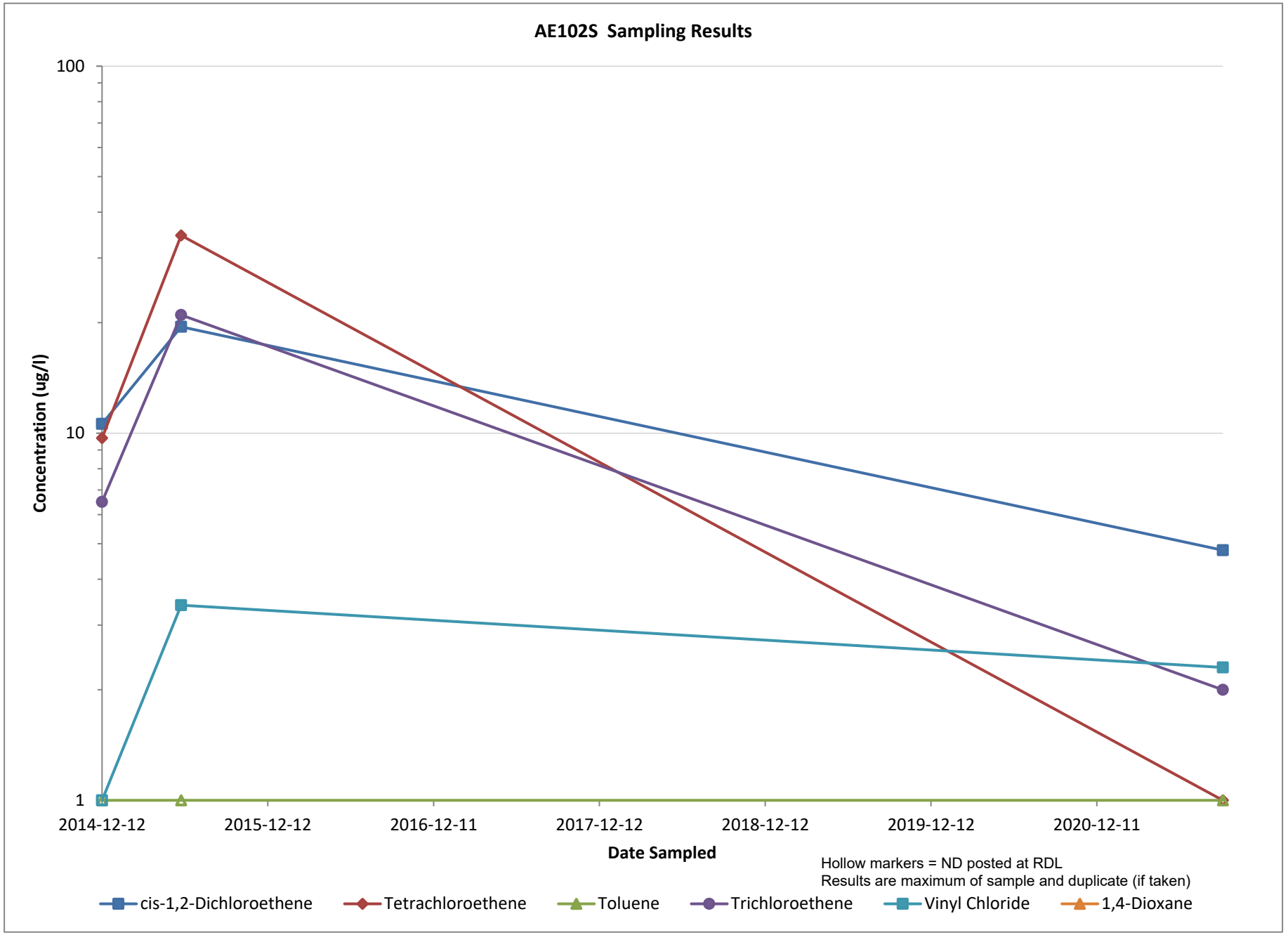

AE102RR-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

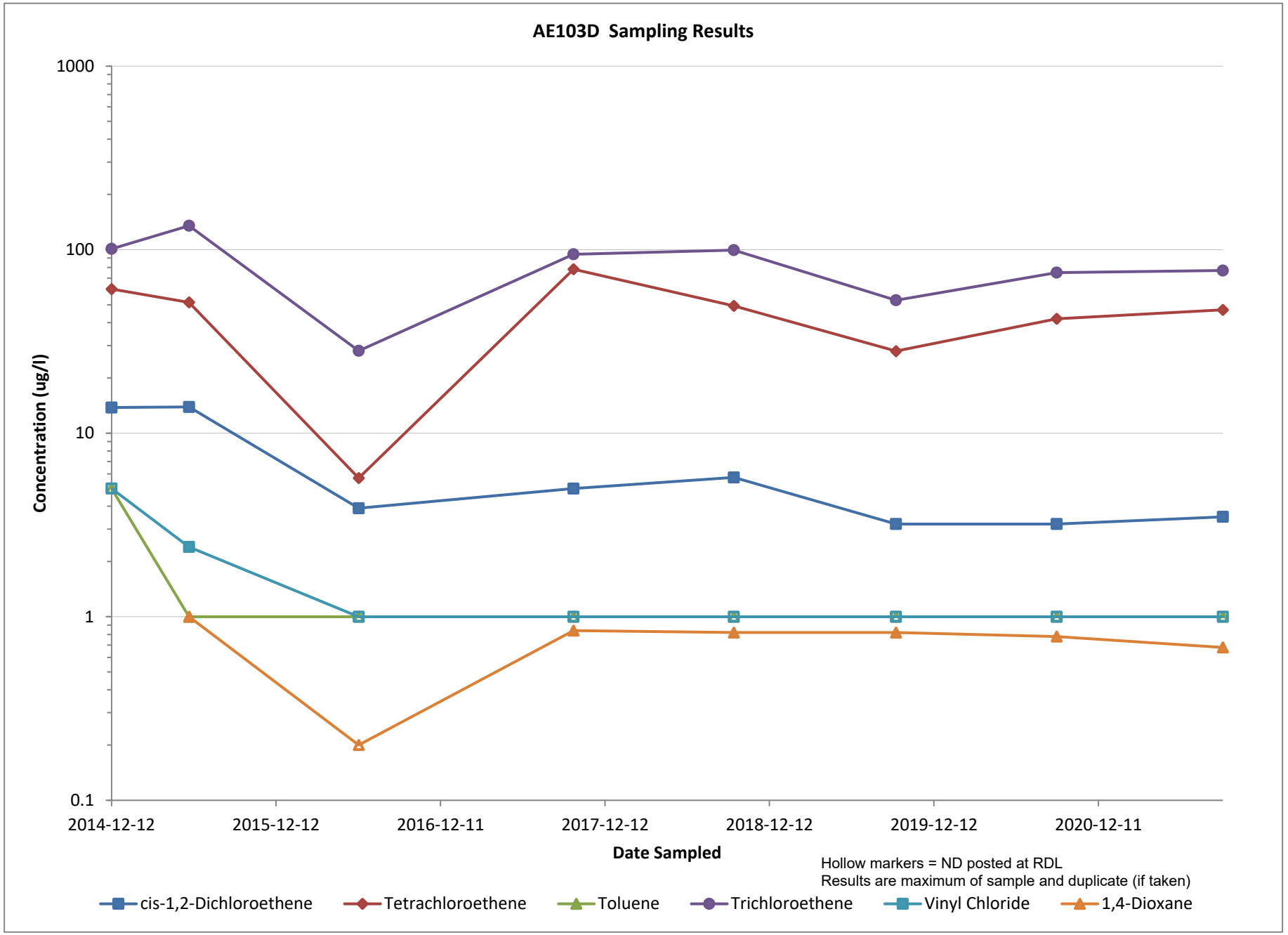

AE102RR-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

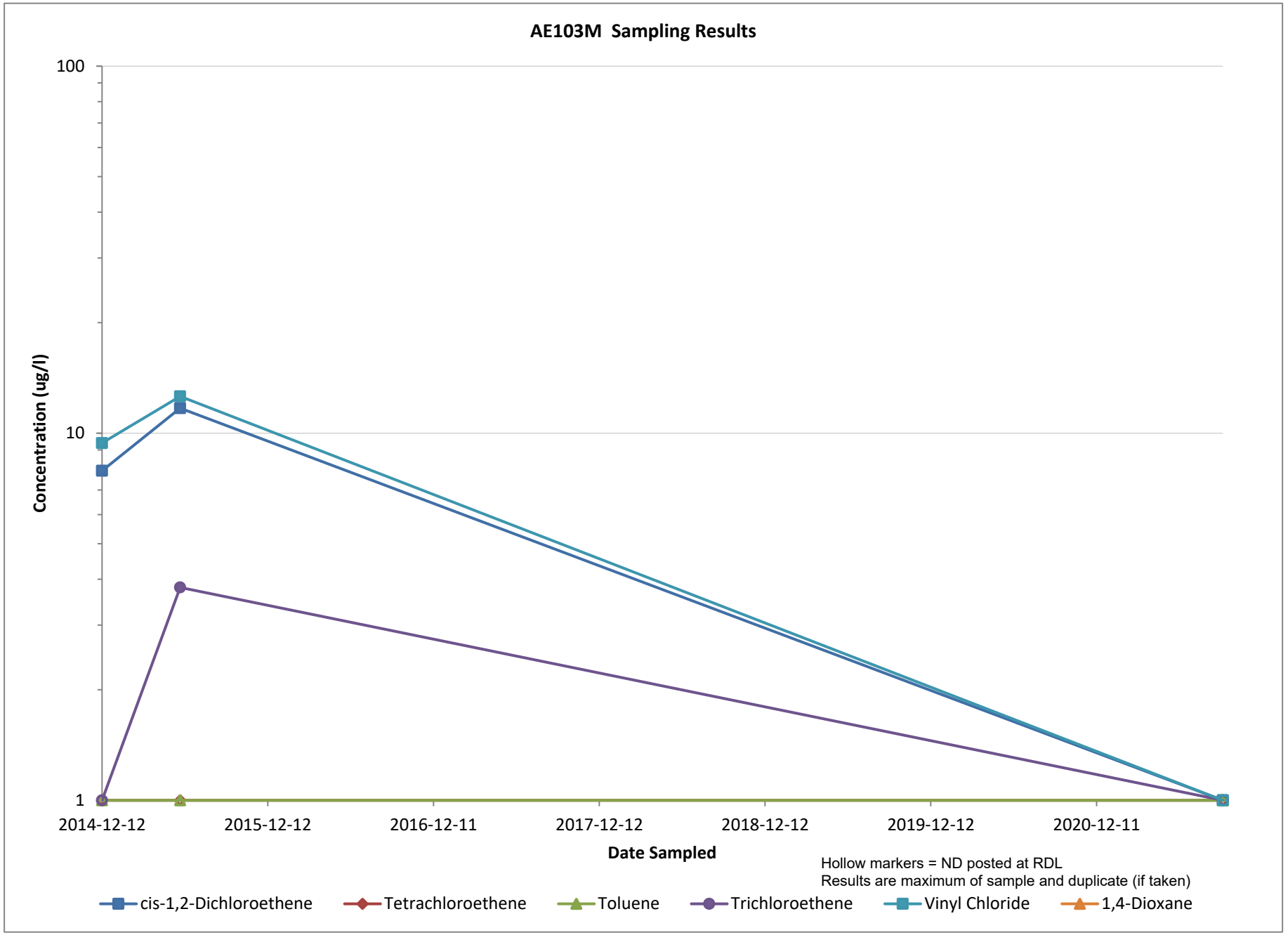

AE102RR-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

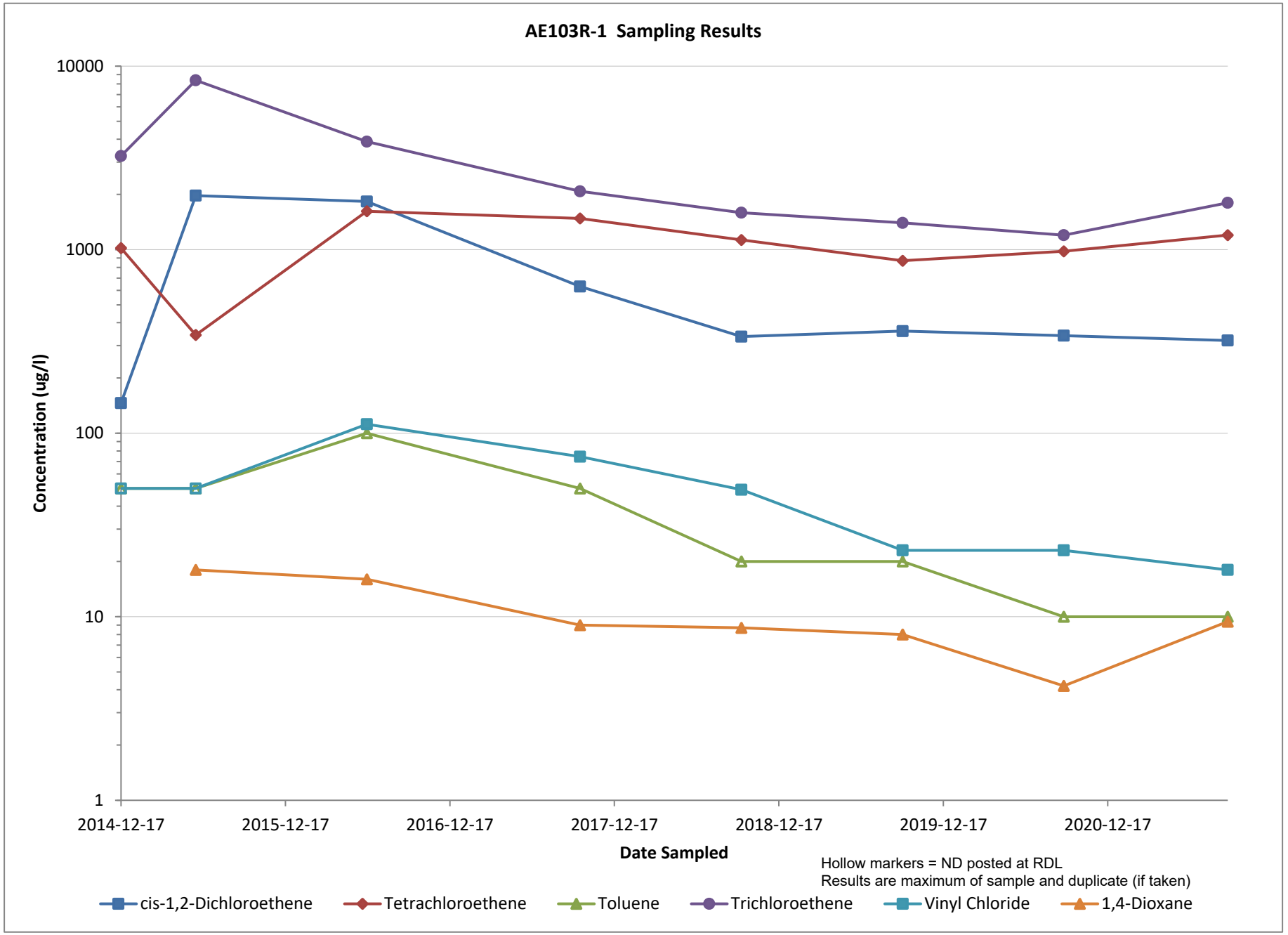

AE102RR-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

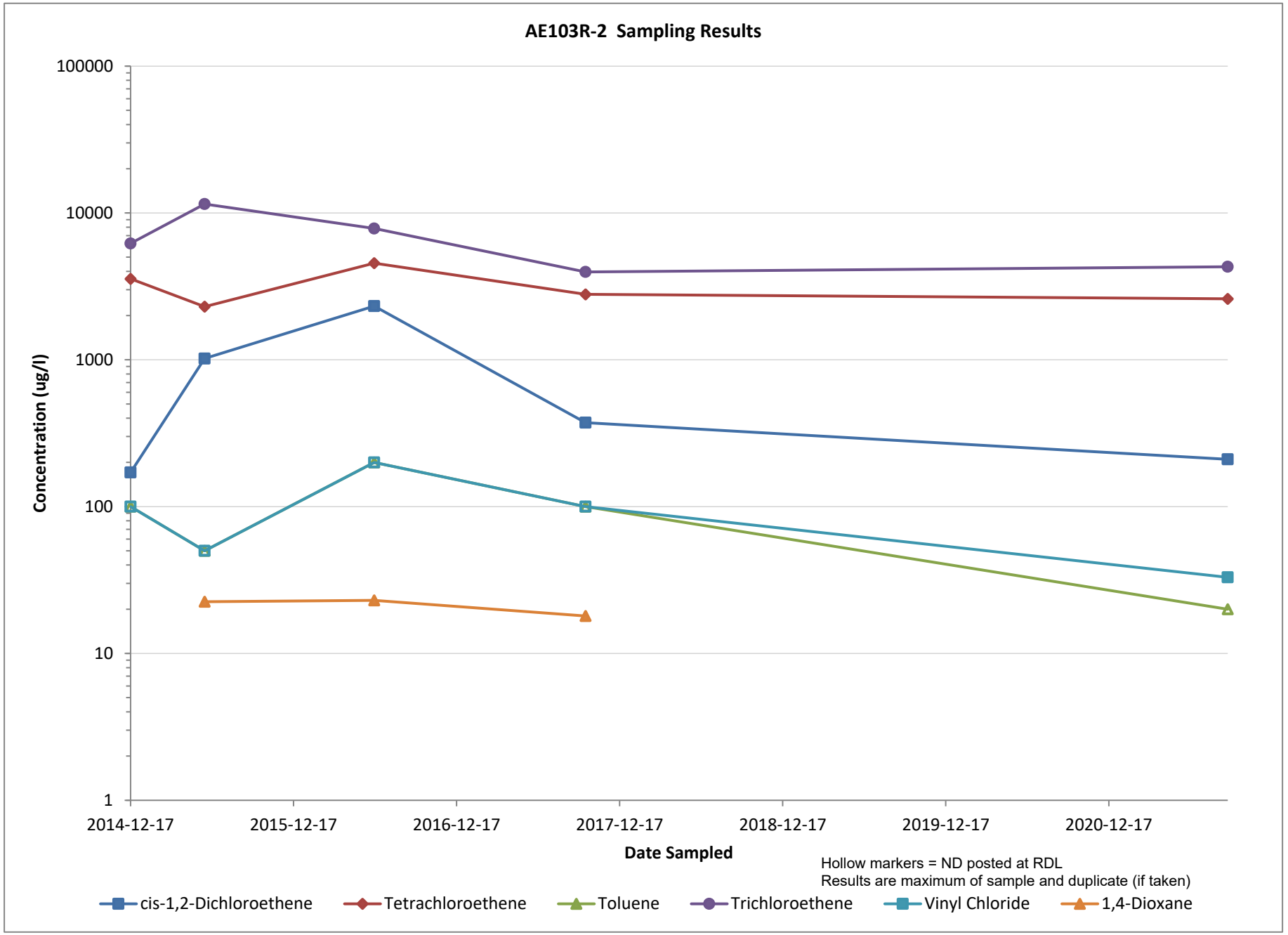

AE102RR-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

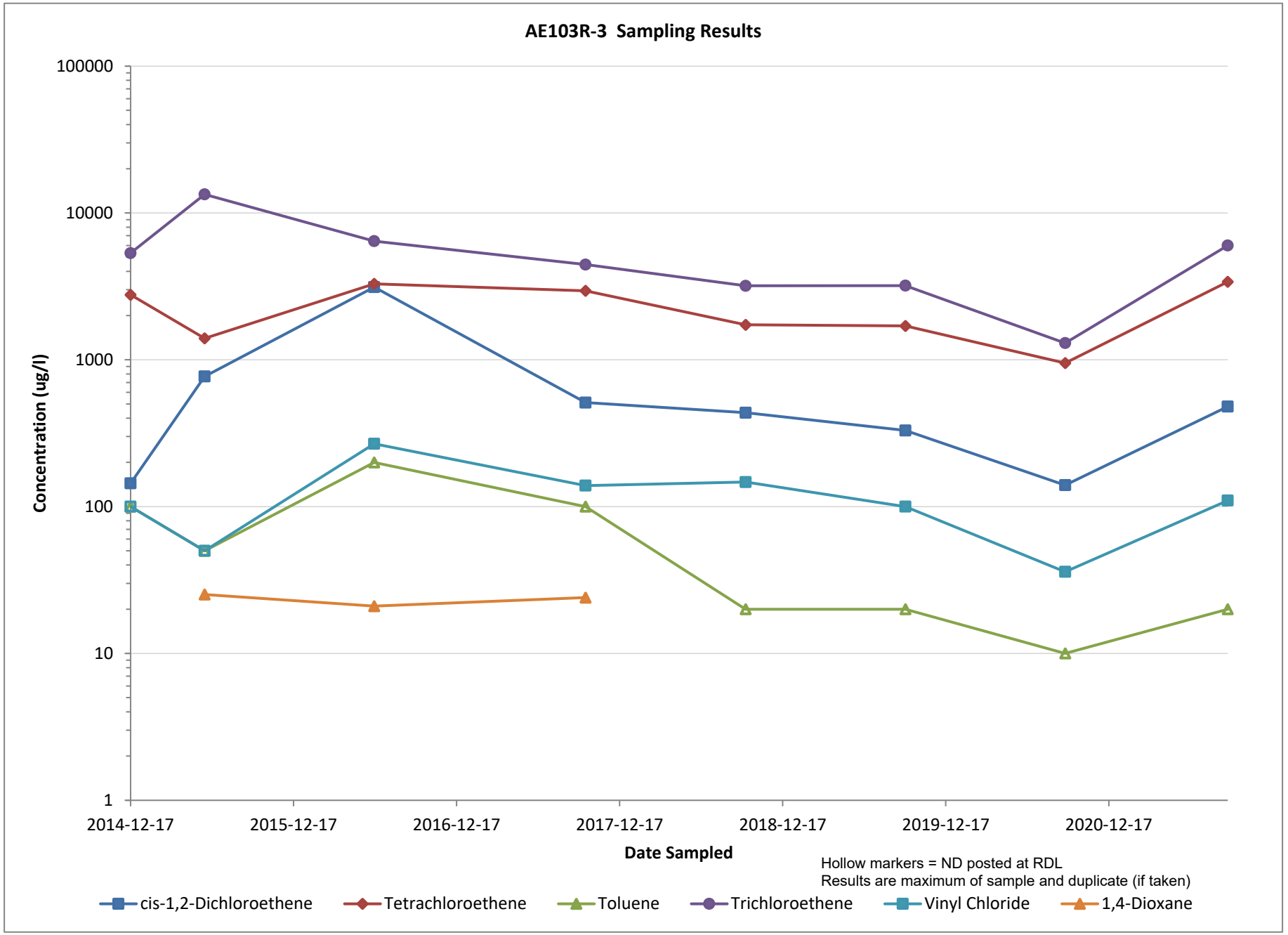

AE102S Sampling Results
100
10
1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

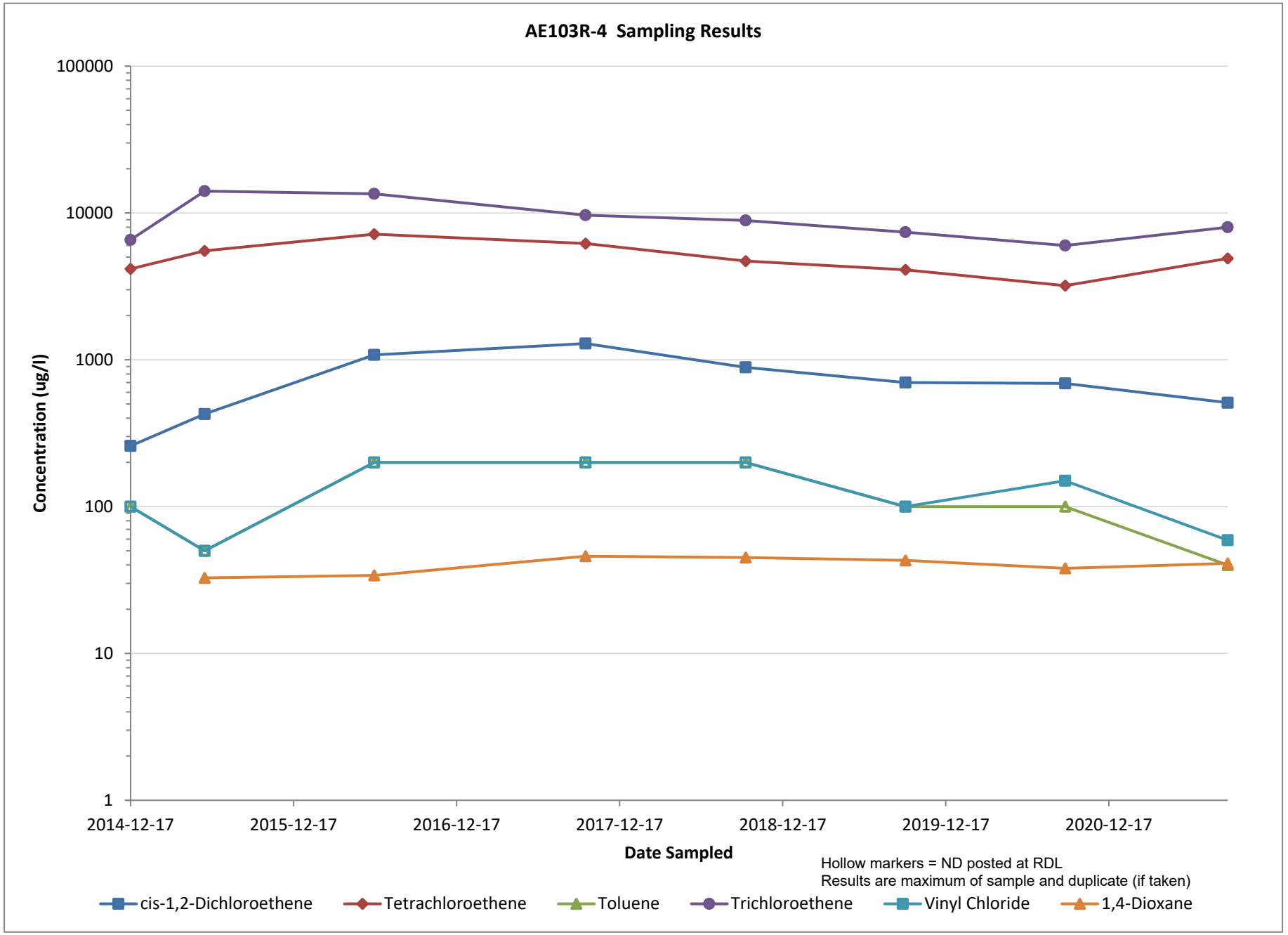

AE103D Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

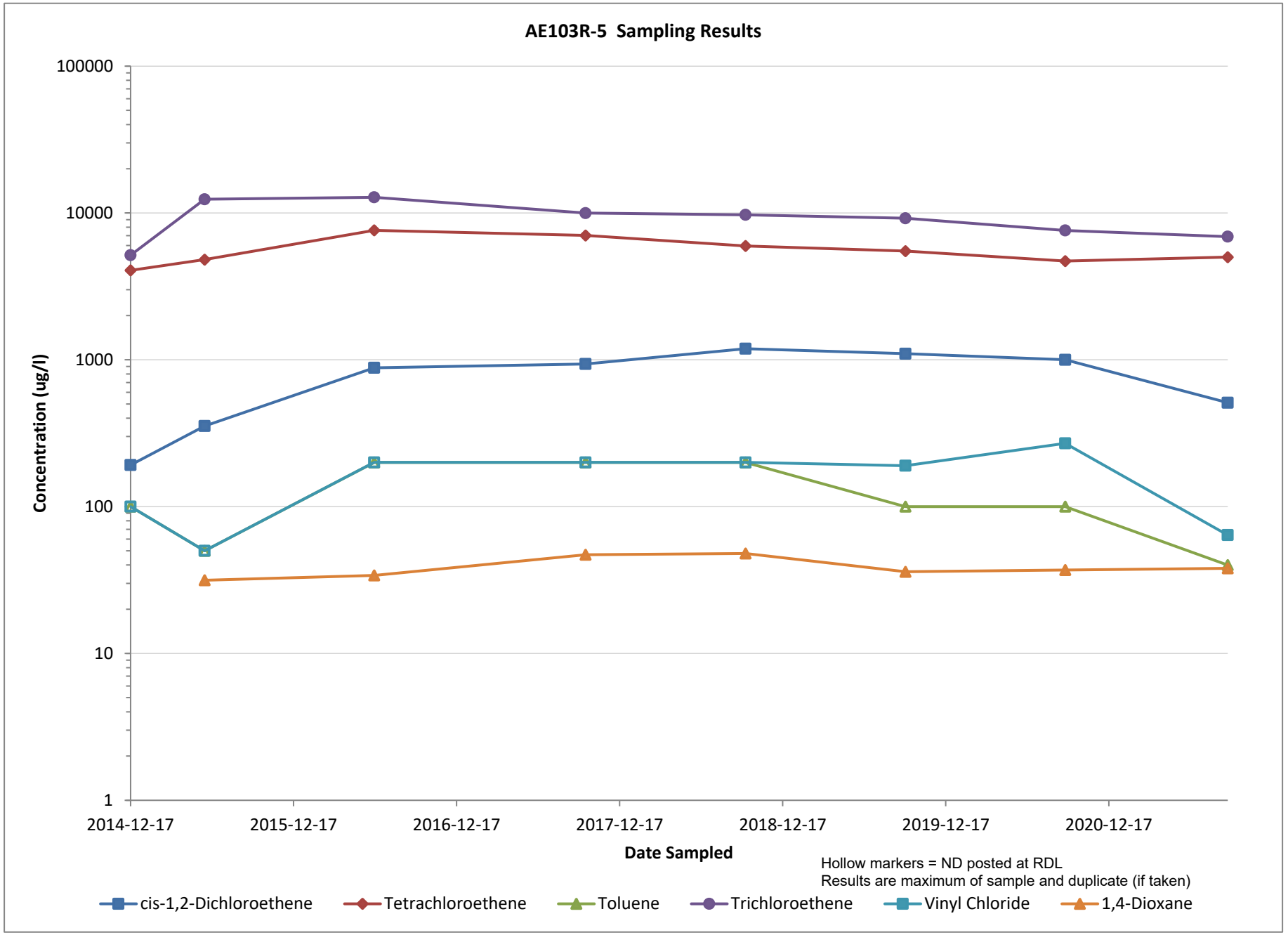

AE103M Sampling Results
100
10
1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

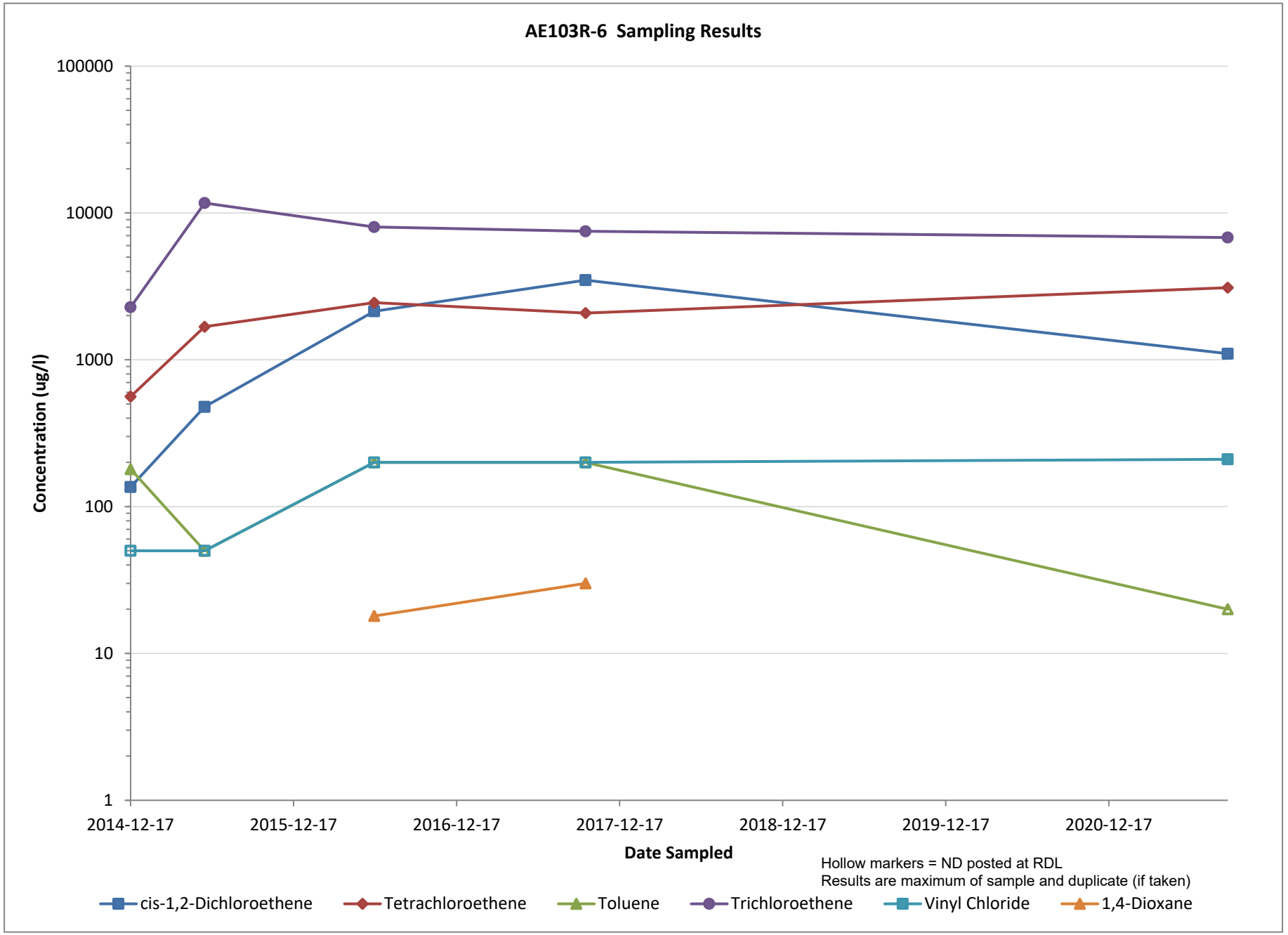

AE103R-1 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

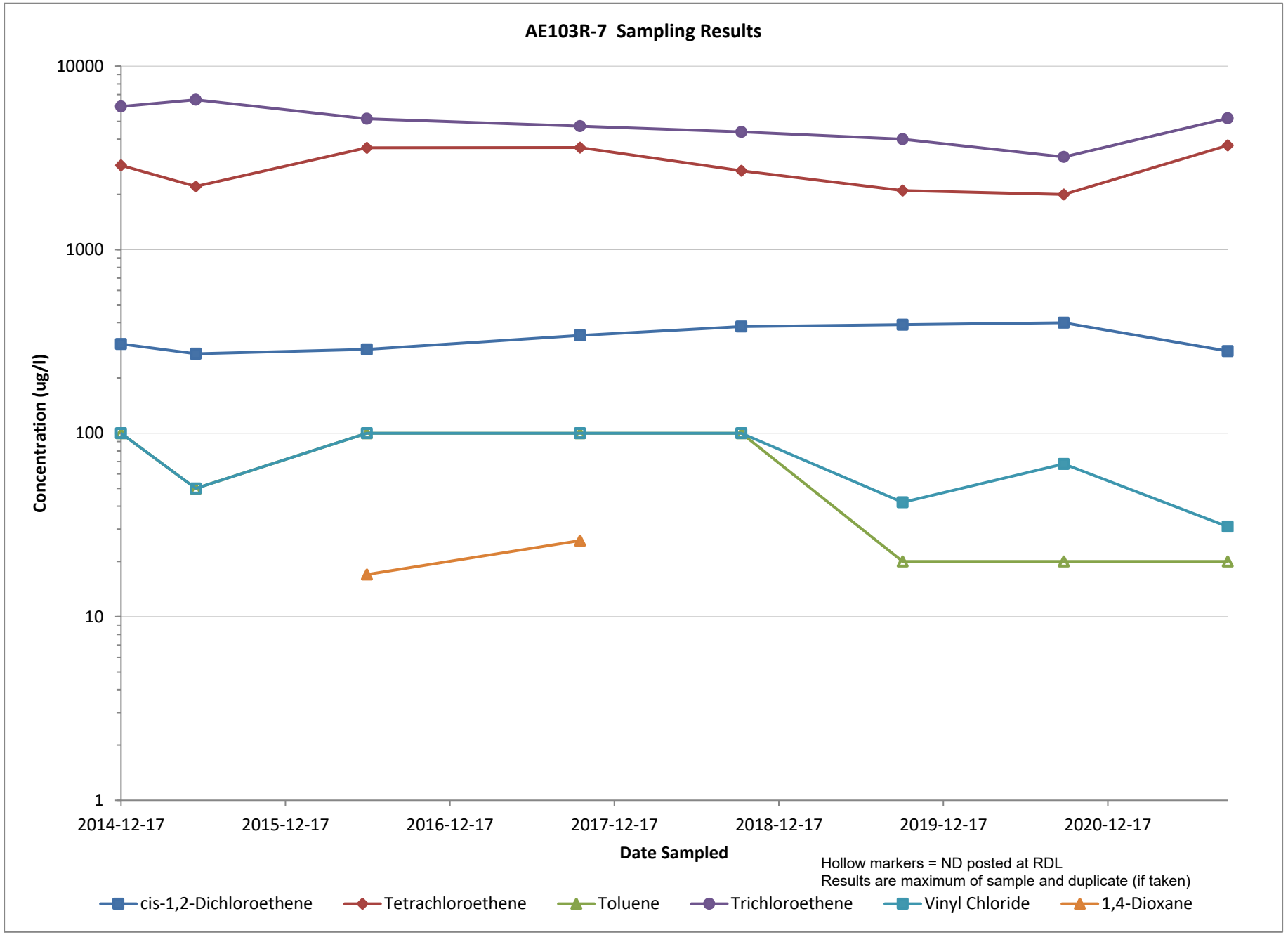

AE103R-2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

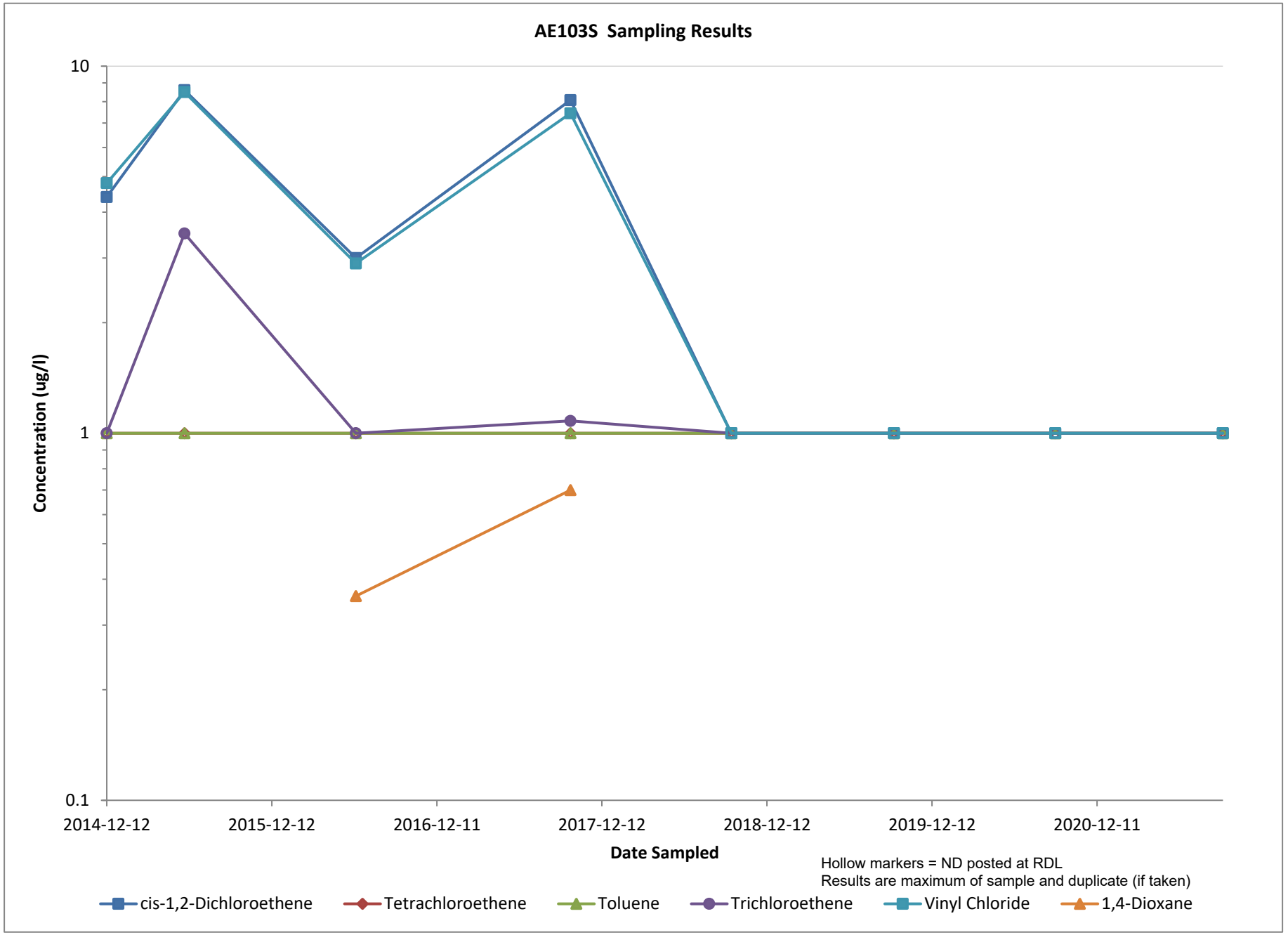

AE103R-3 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

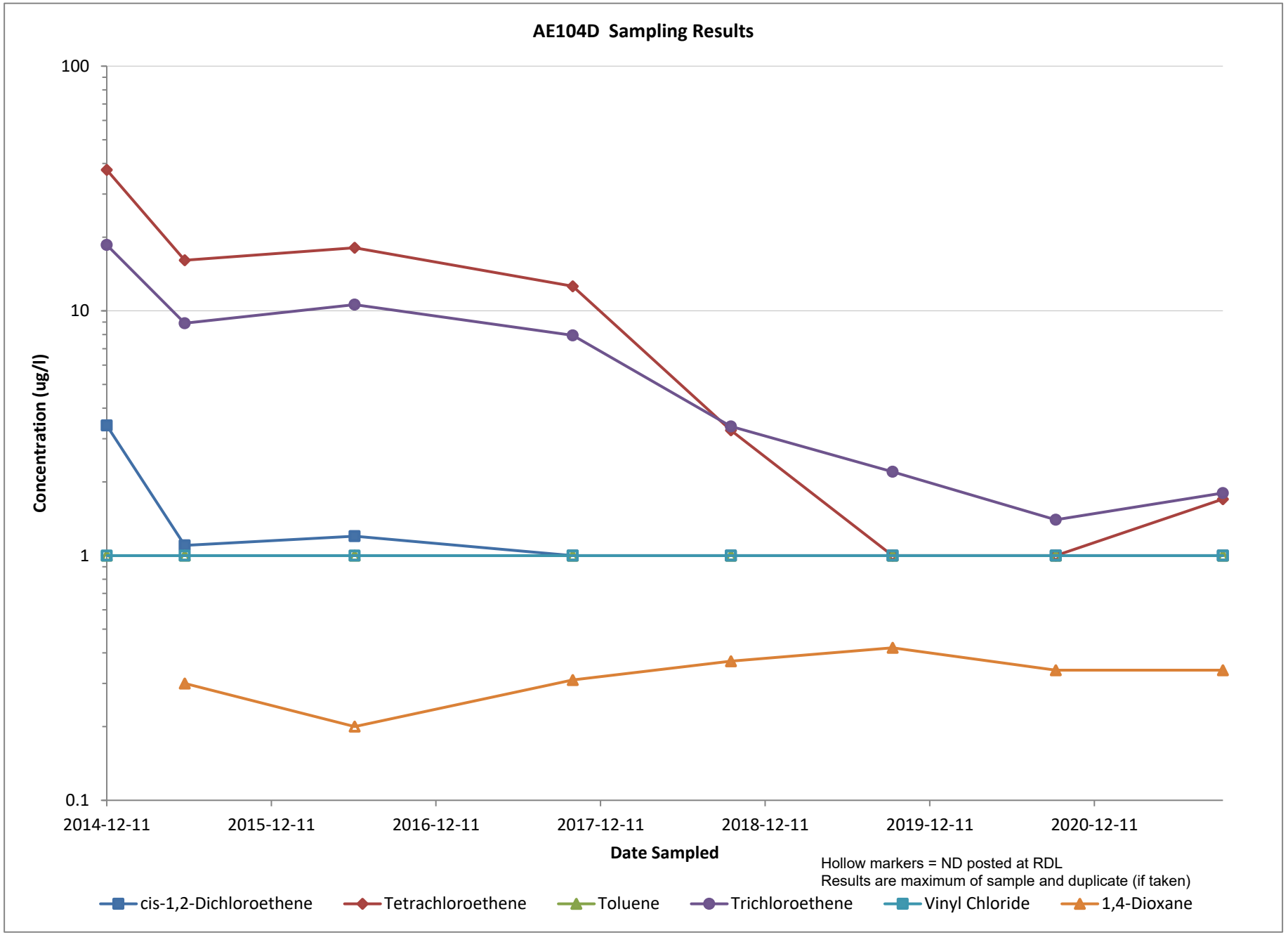

AE103R-4 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

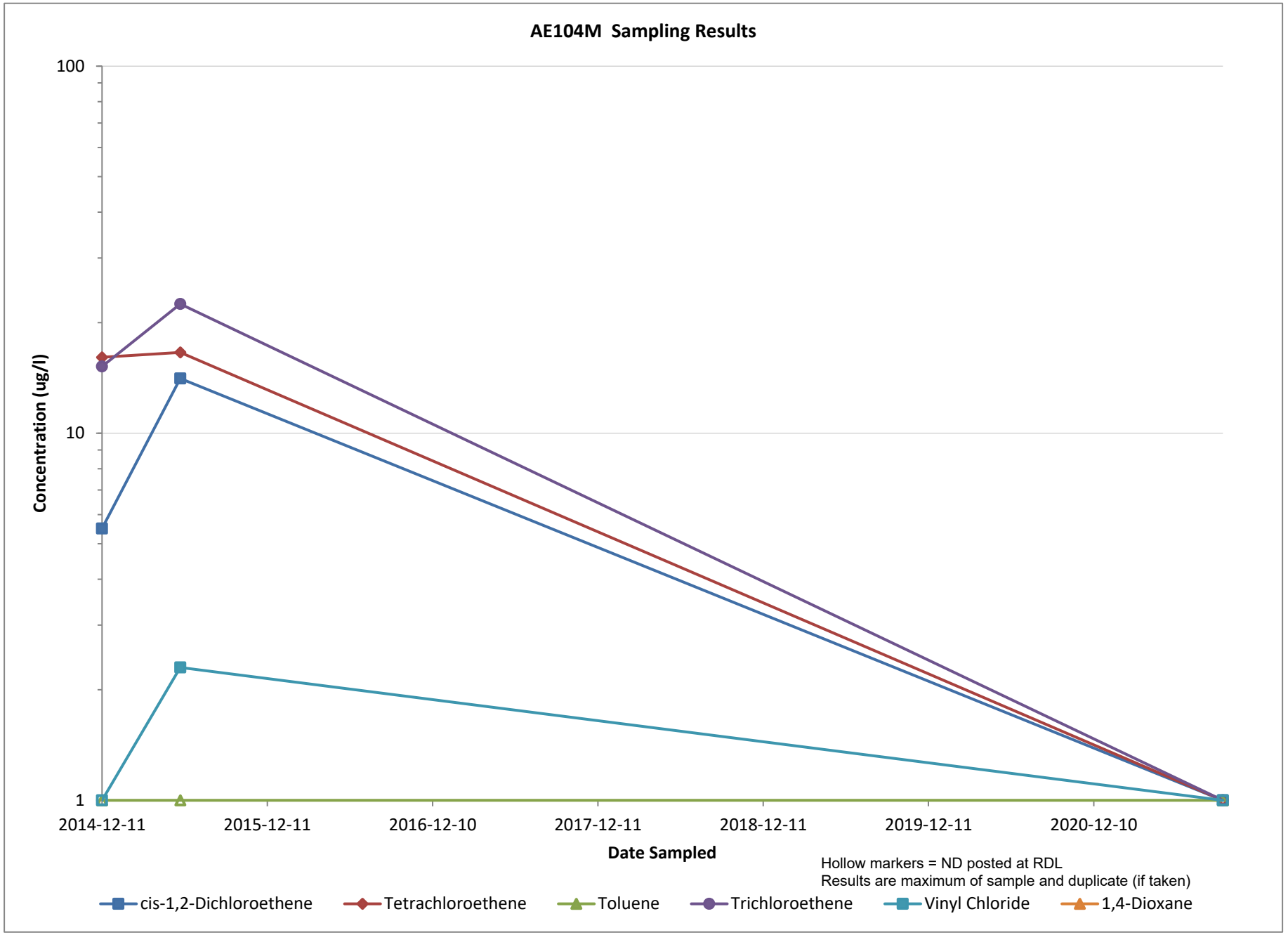

AE103R-5 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

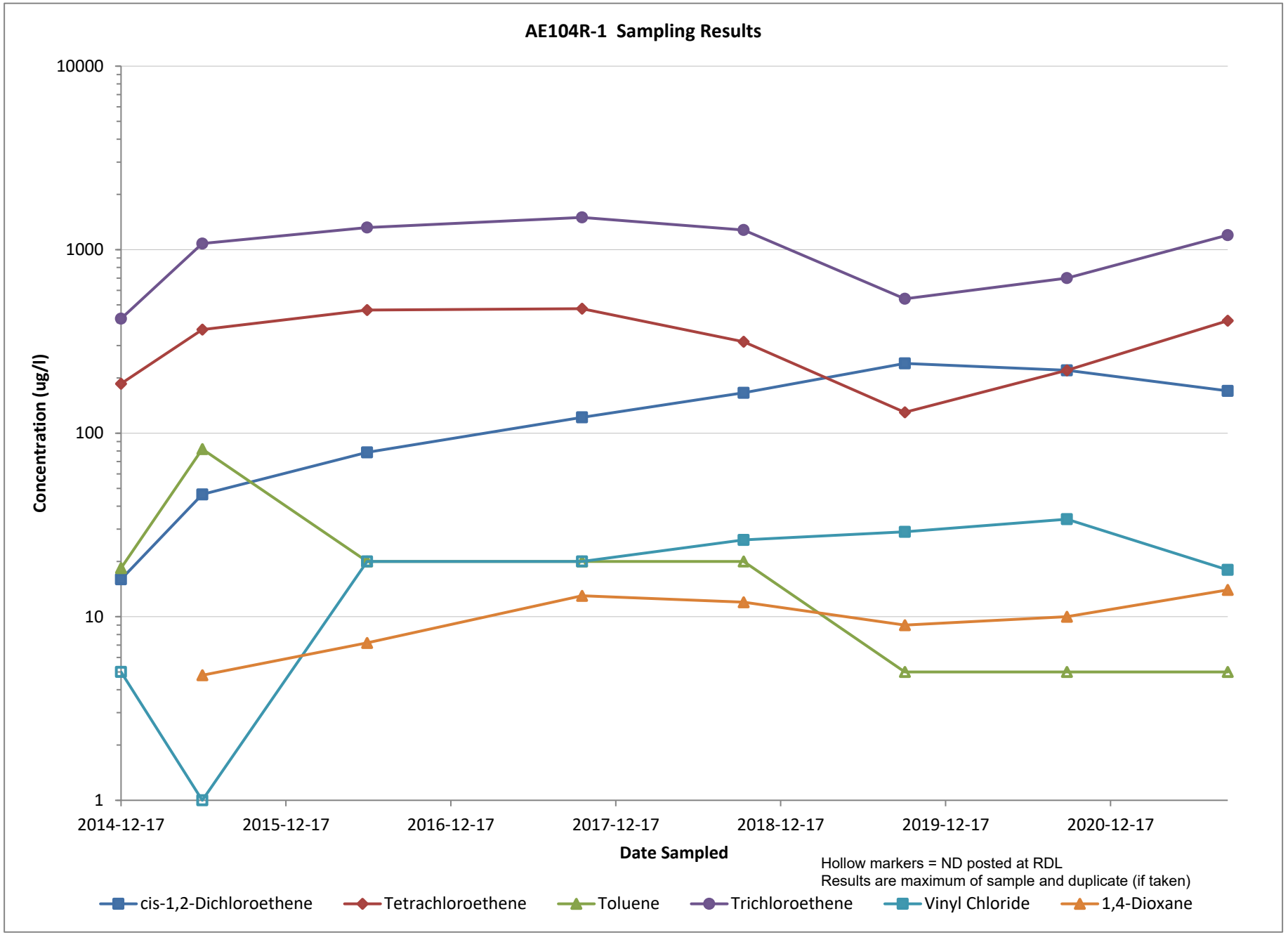

AE103R-6 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

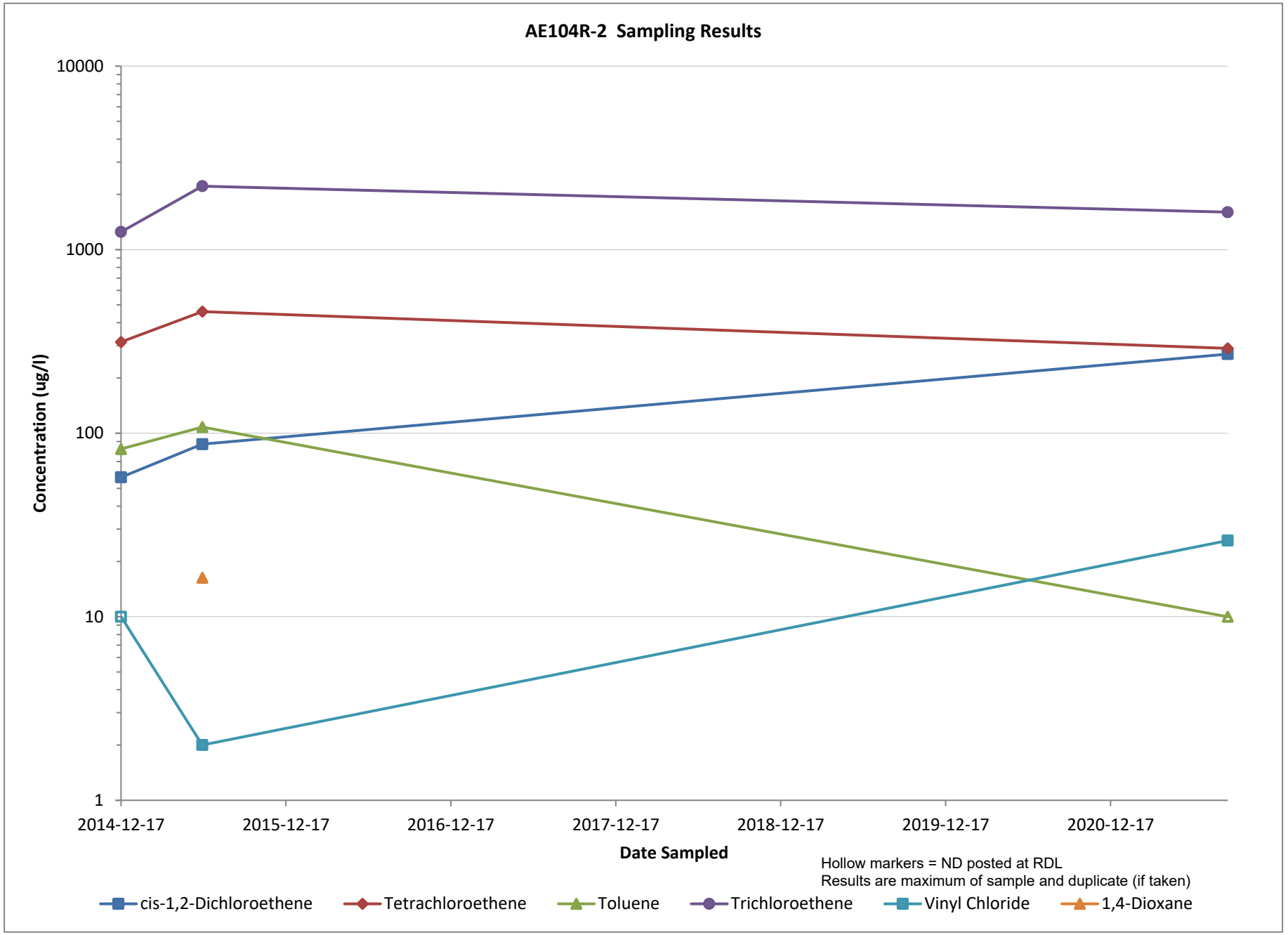

AE103R-7 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

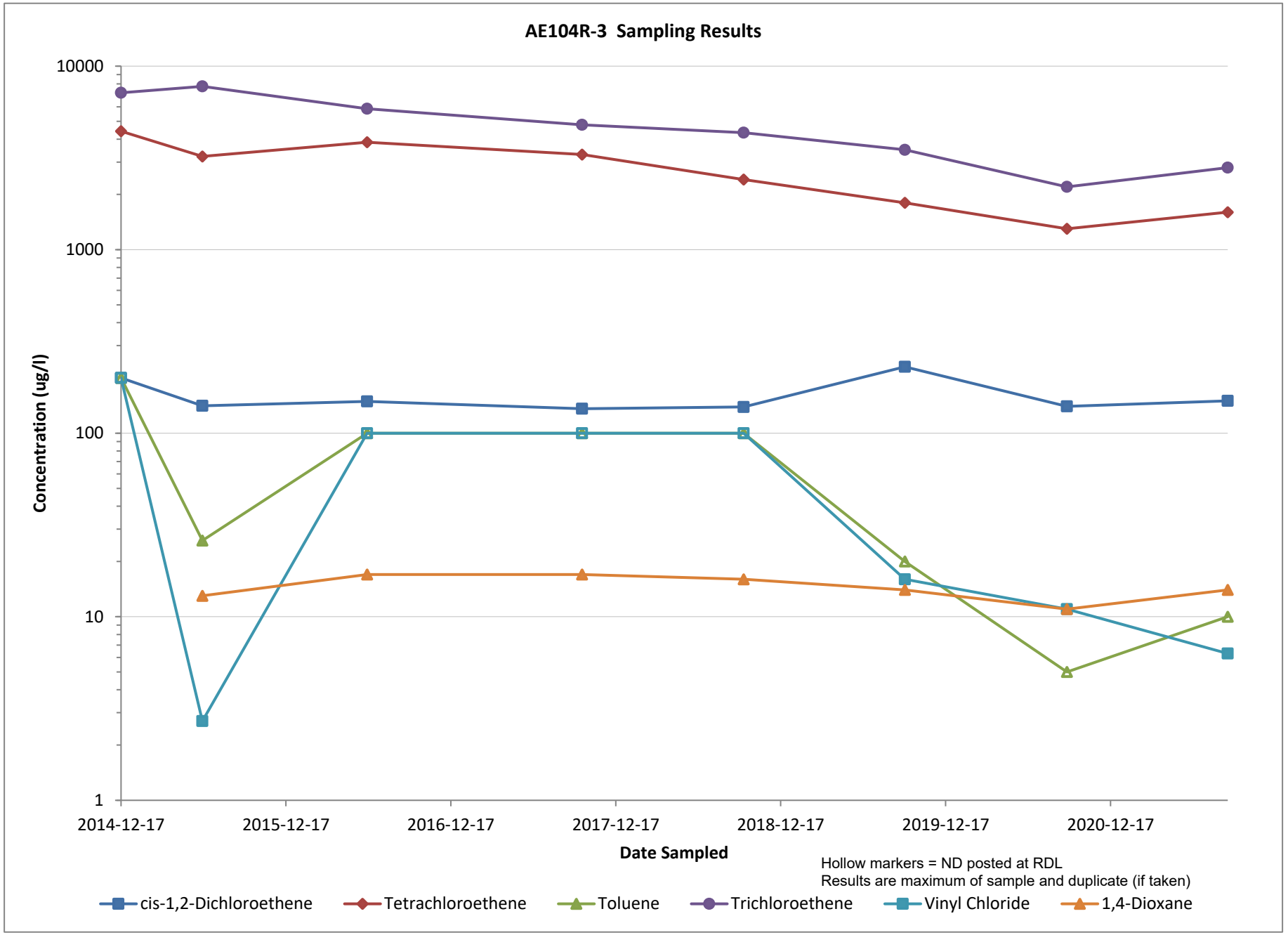

AE103S Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

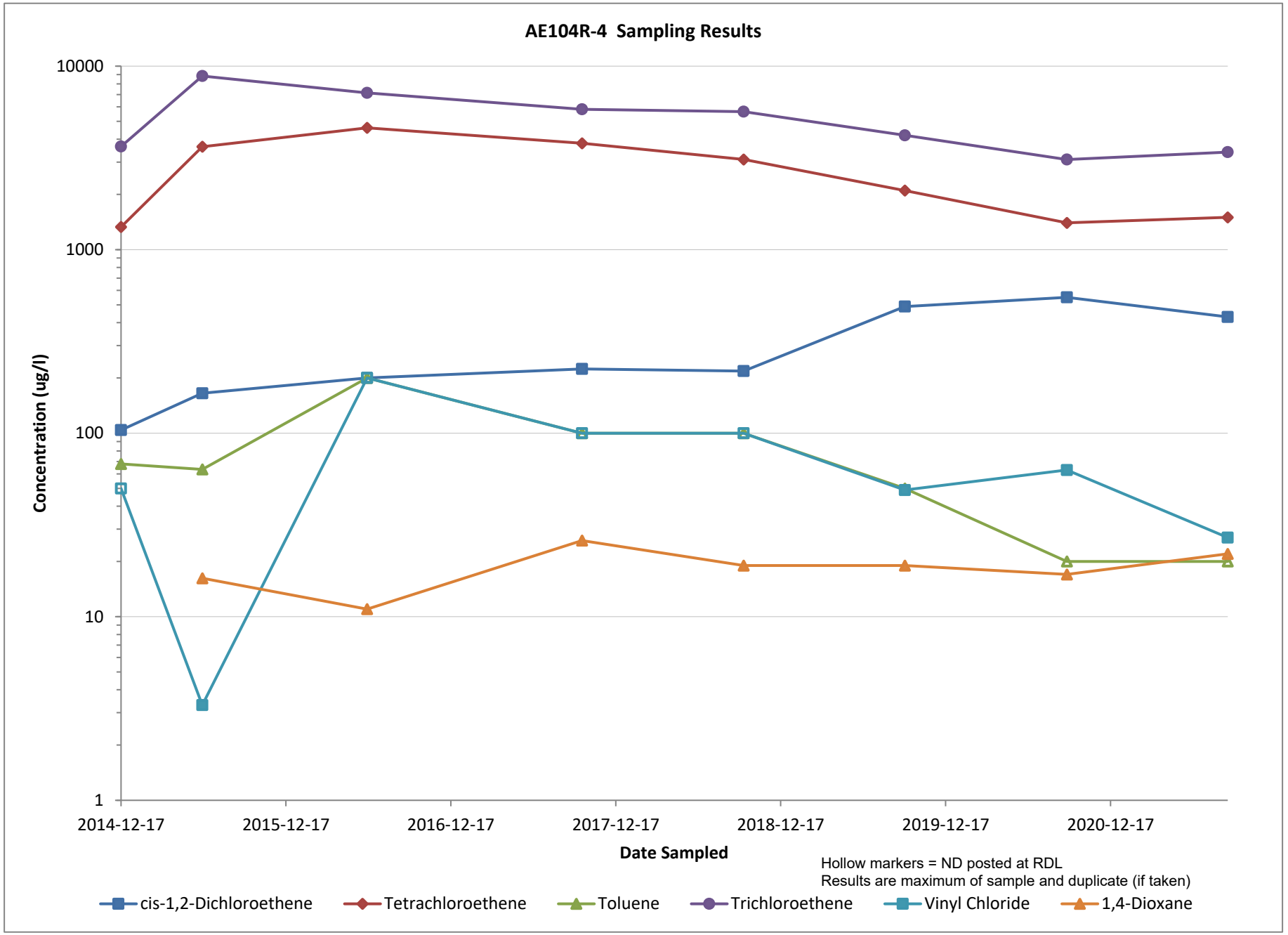

AE104D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

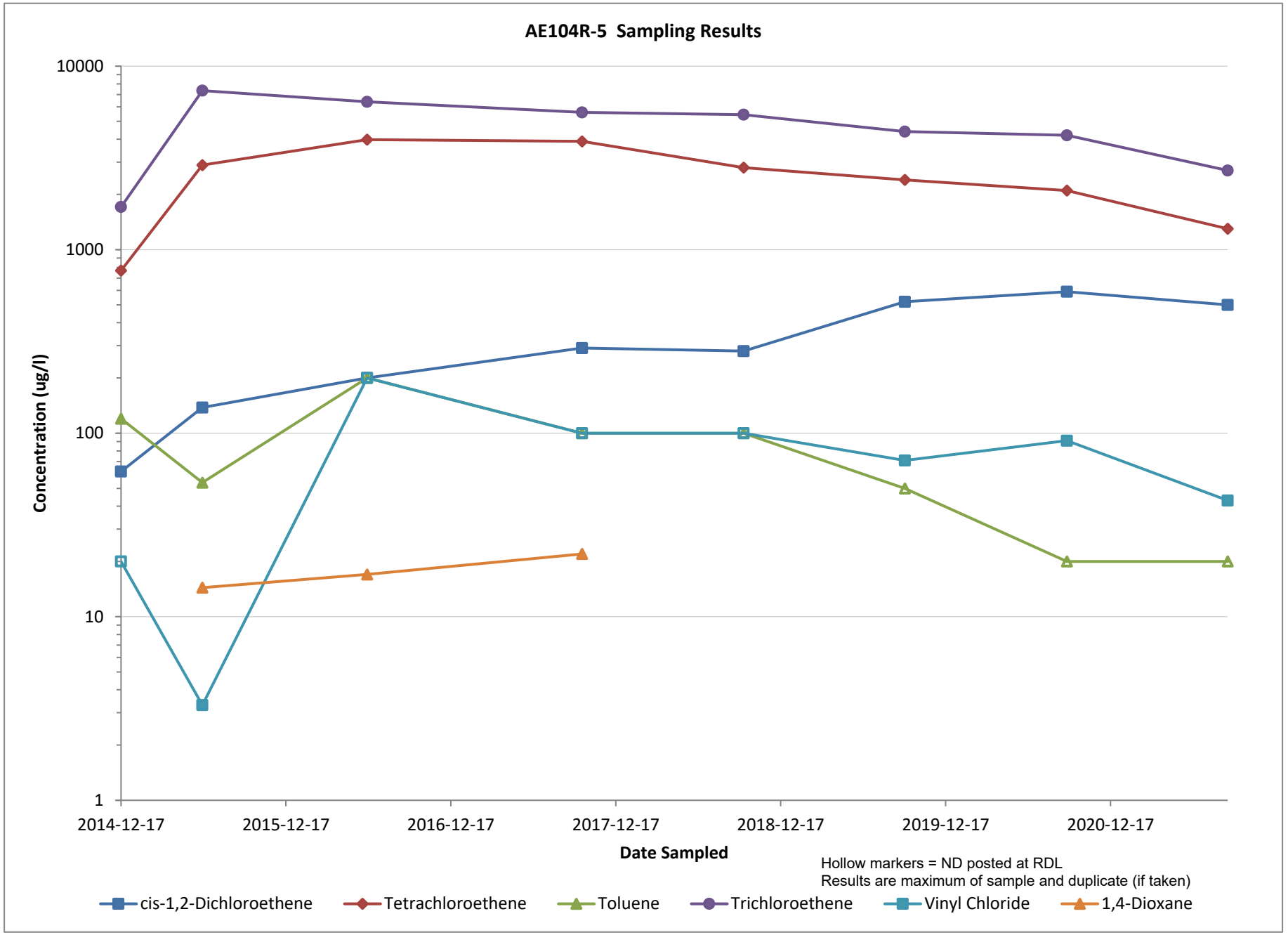

AE104M Sampling Results
100
10
1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-10
2017-12-11
2018-12-11
2019-12-11
2020-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

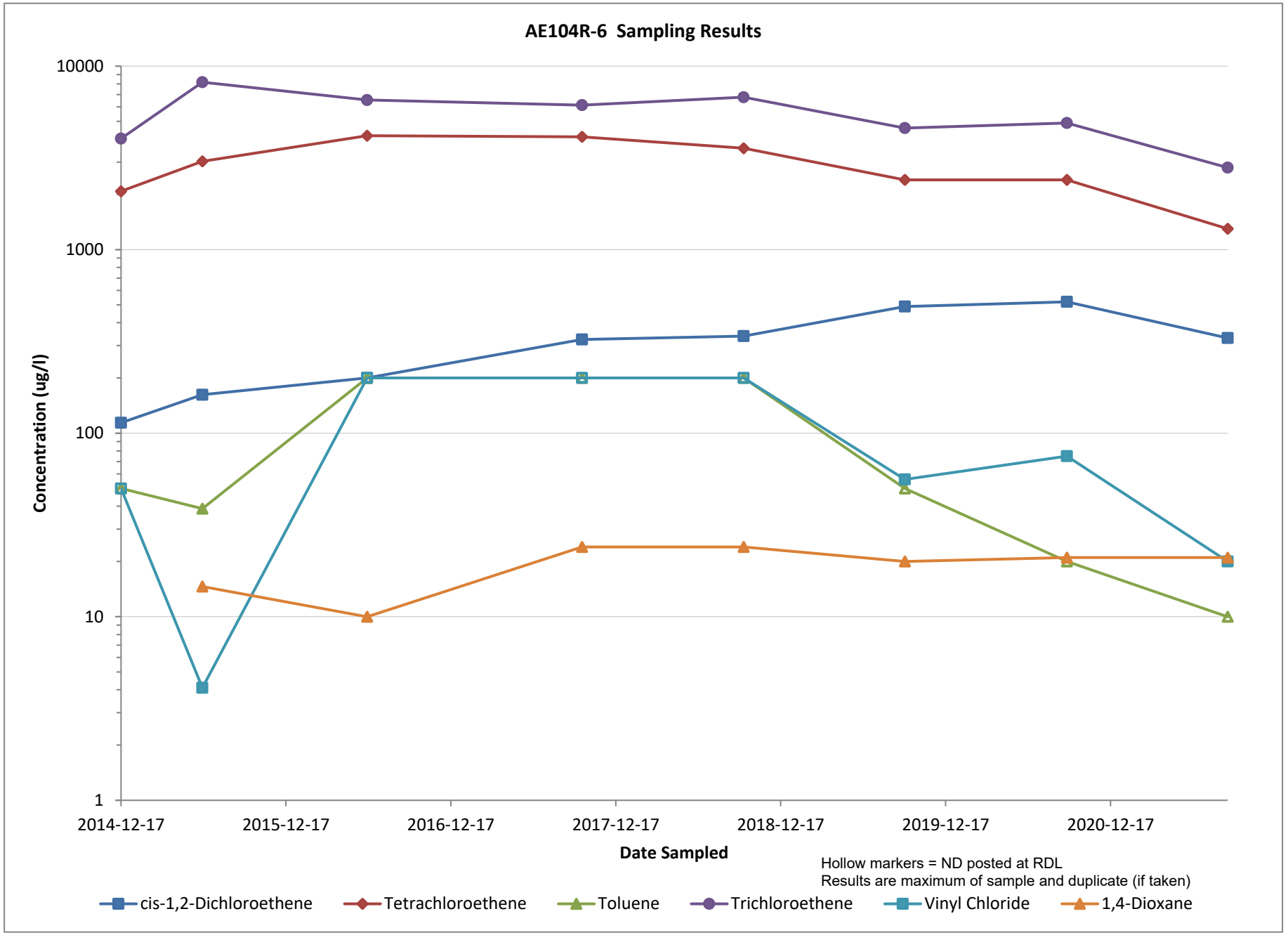

AE104R-1 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

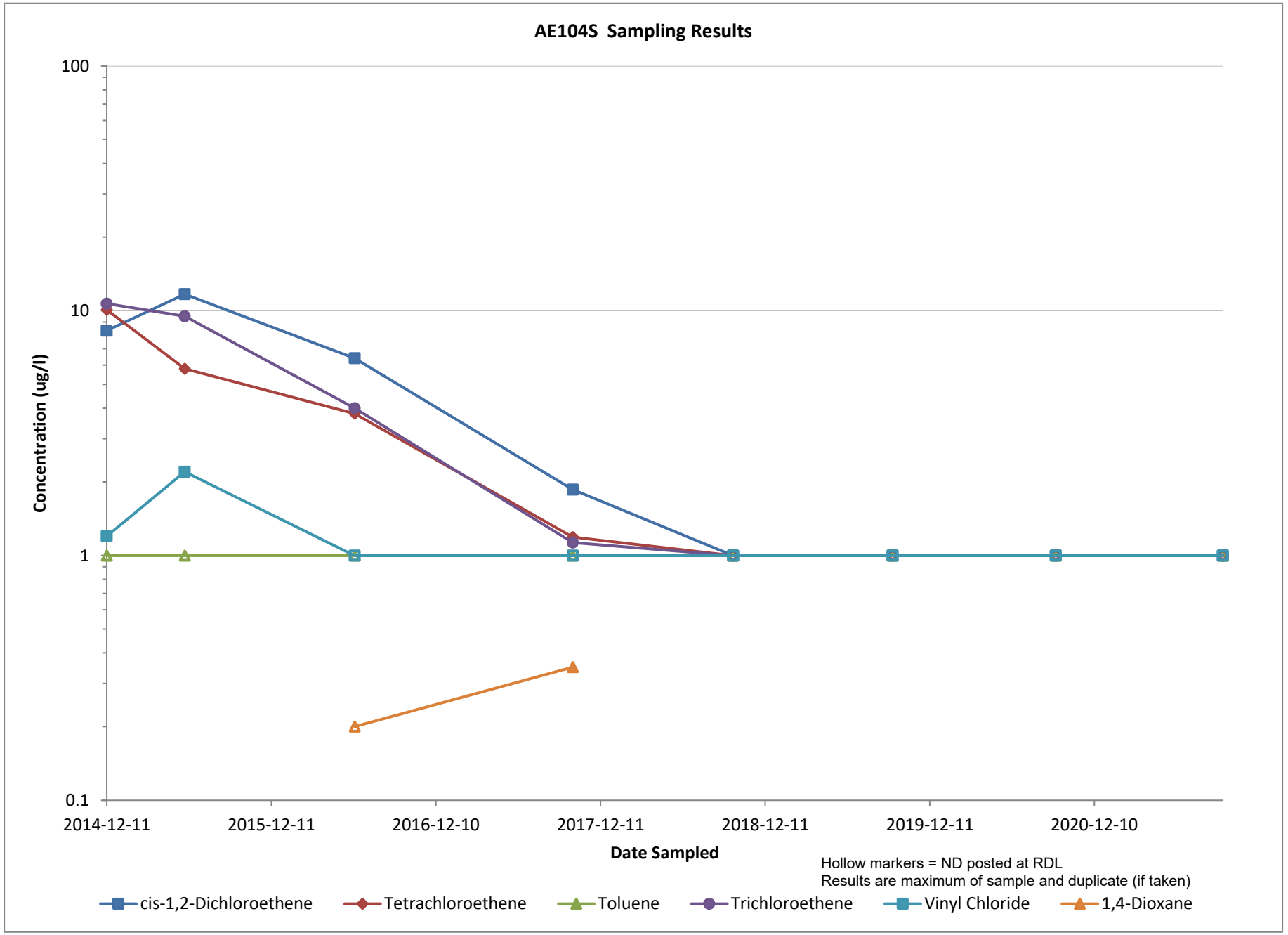

AE104R-2 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

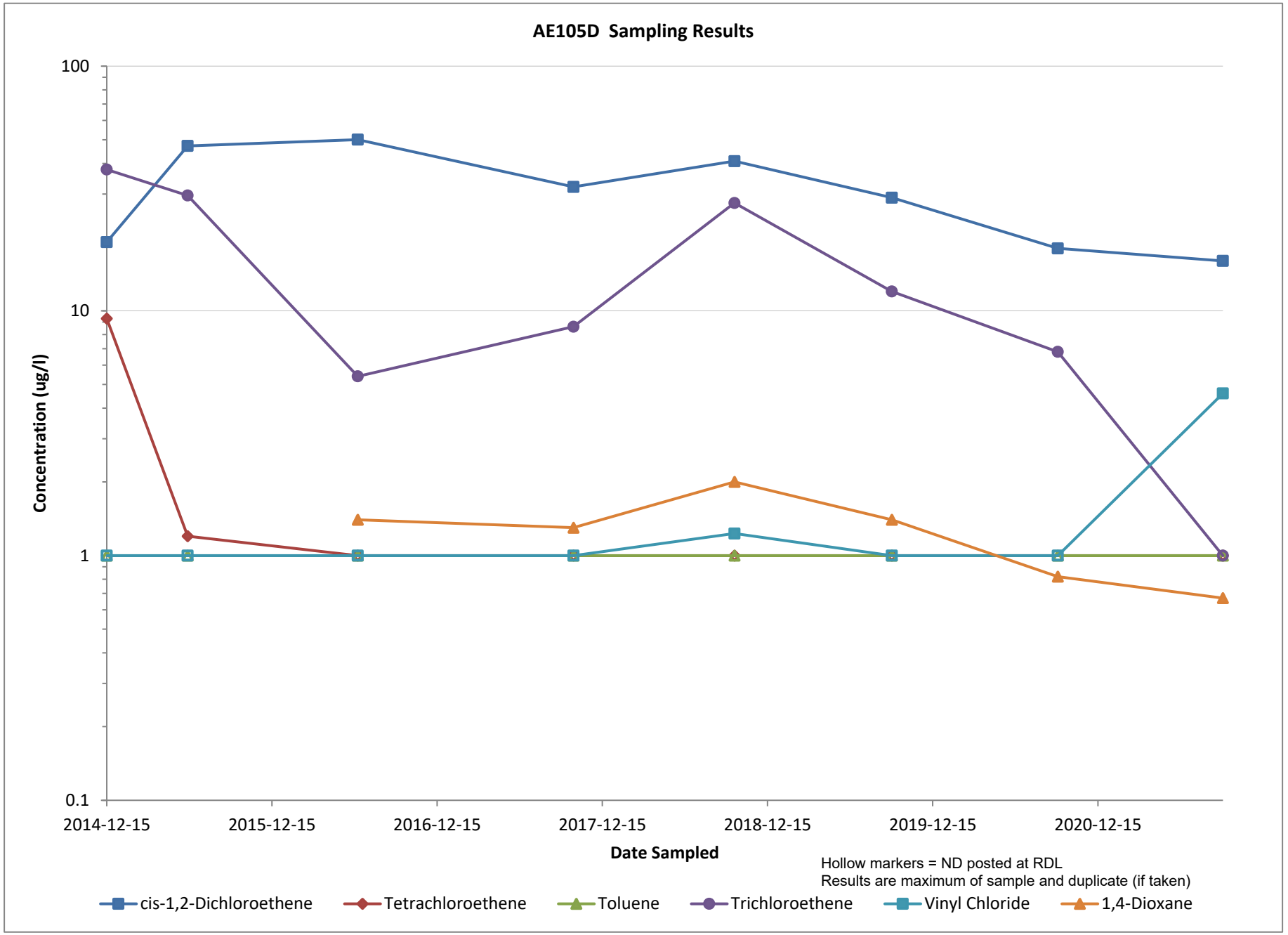

AE104R-3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

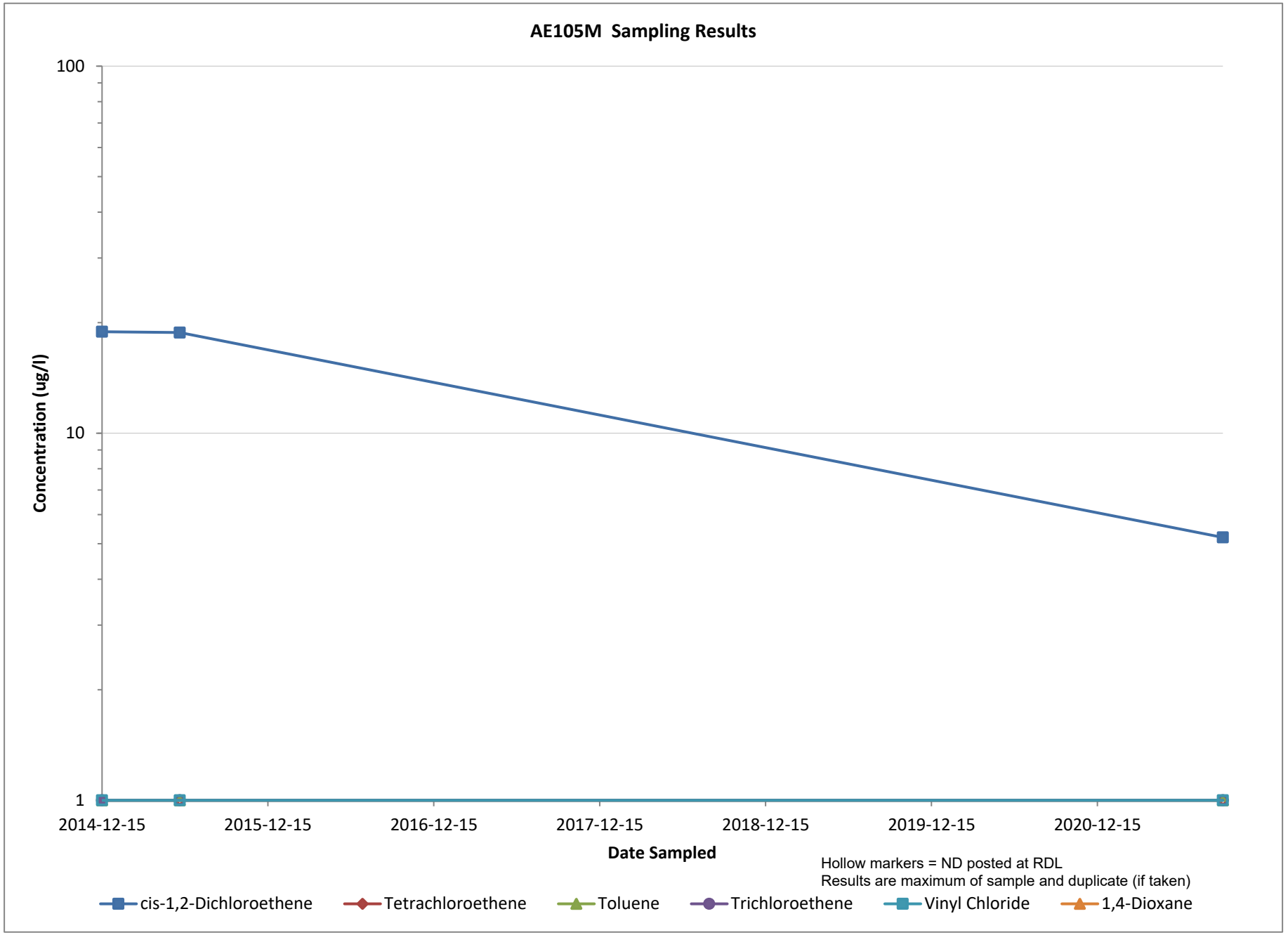

AE104R-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

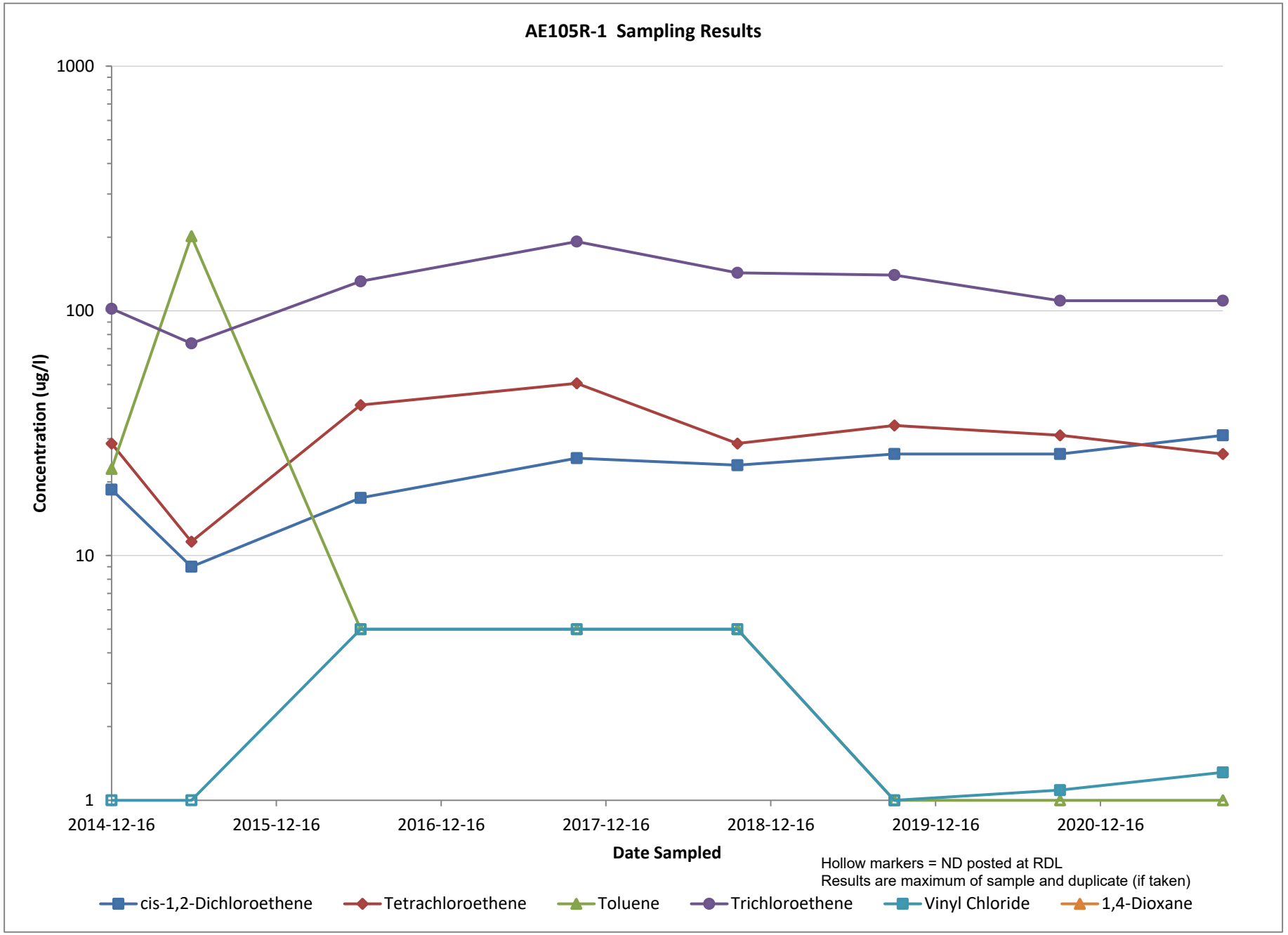

AE104R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

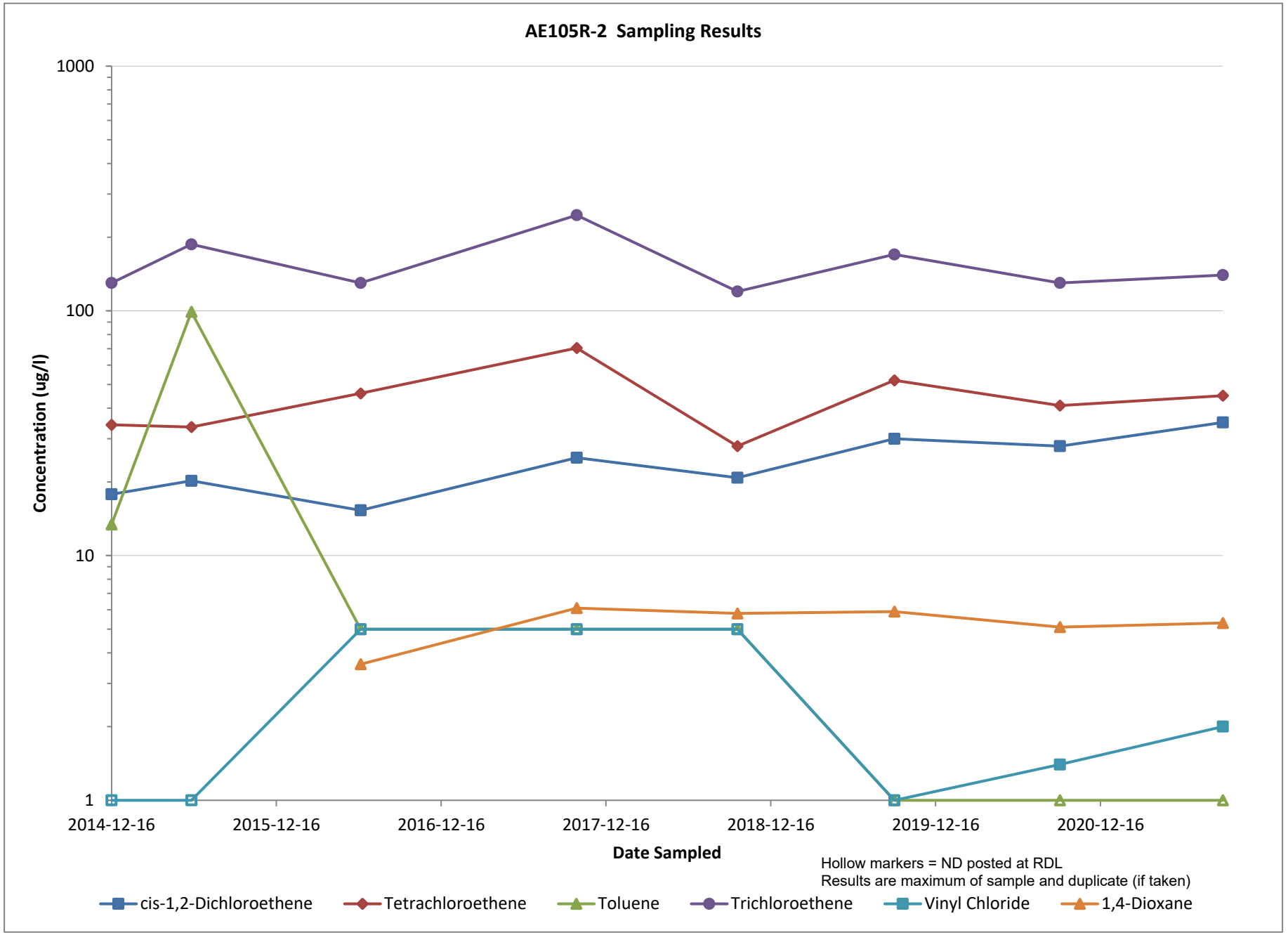

AE104R-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

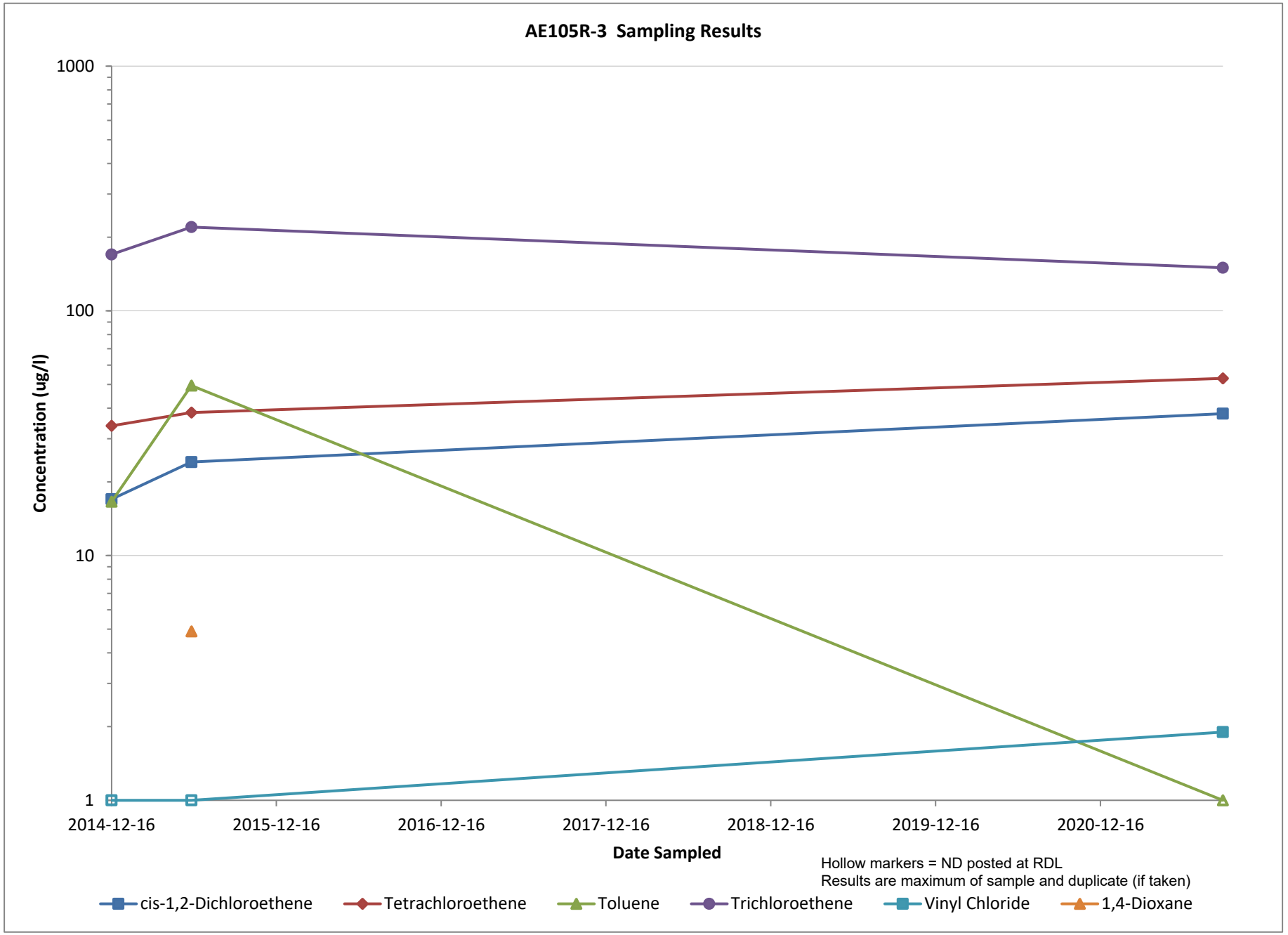

AE104S Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-10
2017-12-11
2018-12-11
2019-12-11
2020-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

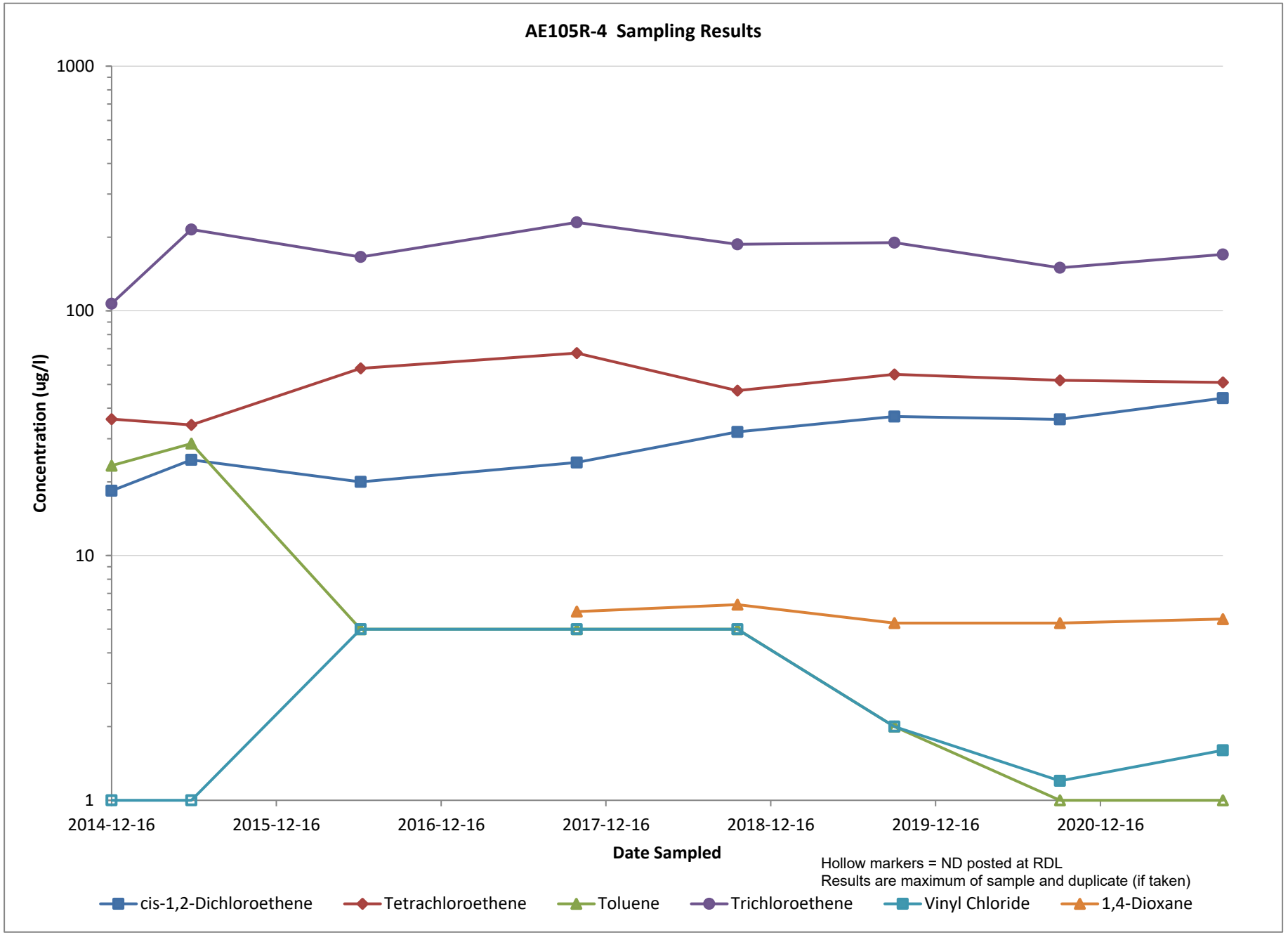

AE105D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

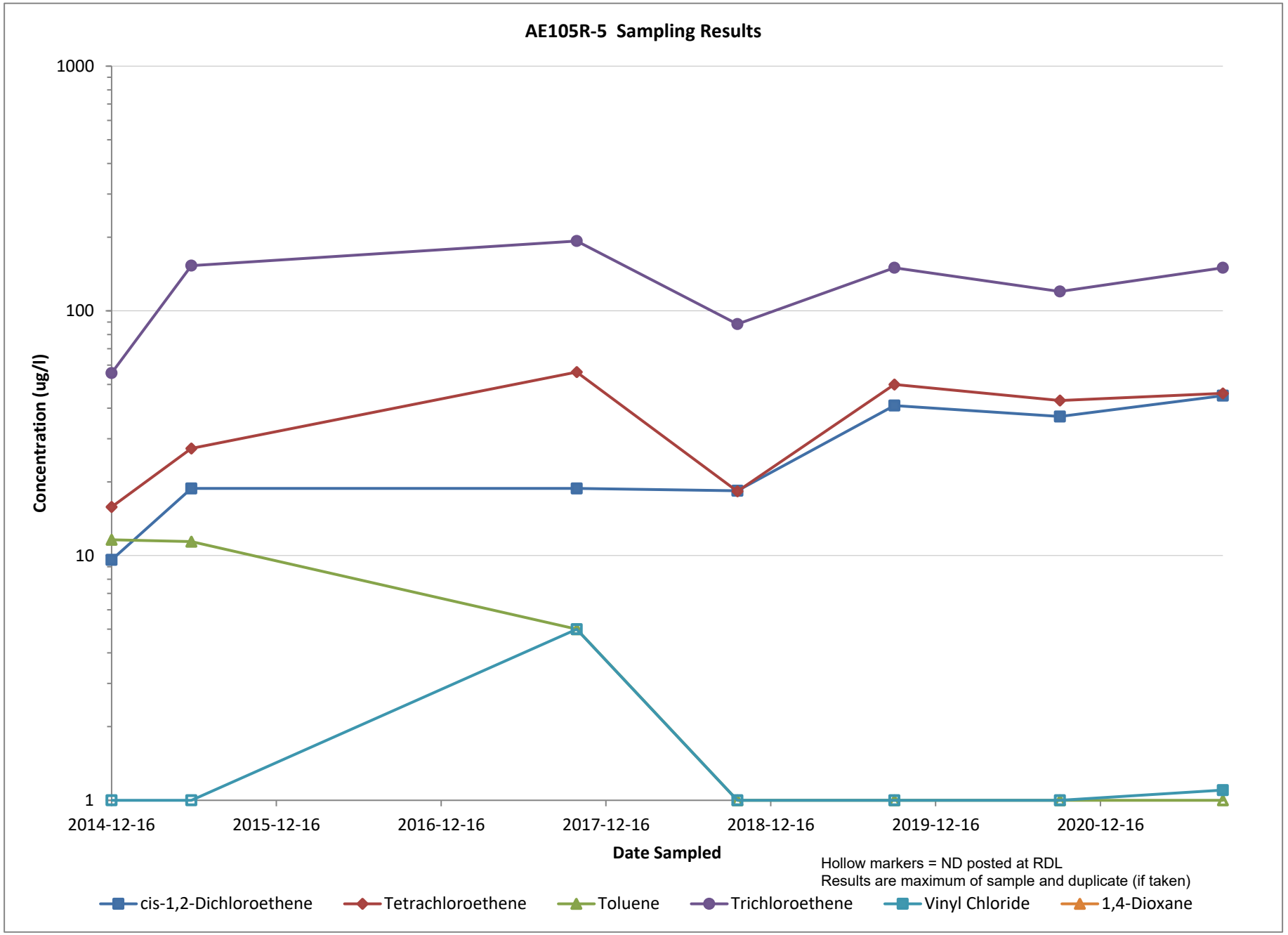

AE105M Sampling Results
100
10
1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

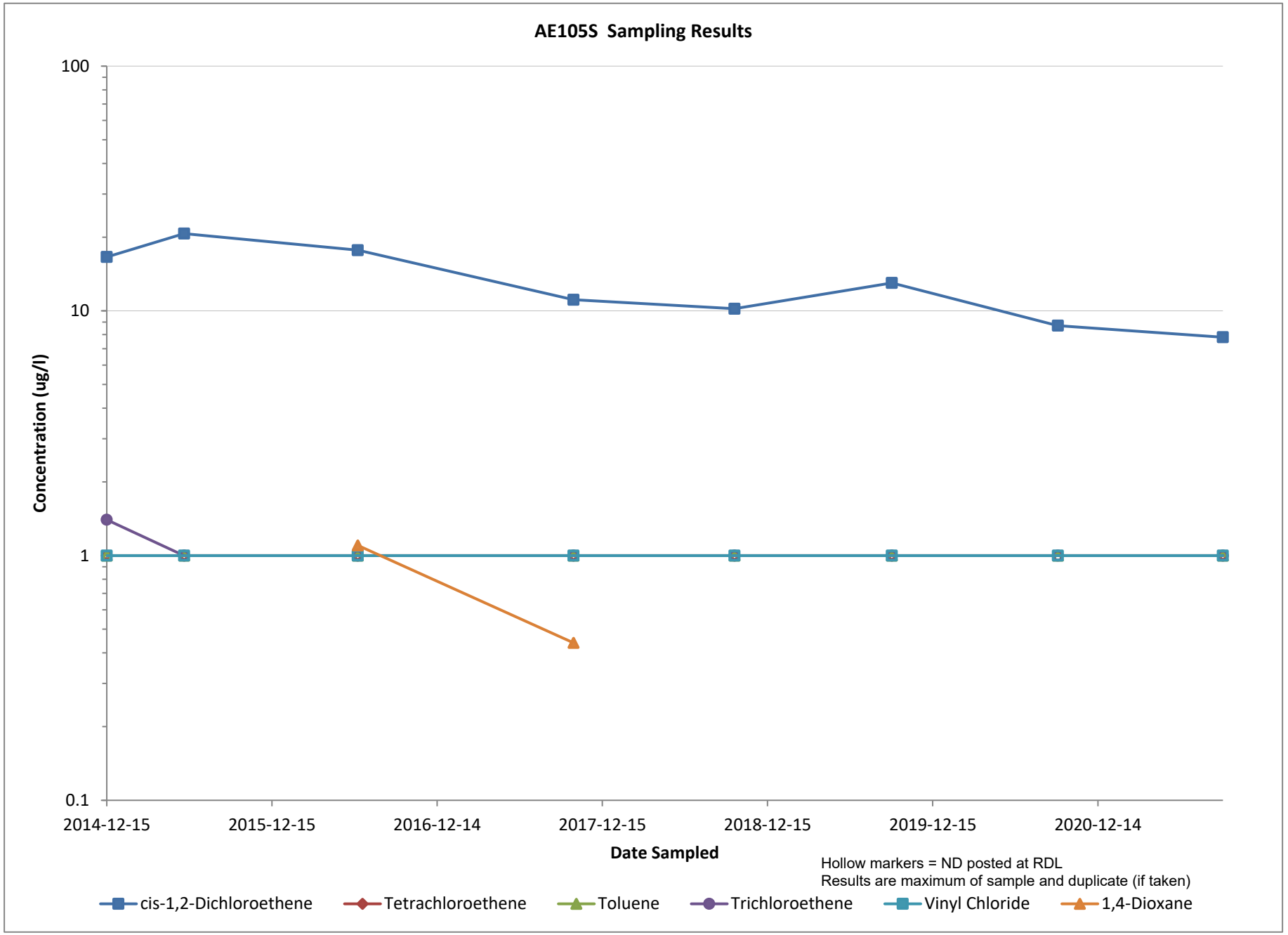

AE105R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

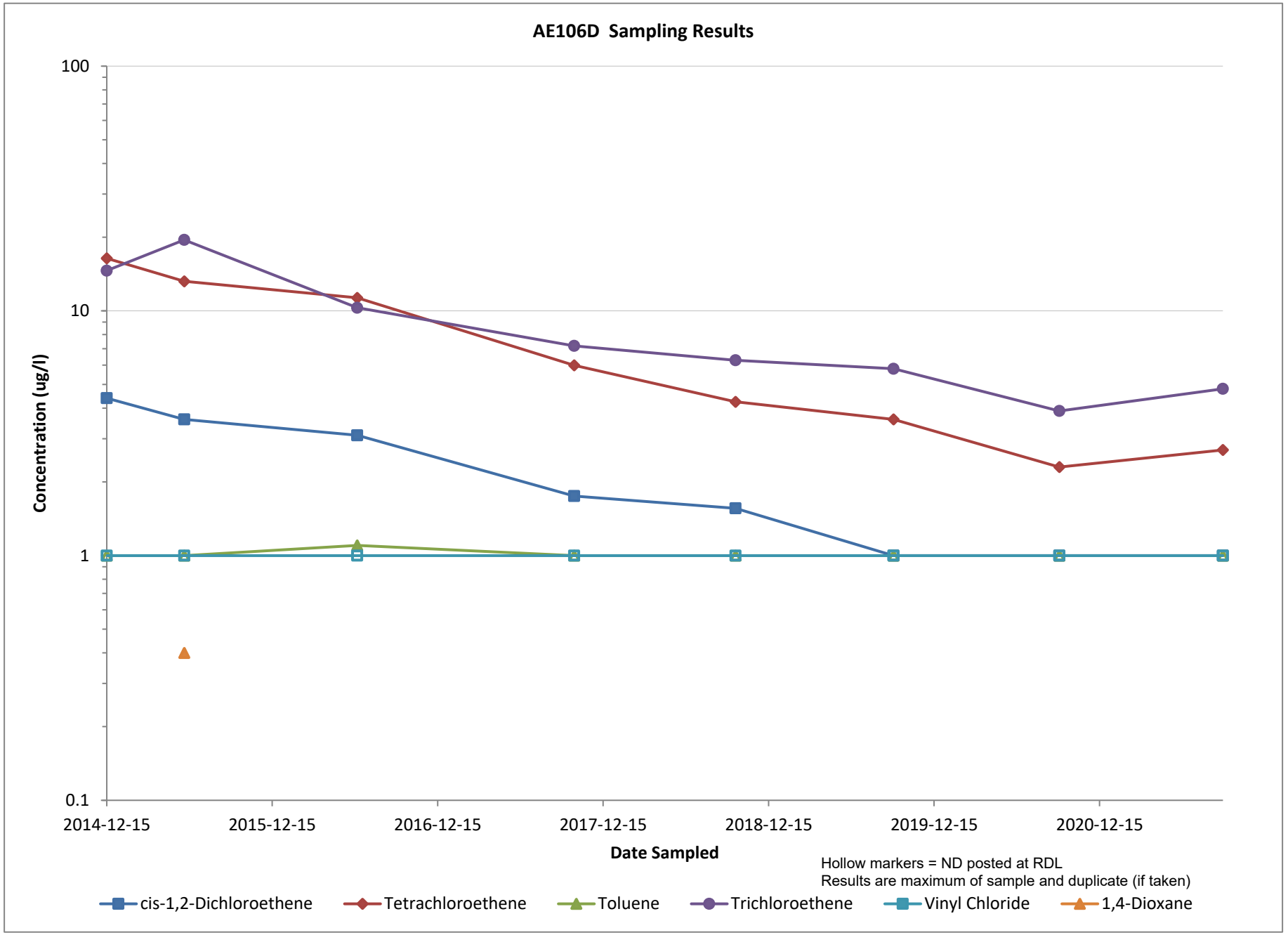

AE105R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

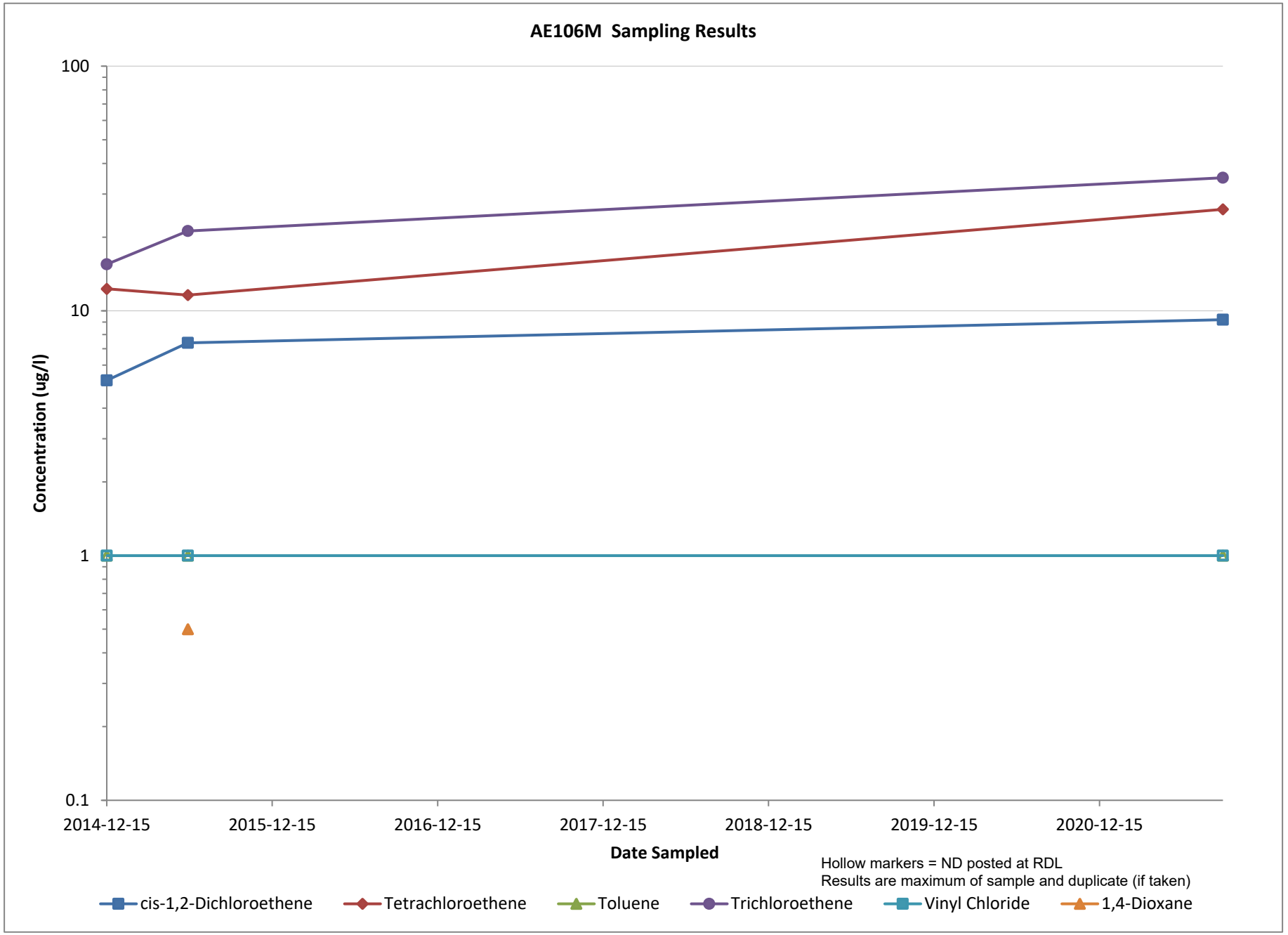

AE105R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

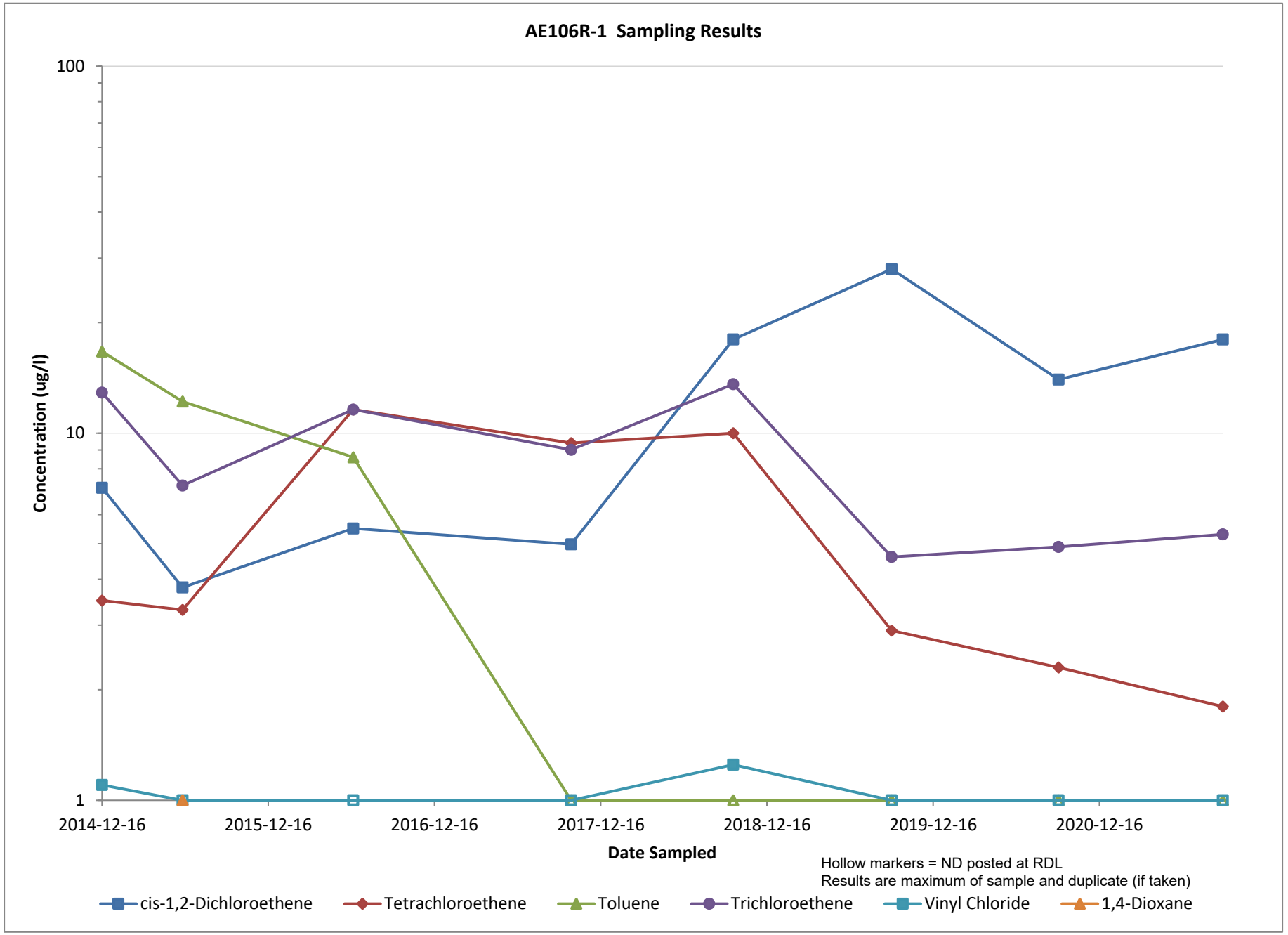

AE105R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

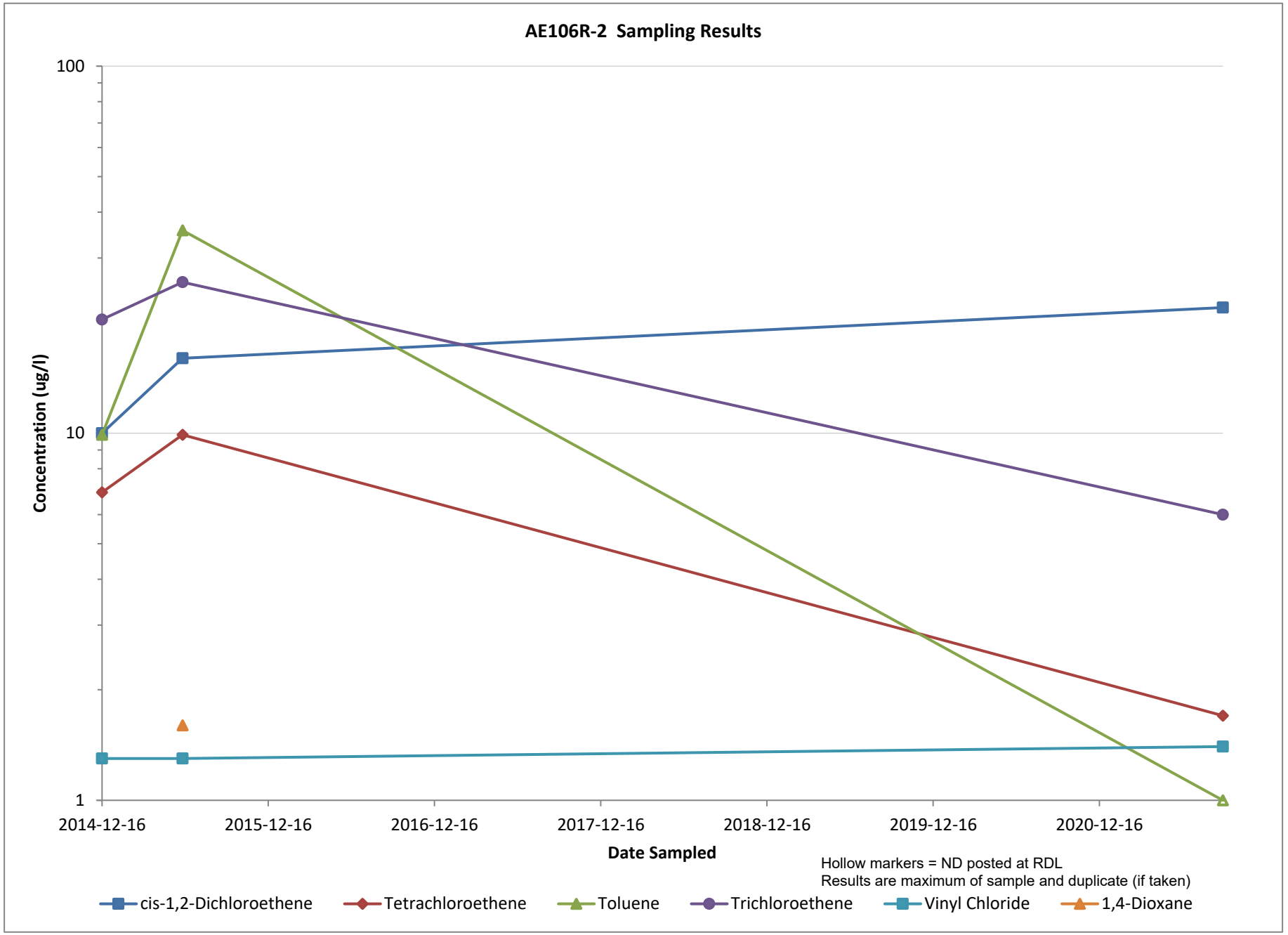

AE105R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

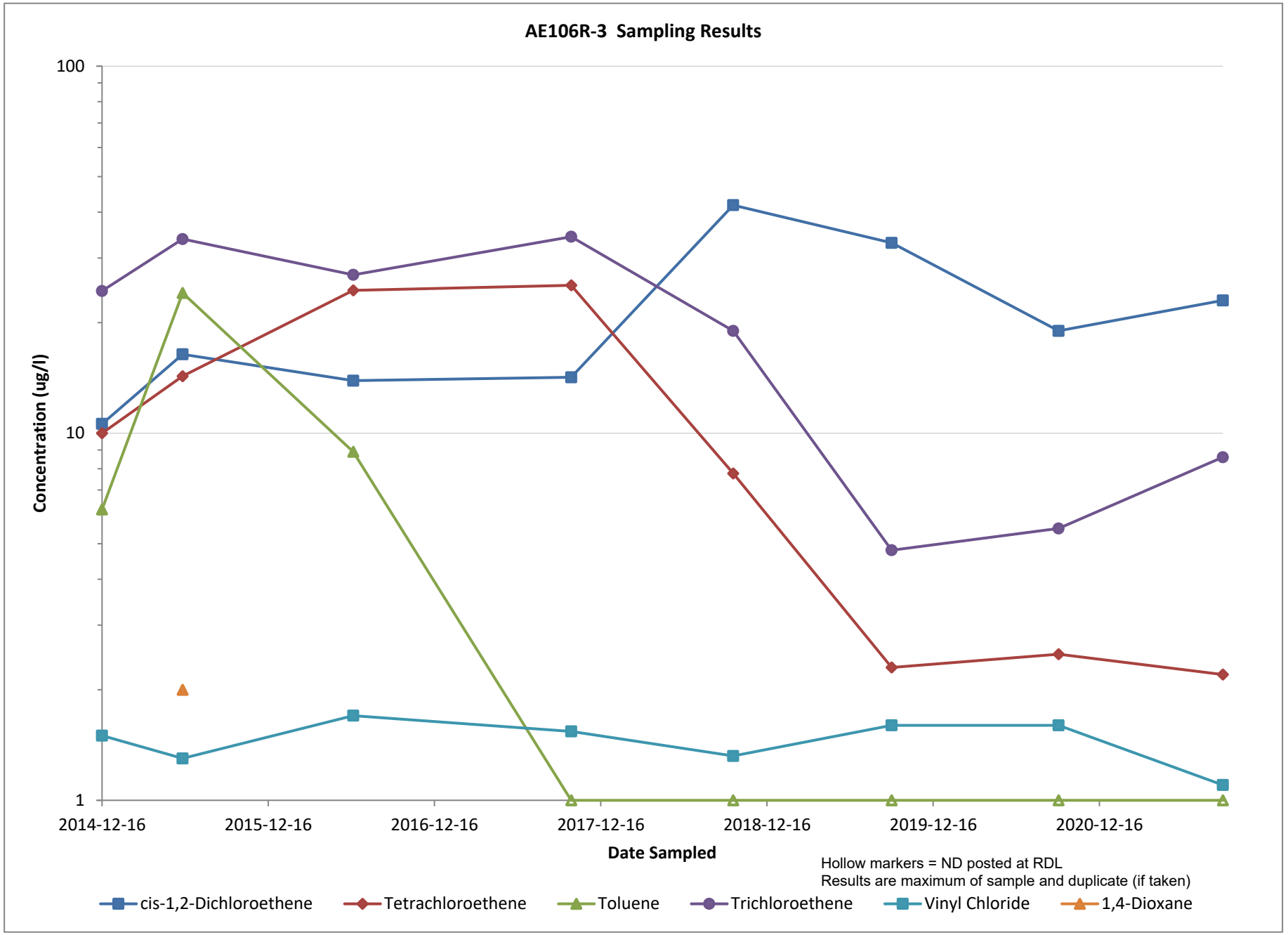

AE105S Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-14
2017-12-15
2018-12-15
2019-12-15
2020-12-14
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

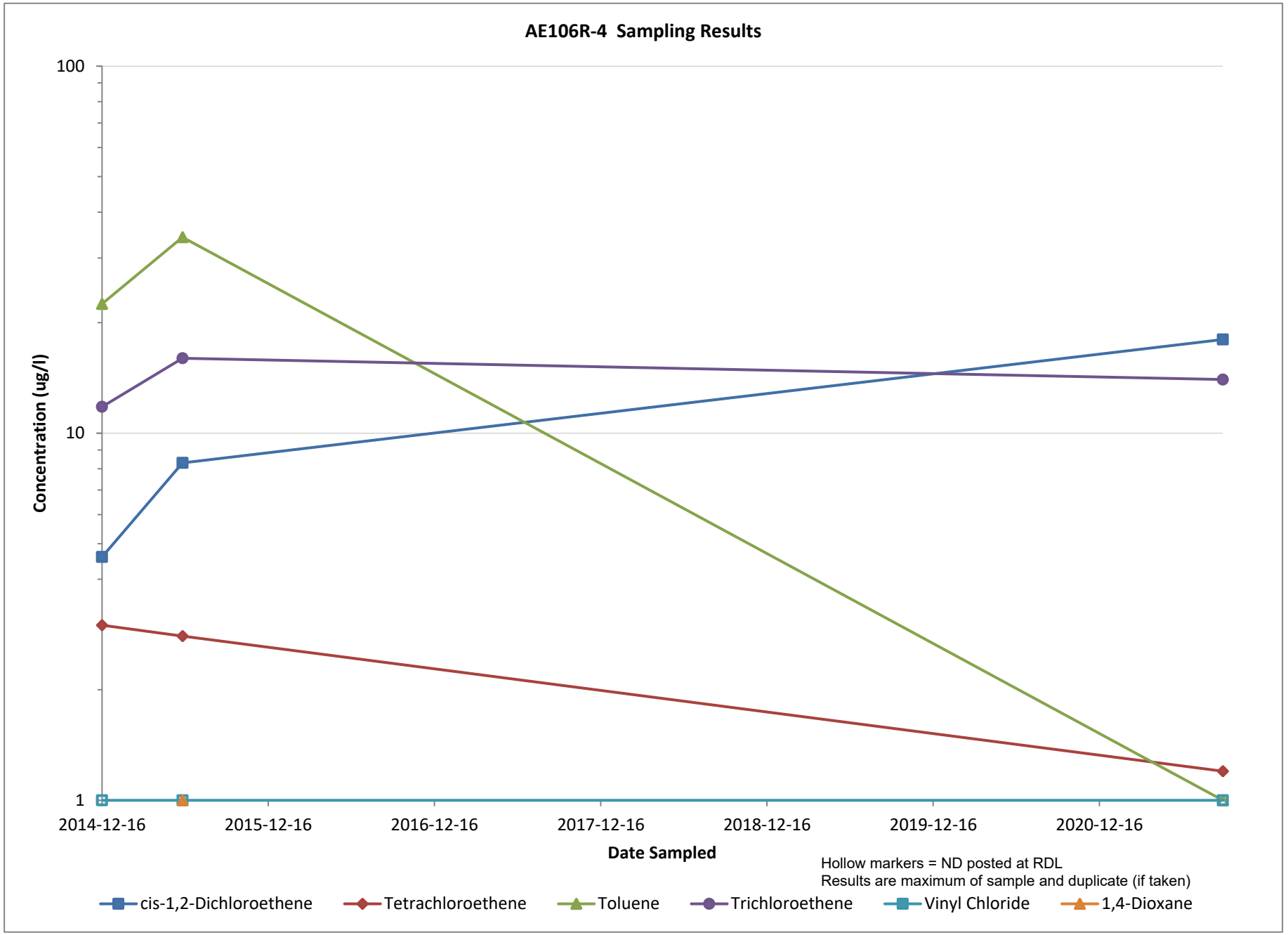

AE106D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

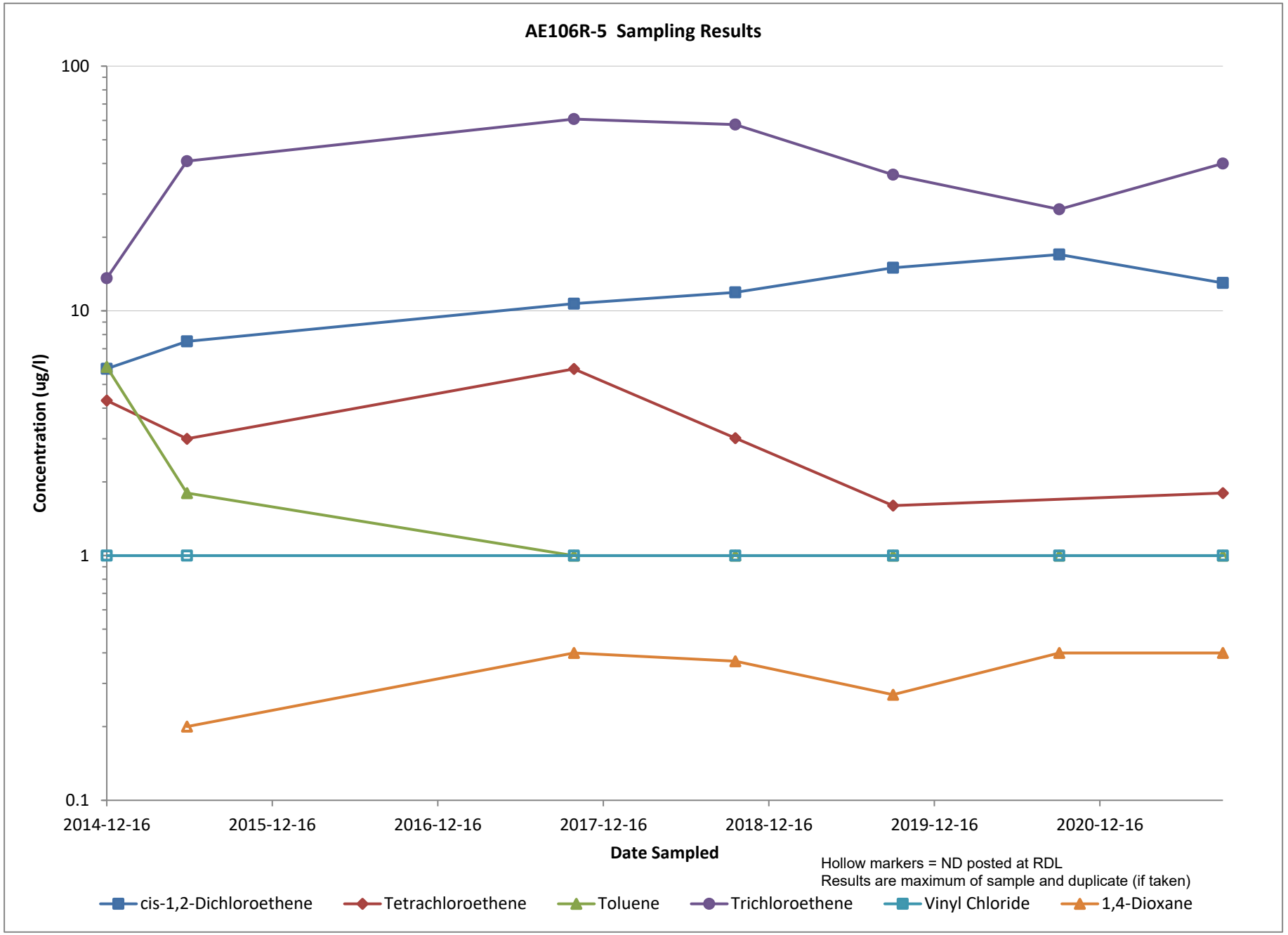

AE106M Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

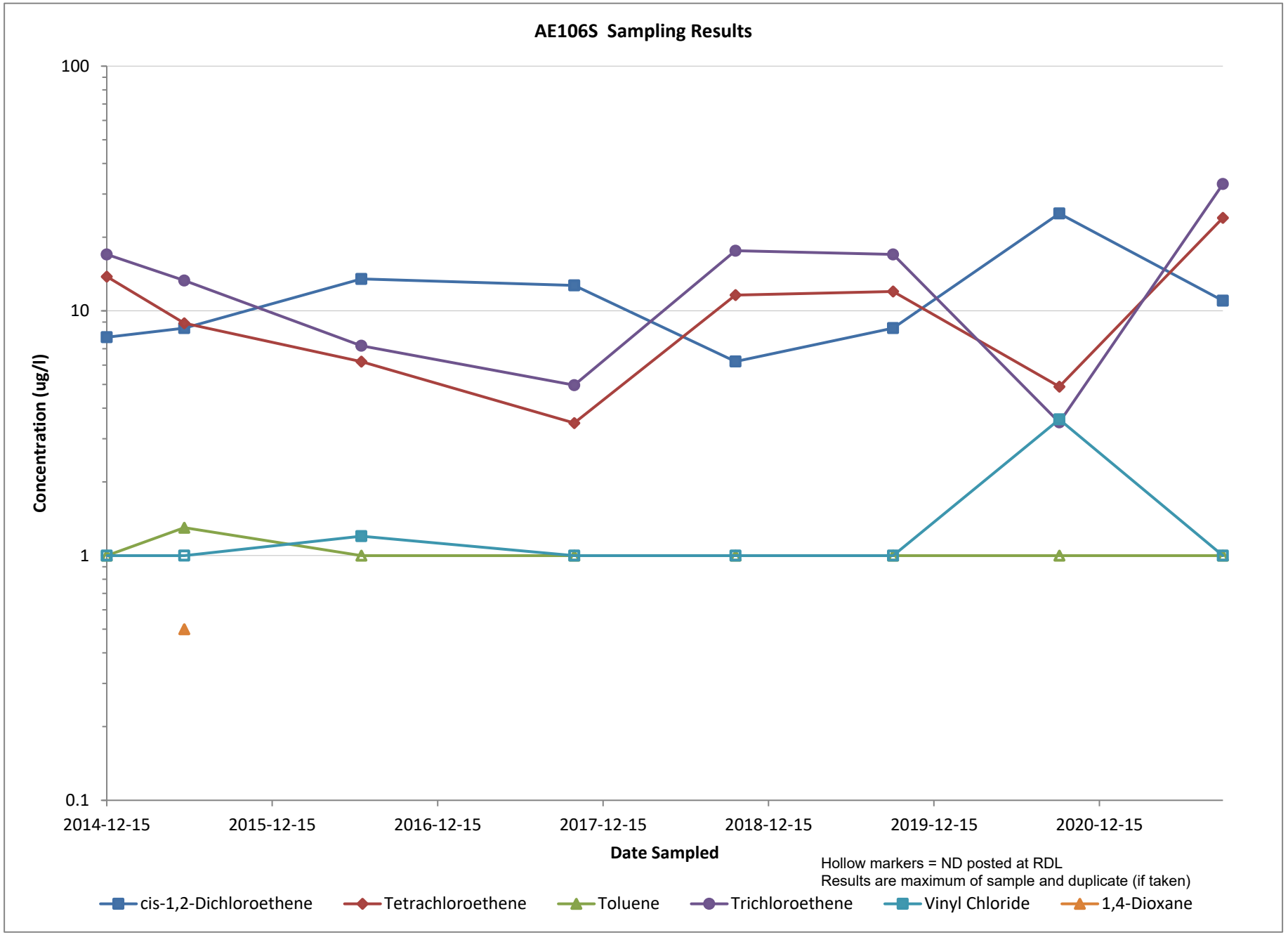

AE106R-1 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

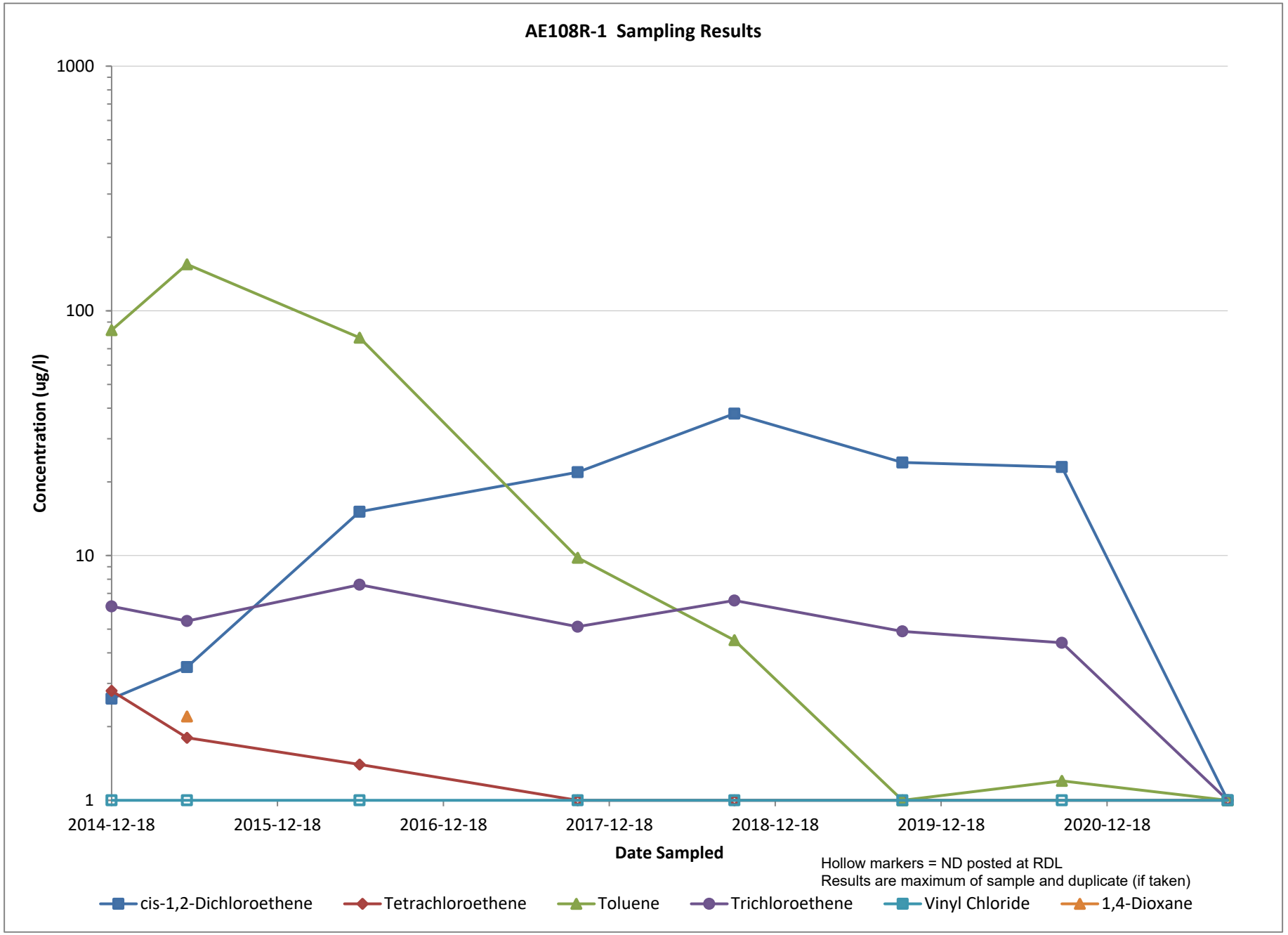

AE106R-2 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

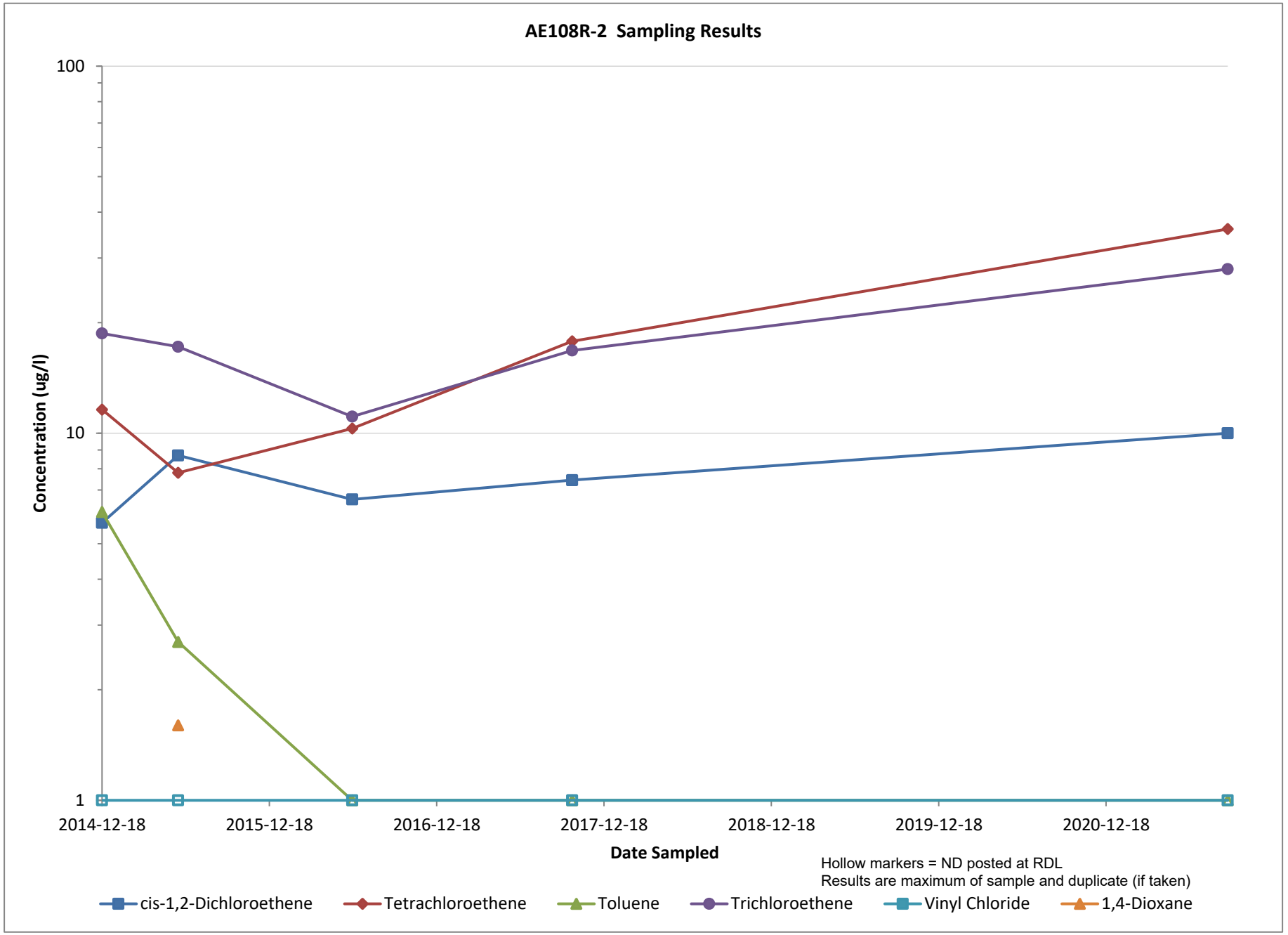

AE106R-3 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

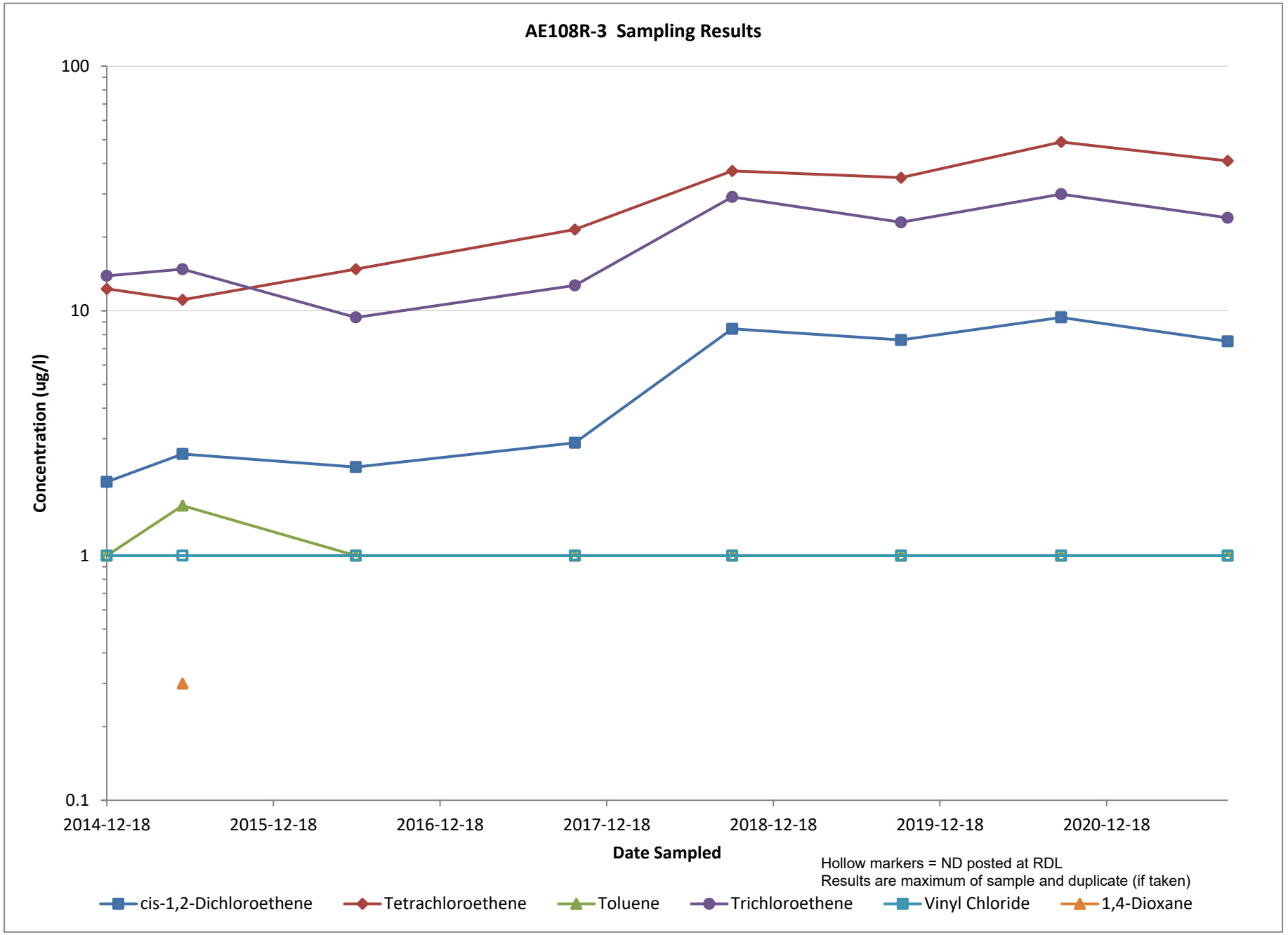

AE106R-4 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

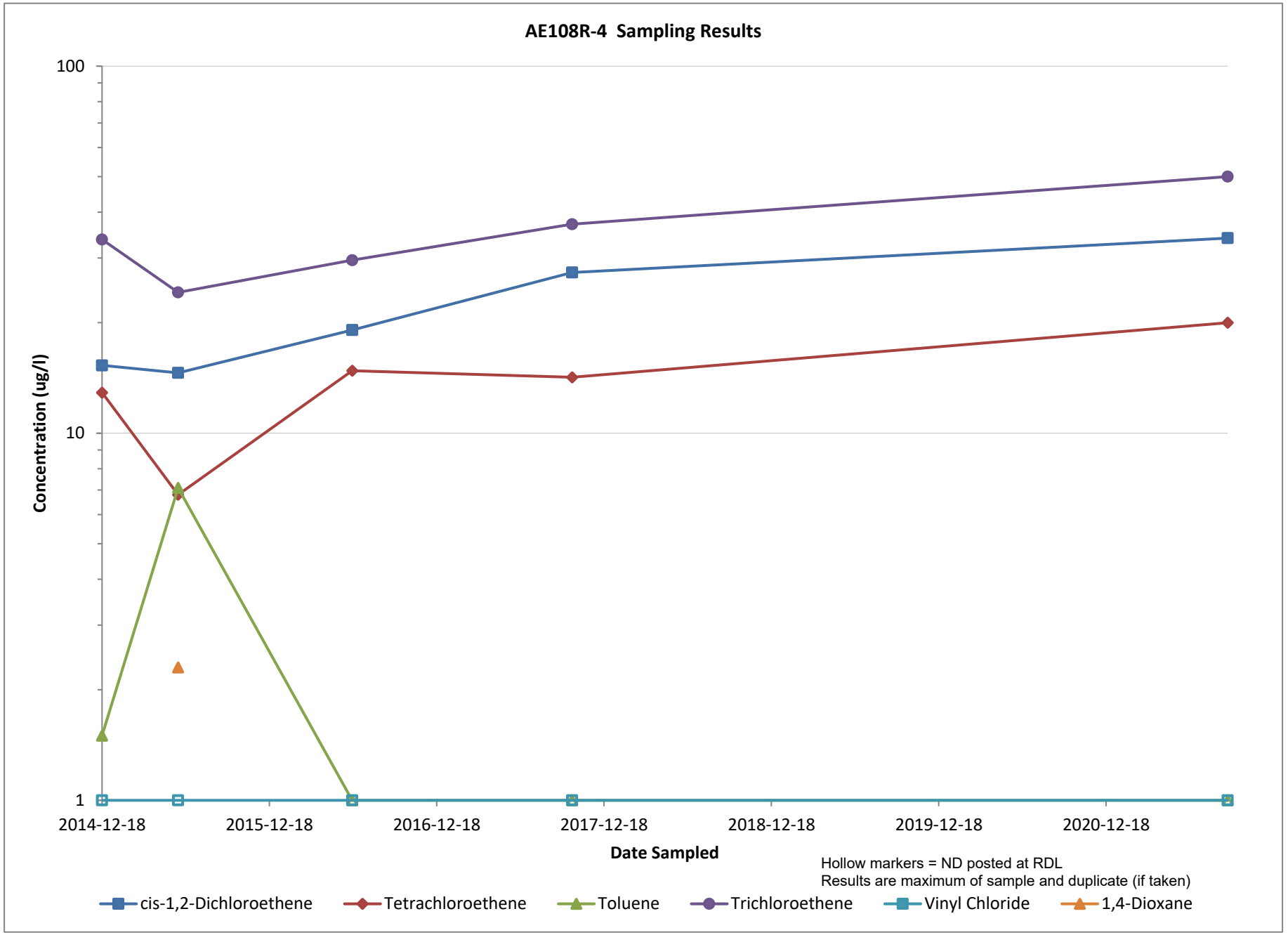

AE106R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

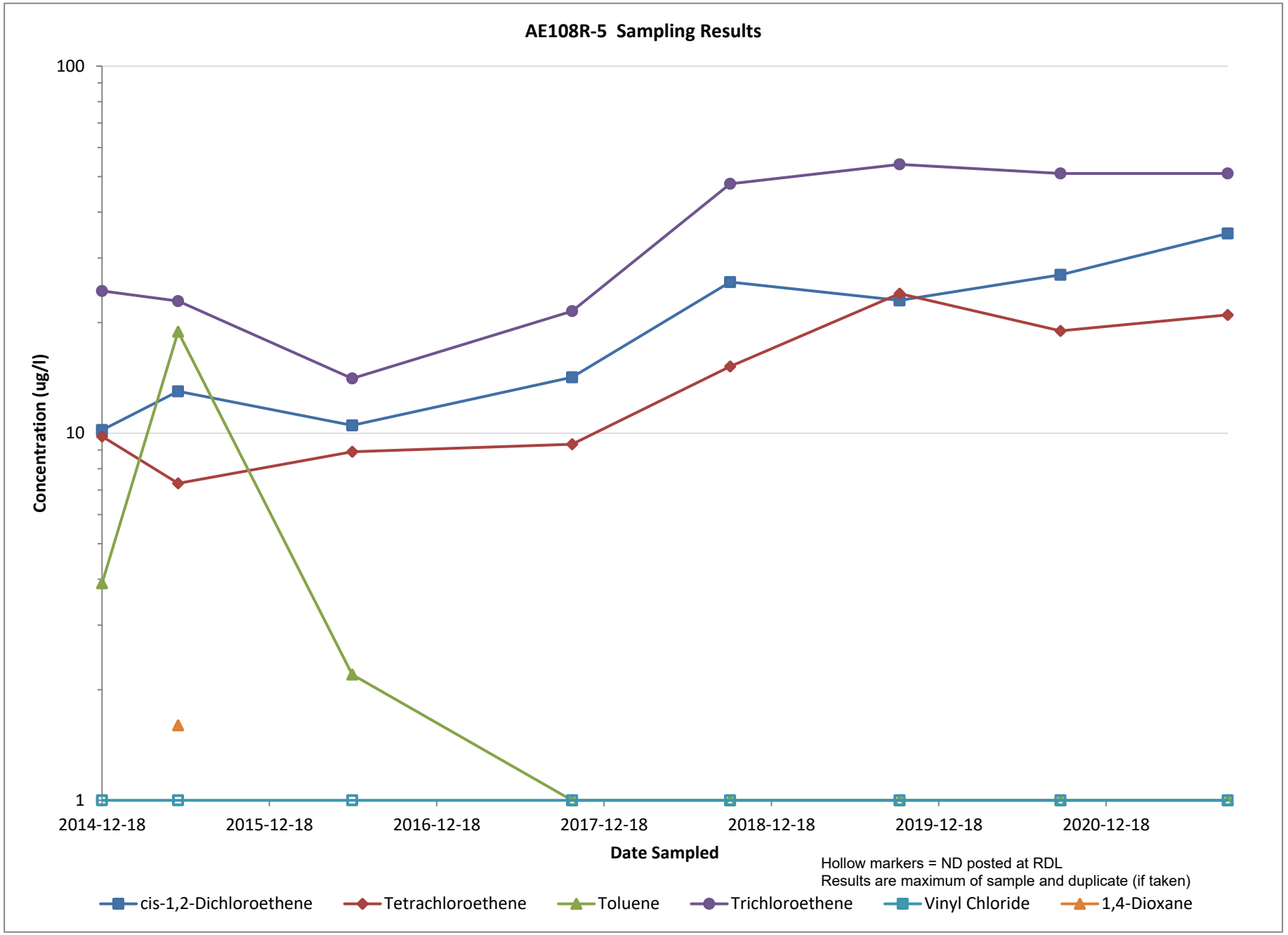

AE106S Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

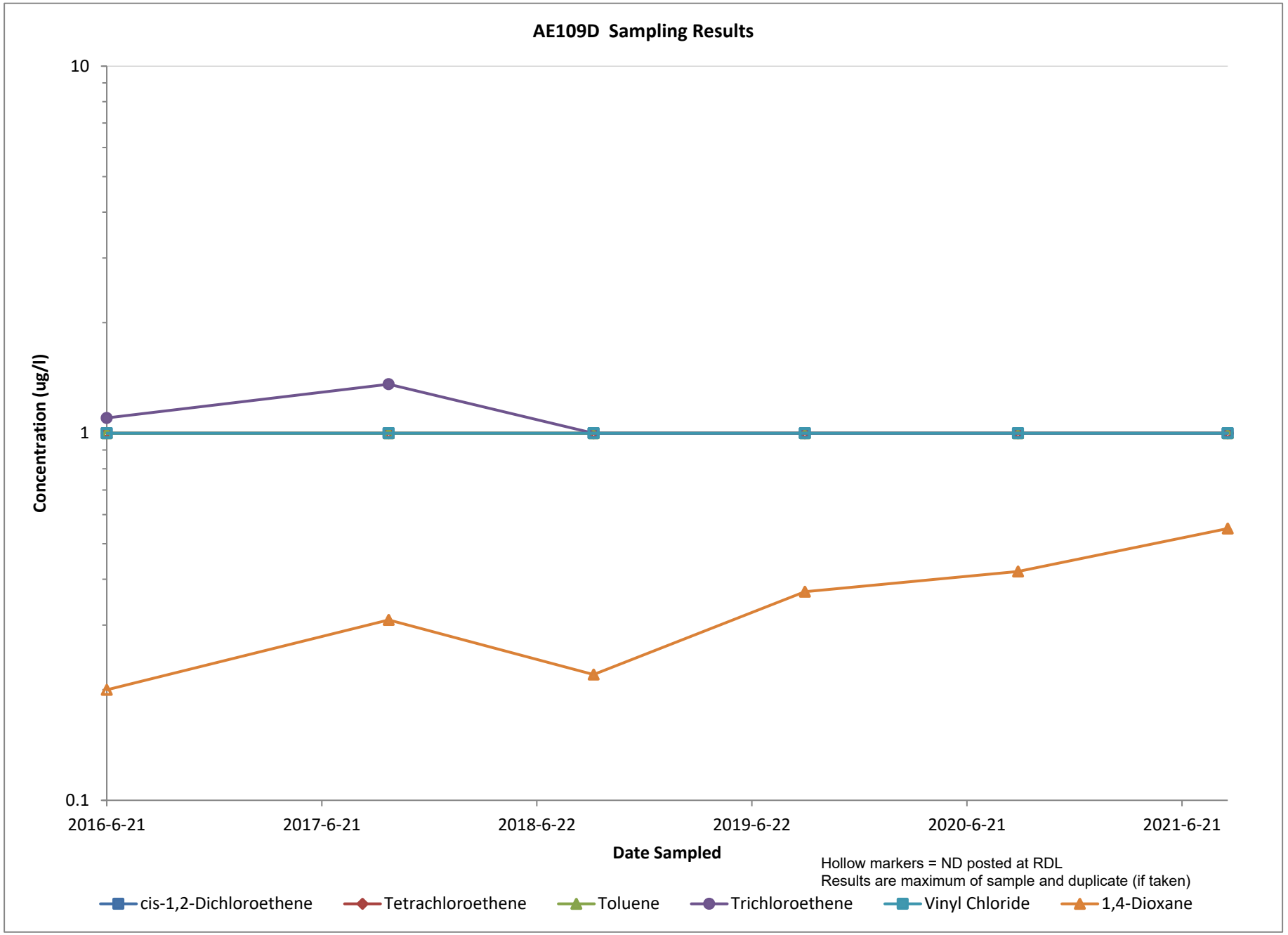

AE108R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

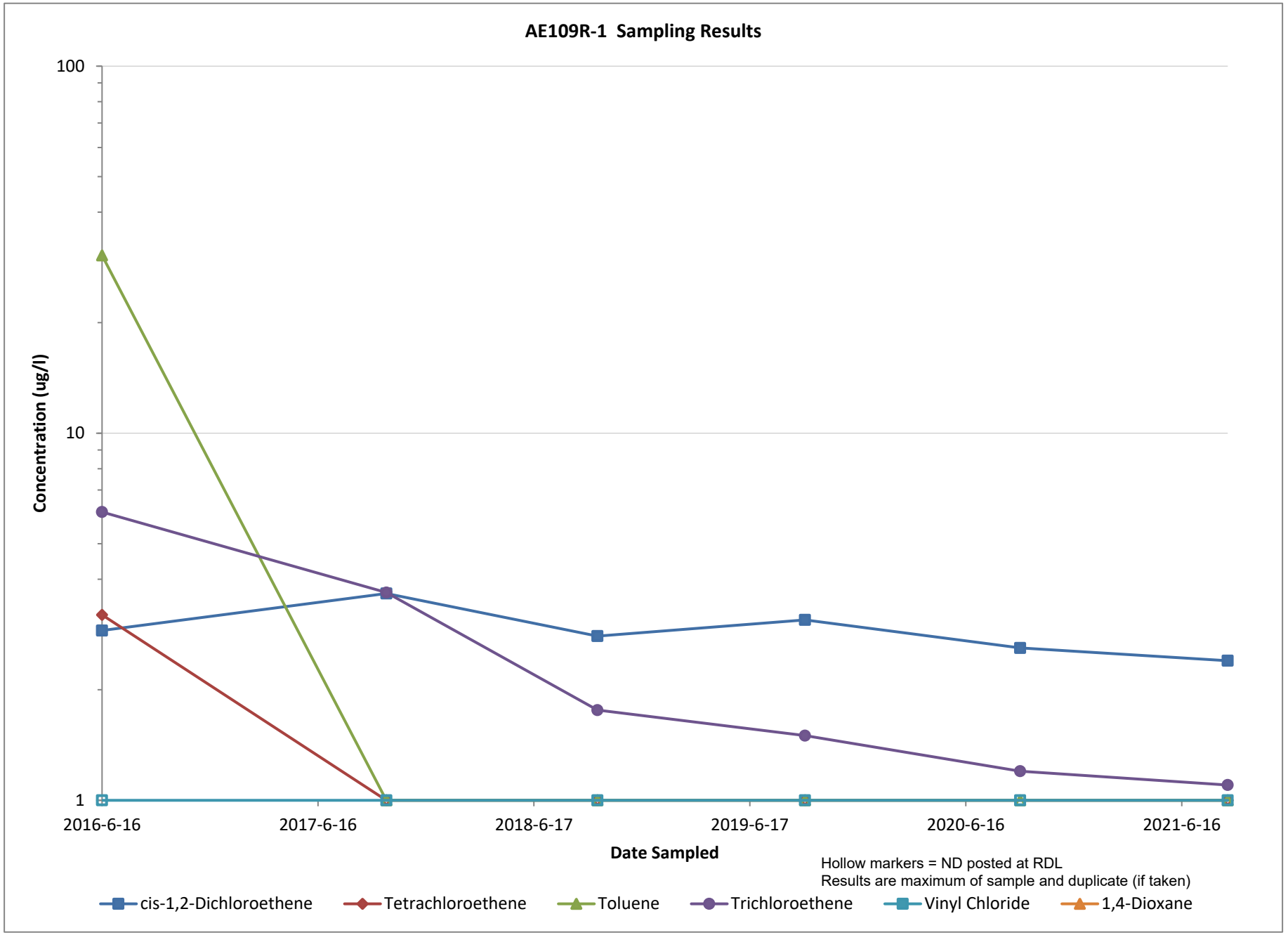

AE108R-2 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

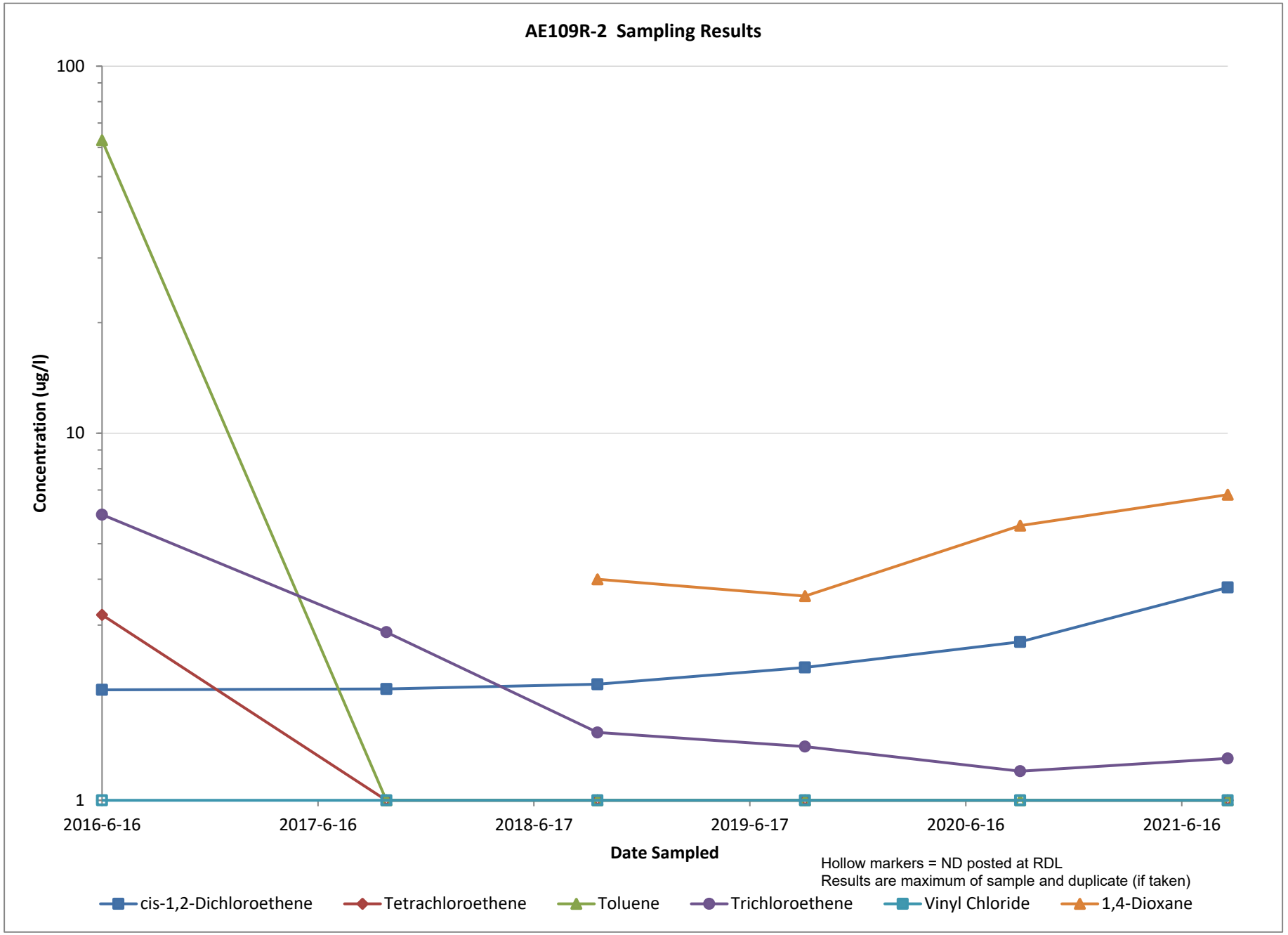

AE108R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

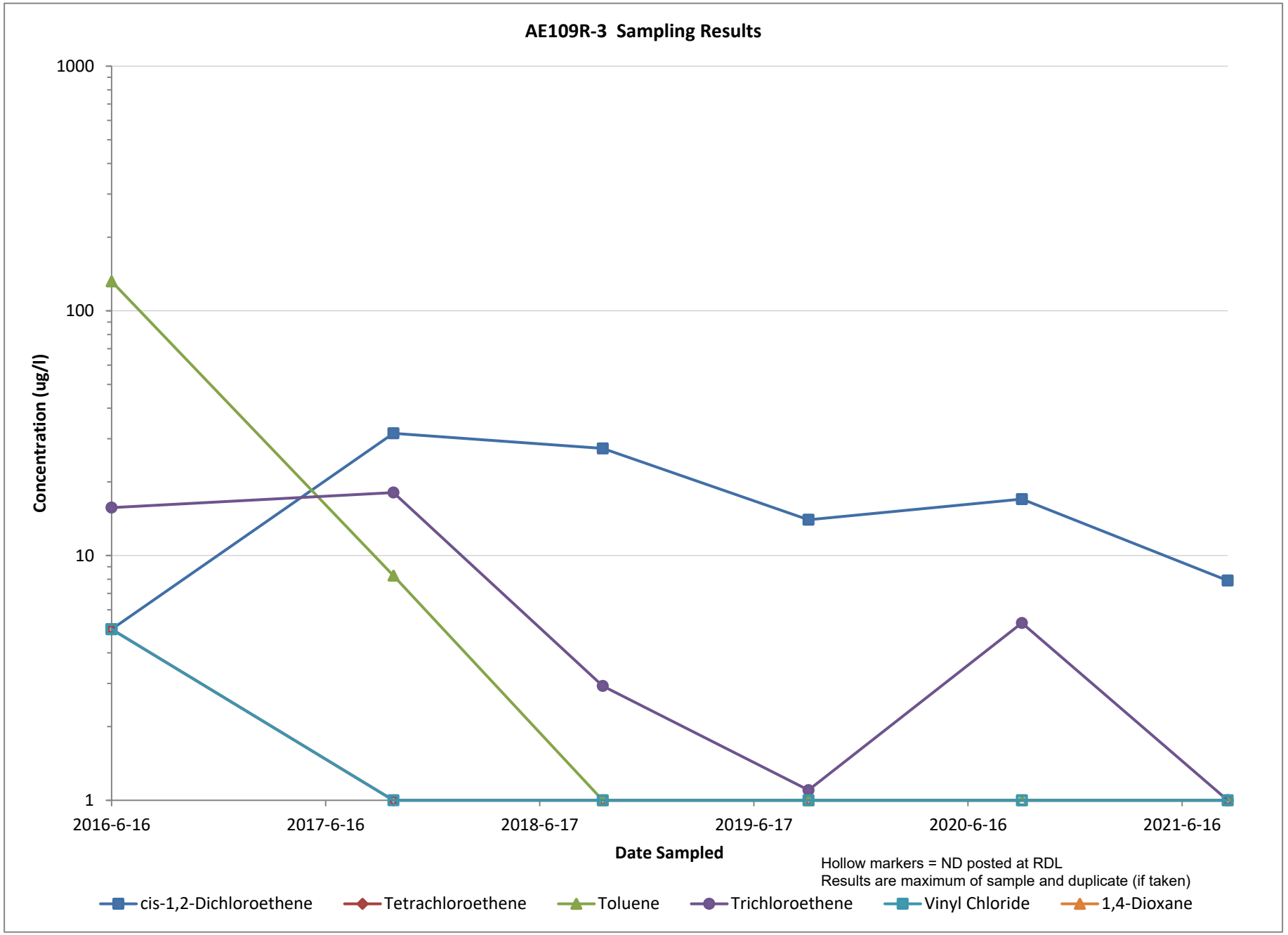

AE108R-4 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

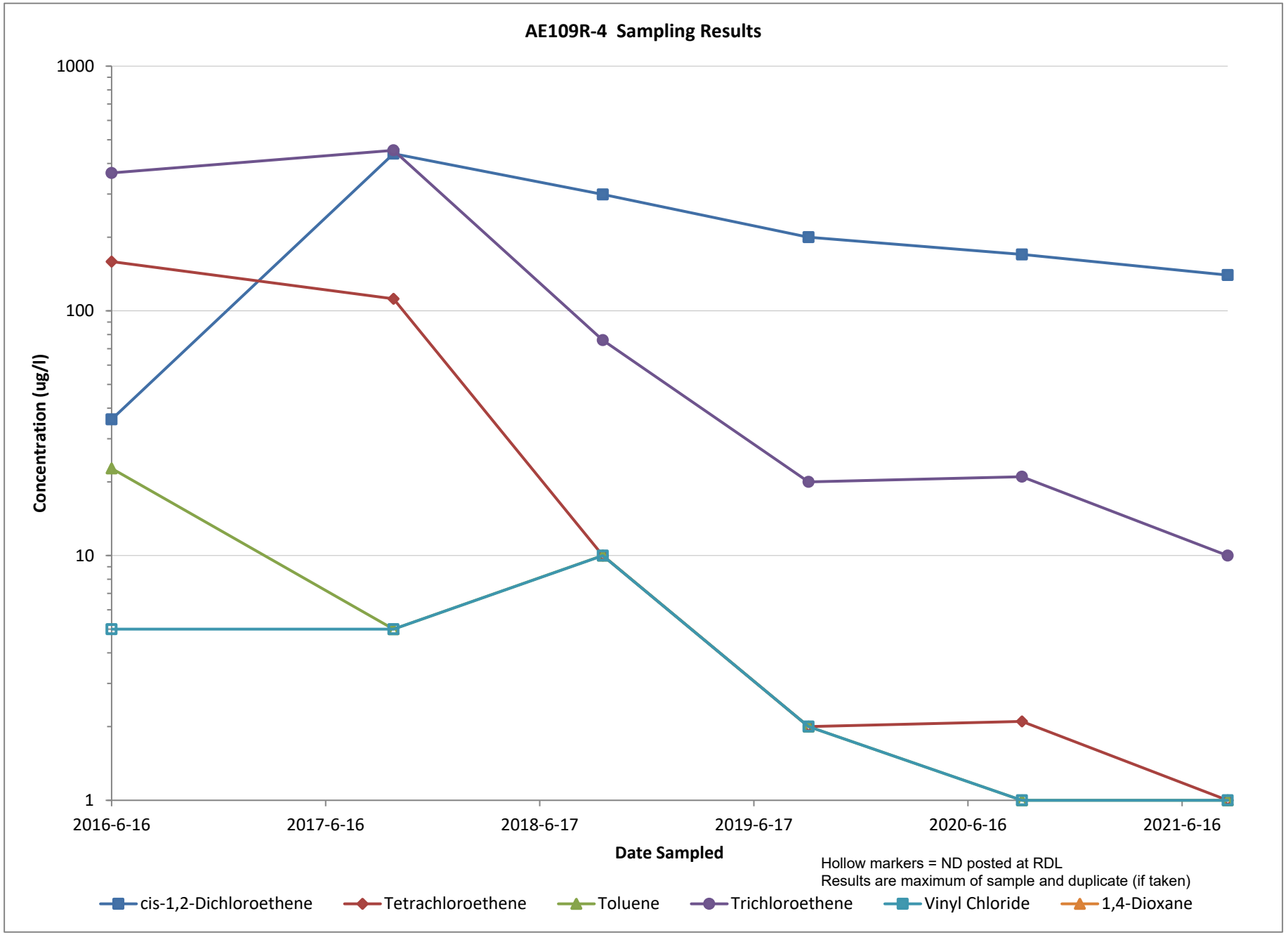

AE108R-5 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

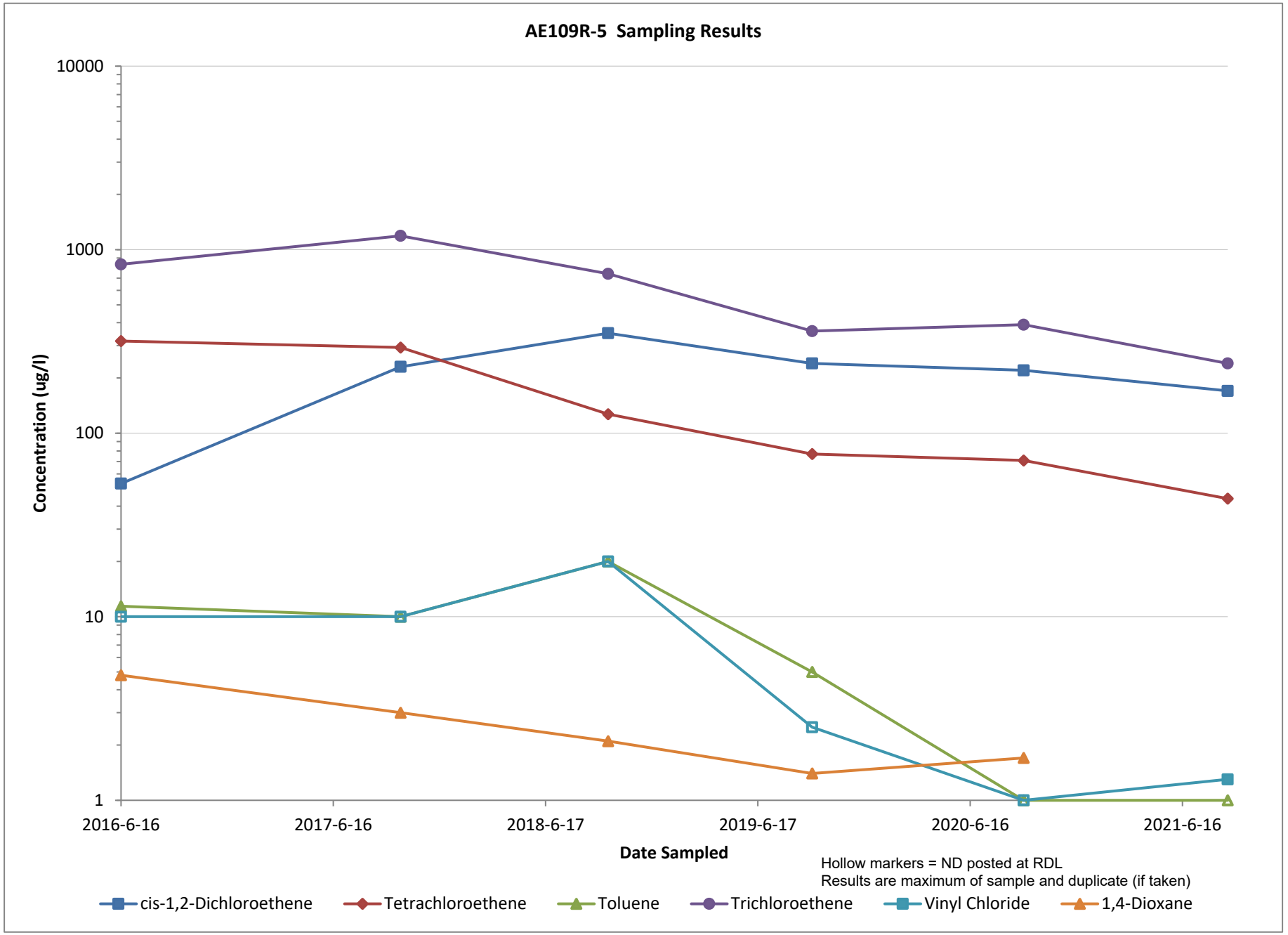

AE109D Sampling Results
10
1
0.1
Concentration (ug/l)
2016-6-21
2017-6-21
2018-6-22
2019-6-22
2020-6-21
2021-6-21
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

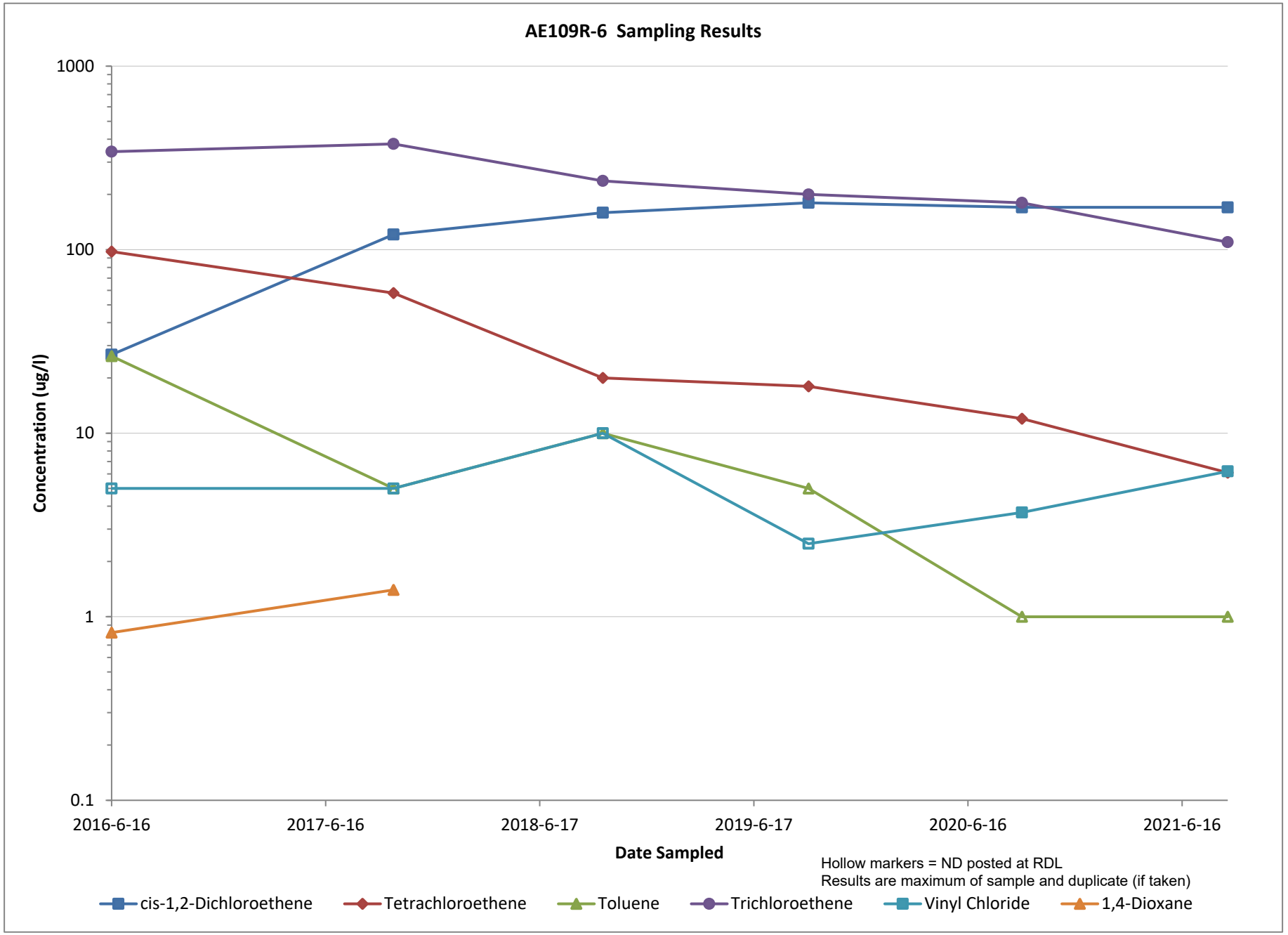

AE109R-1 Sampling Results
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

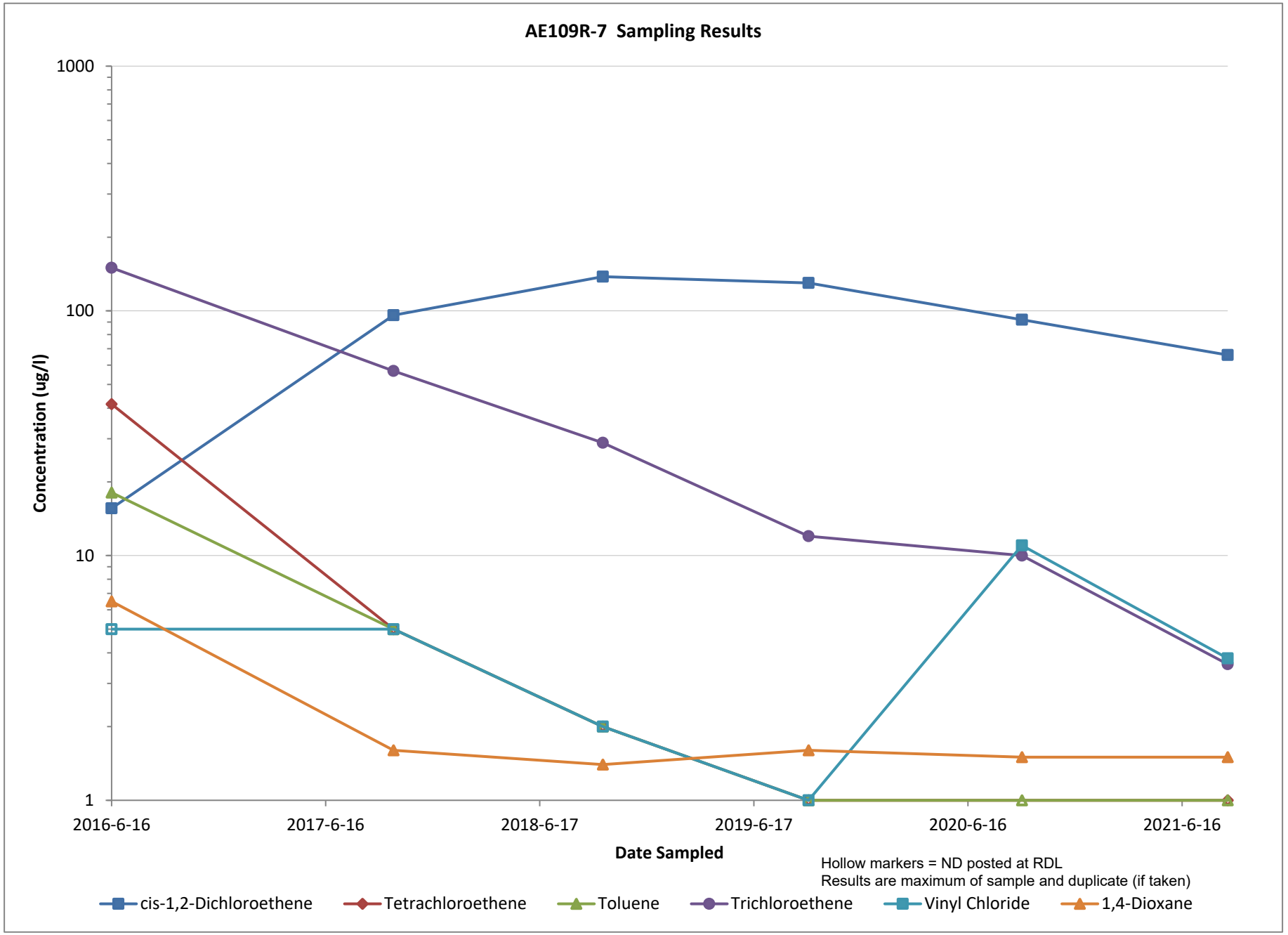

AE109R-2 Sampling Results
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

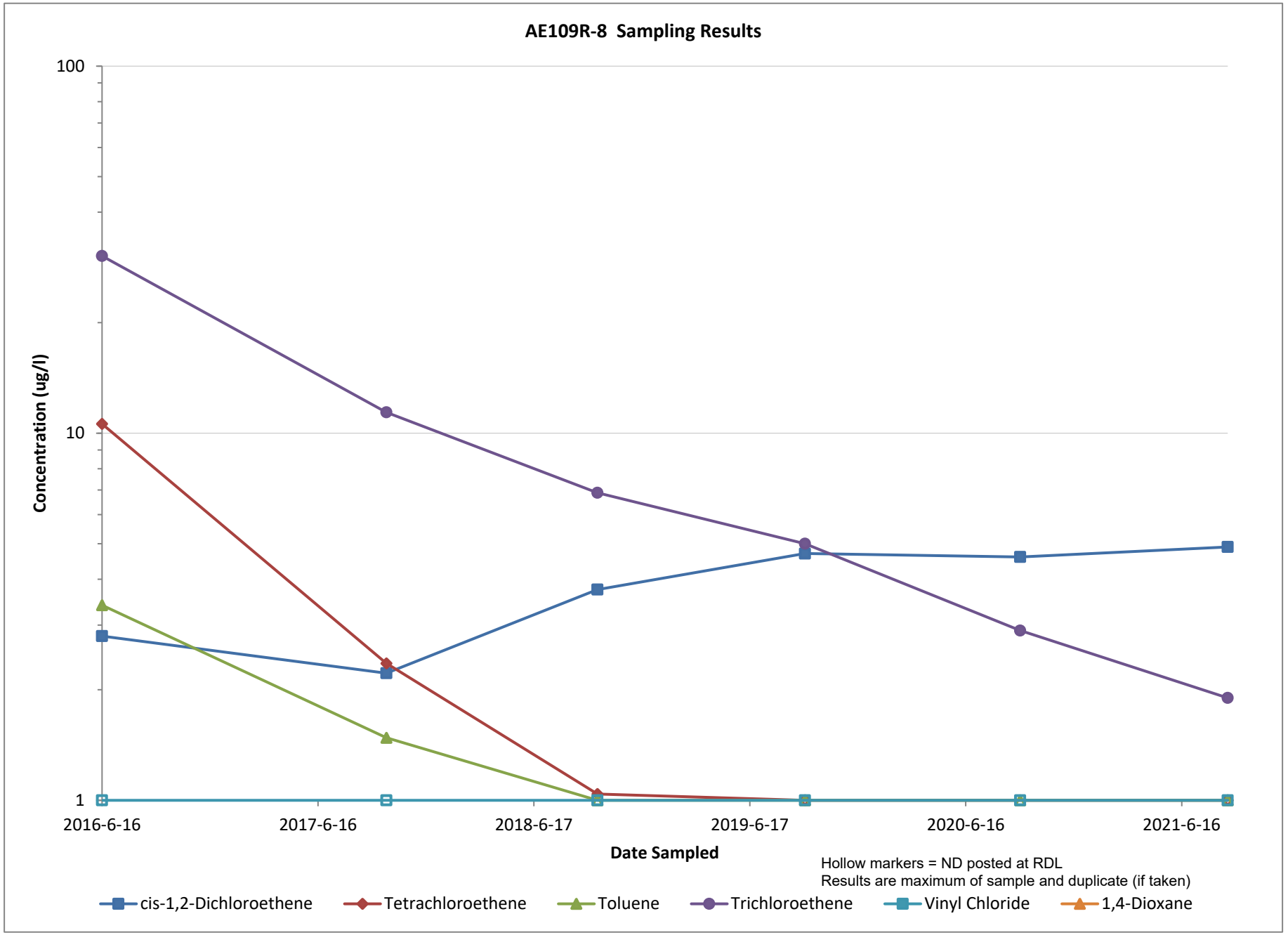

AE109R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

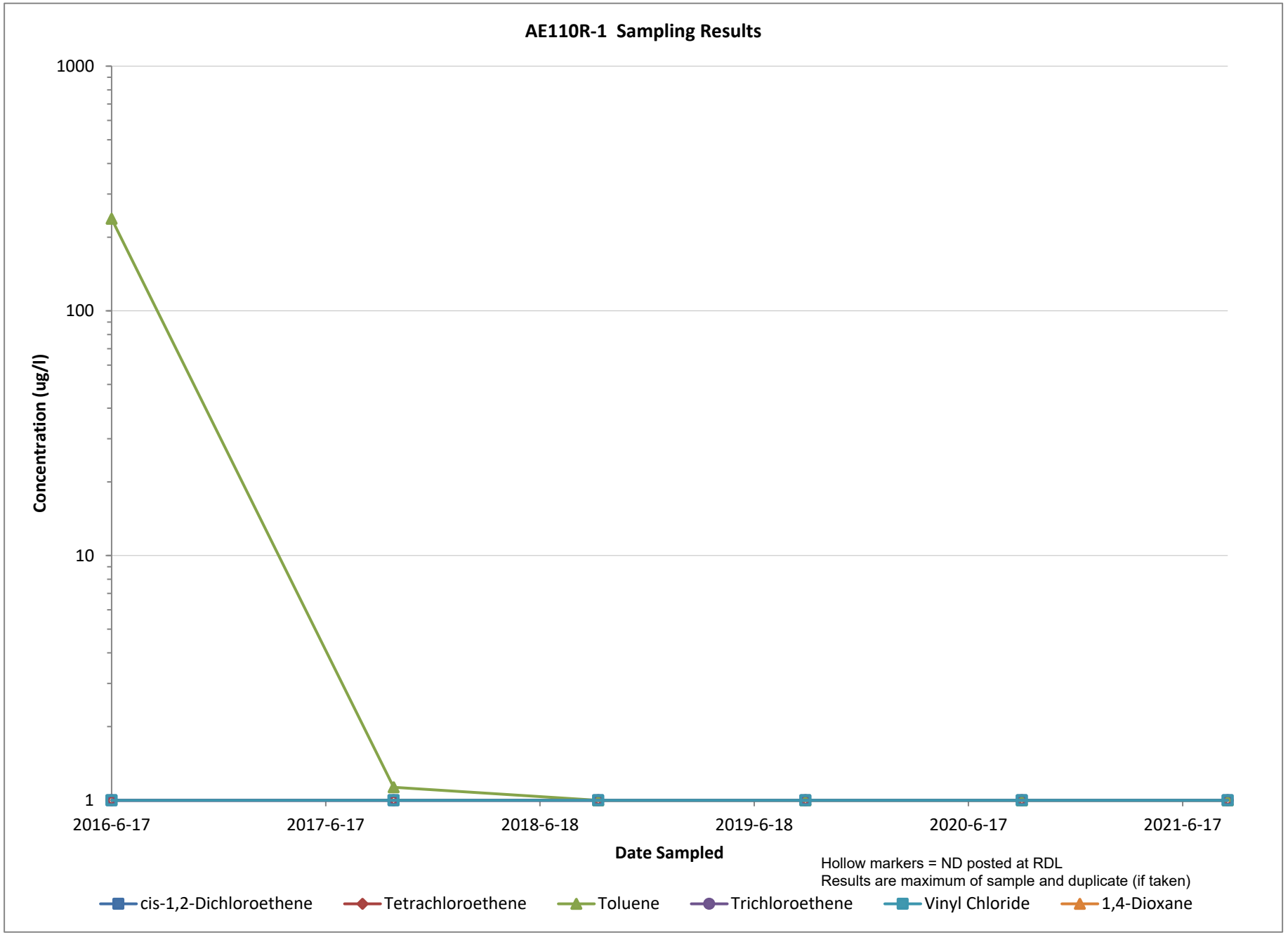

AE109R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

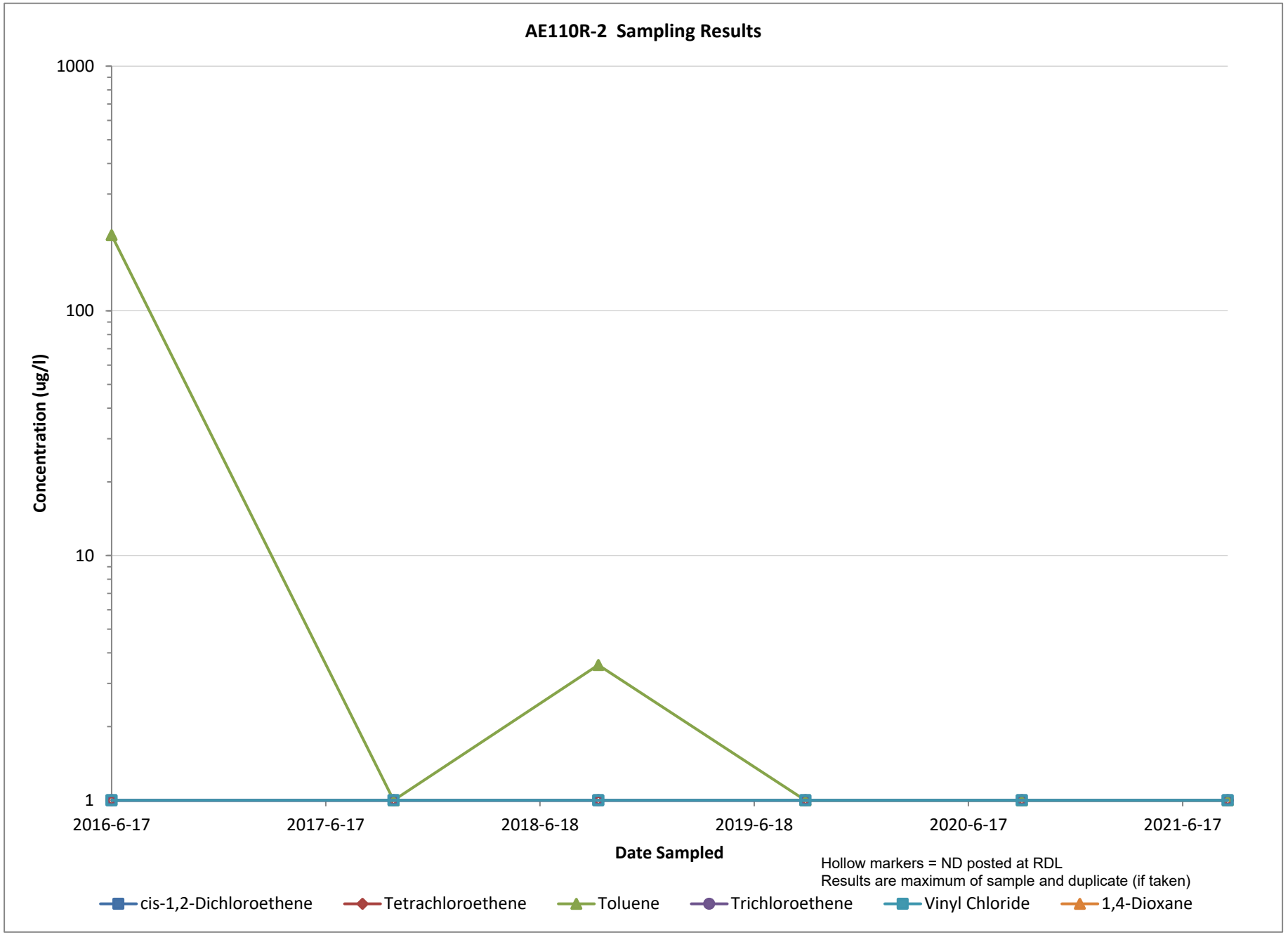

AE109R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

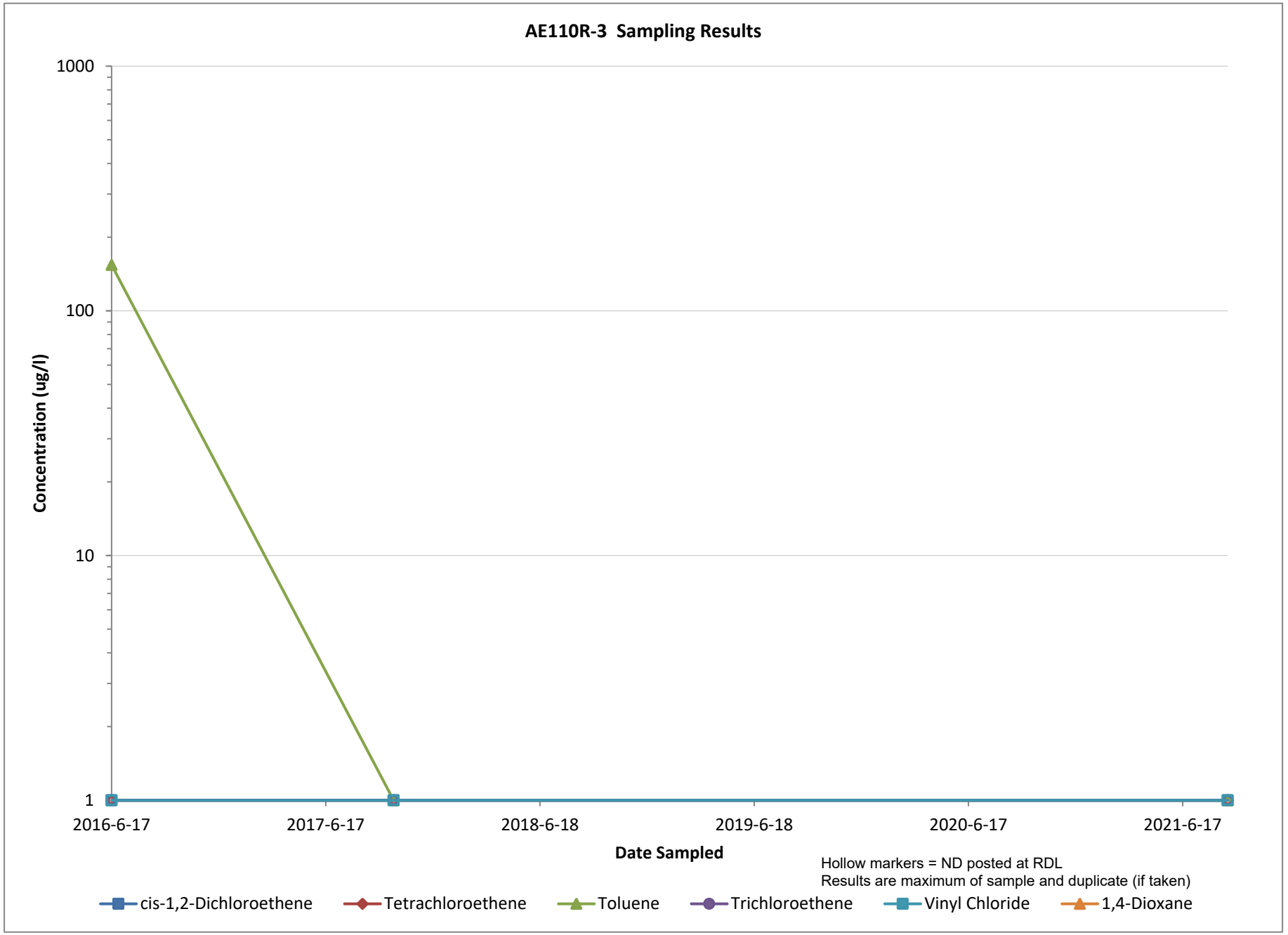

AE109R-6 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

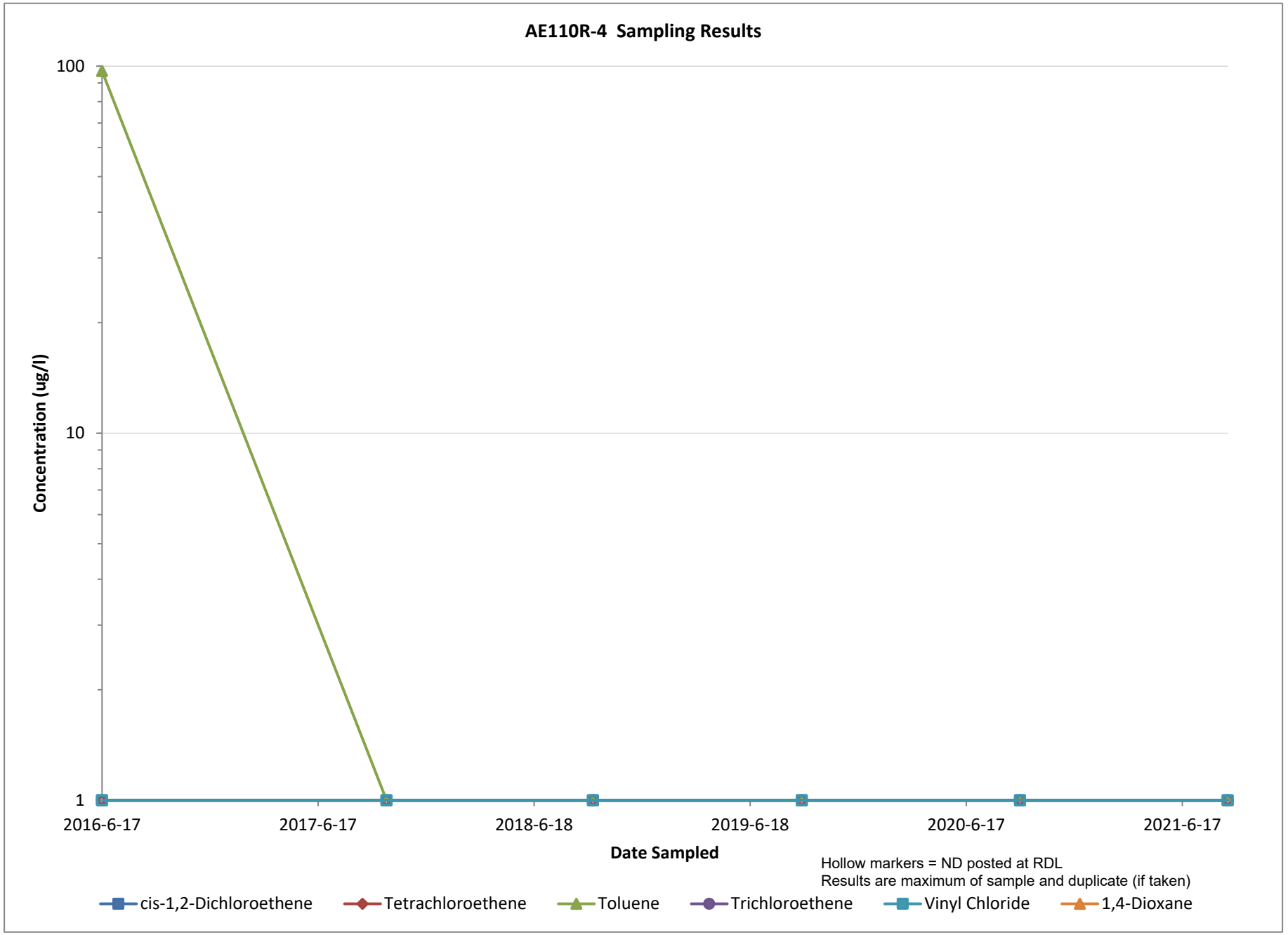

AE109R-7 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

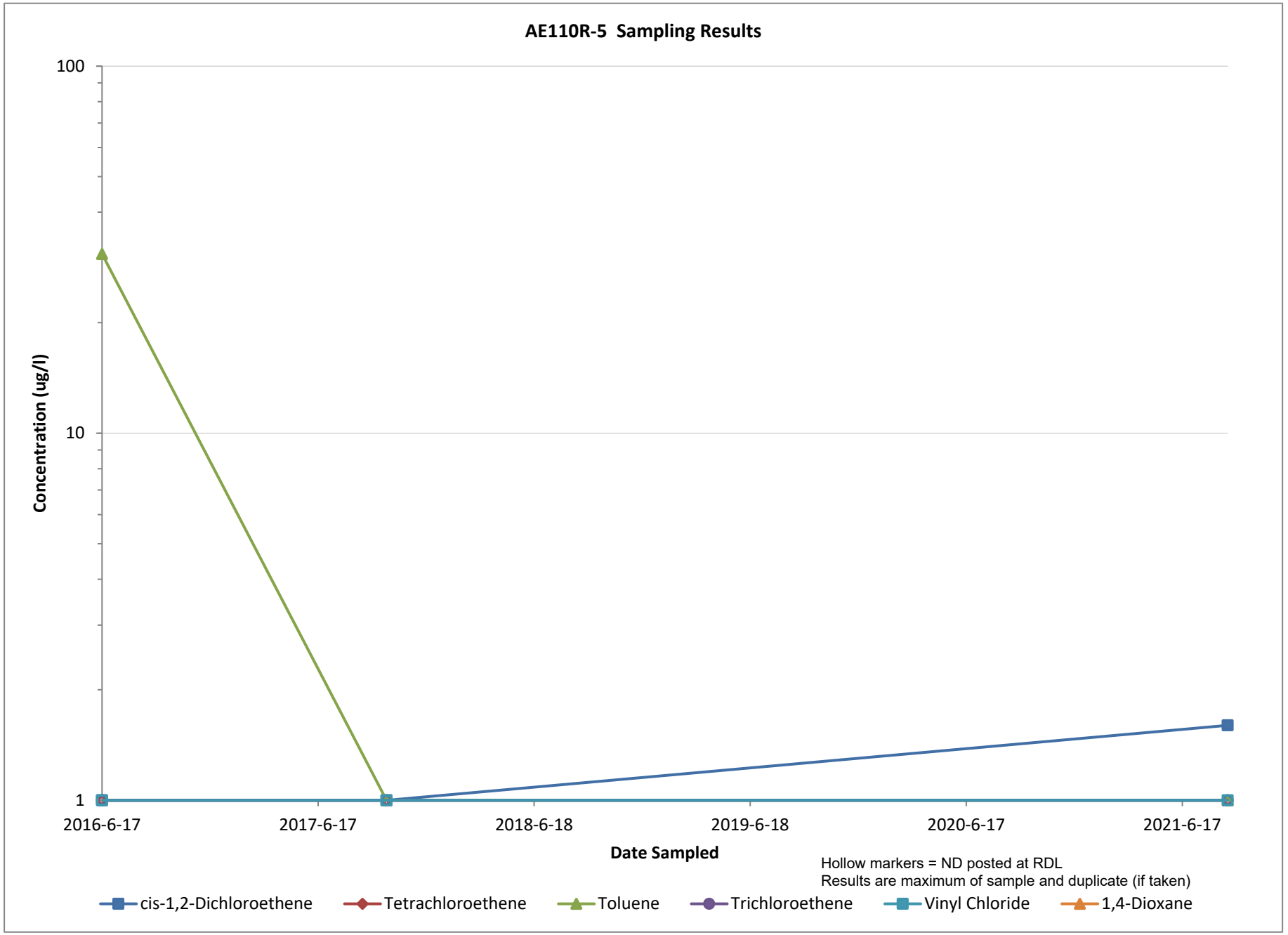

AE109R-8 Sampling Results
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

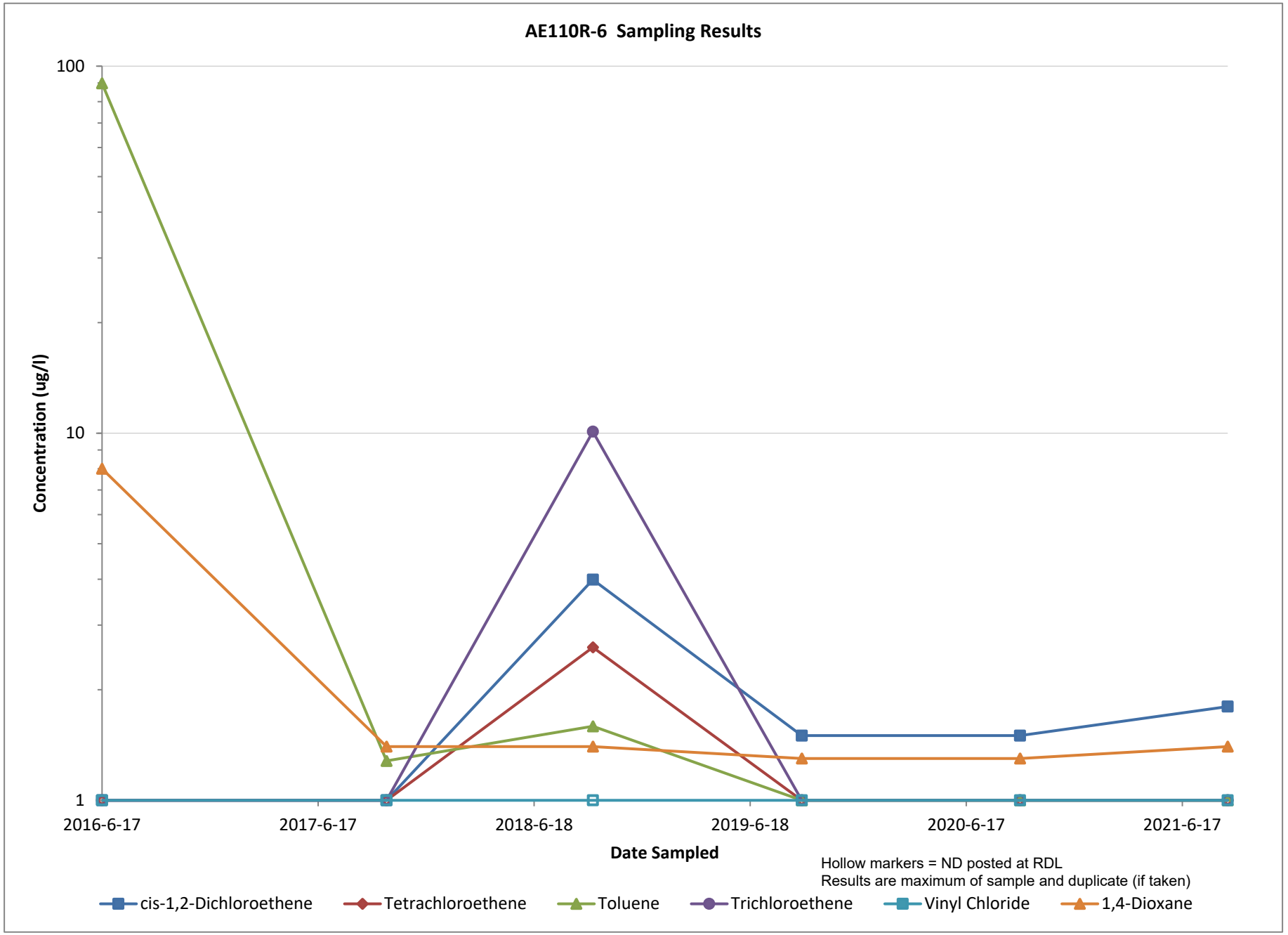

AE110R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

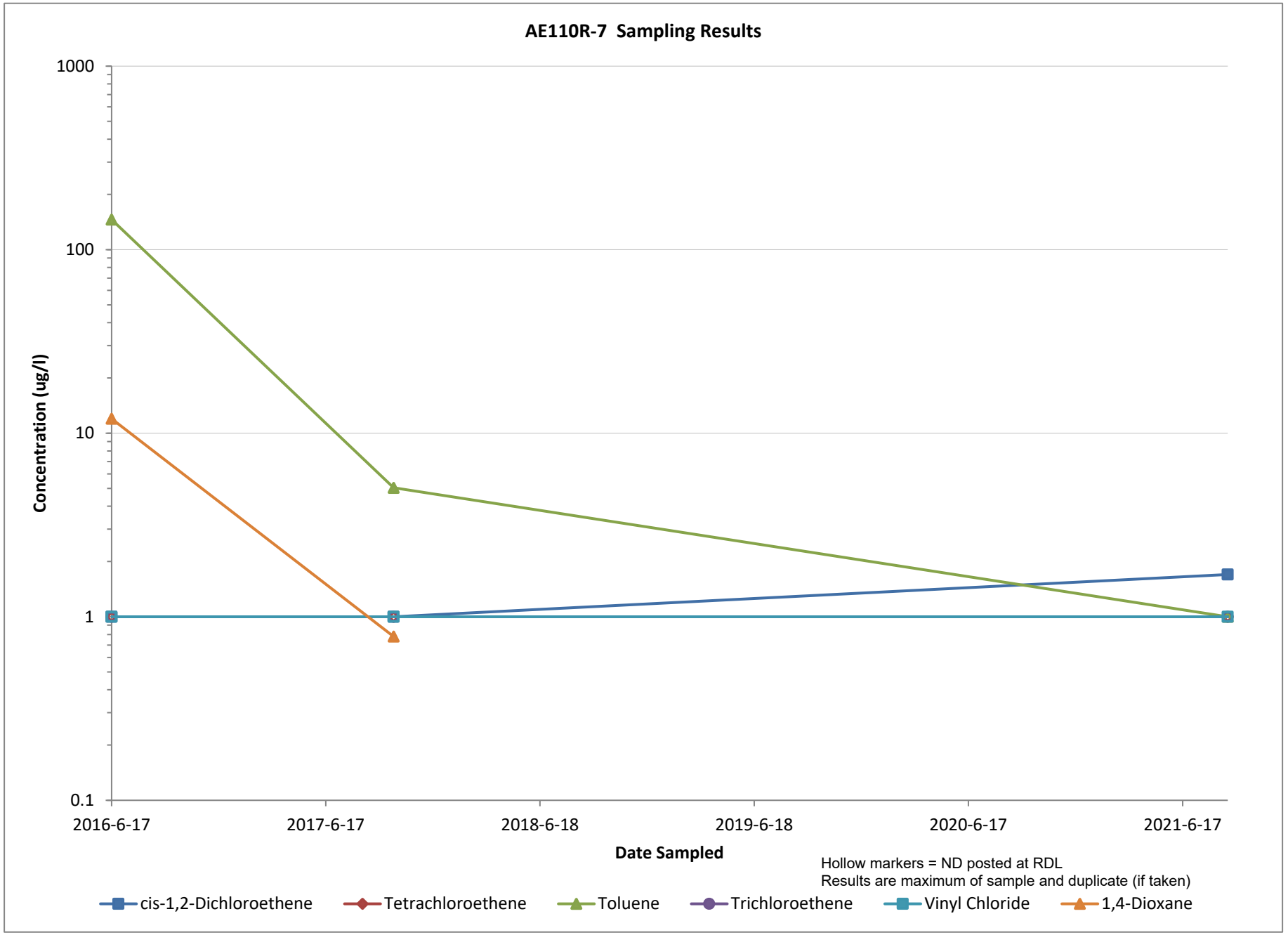

AE110R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

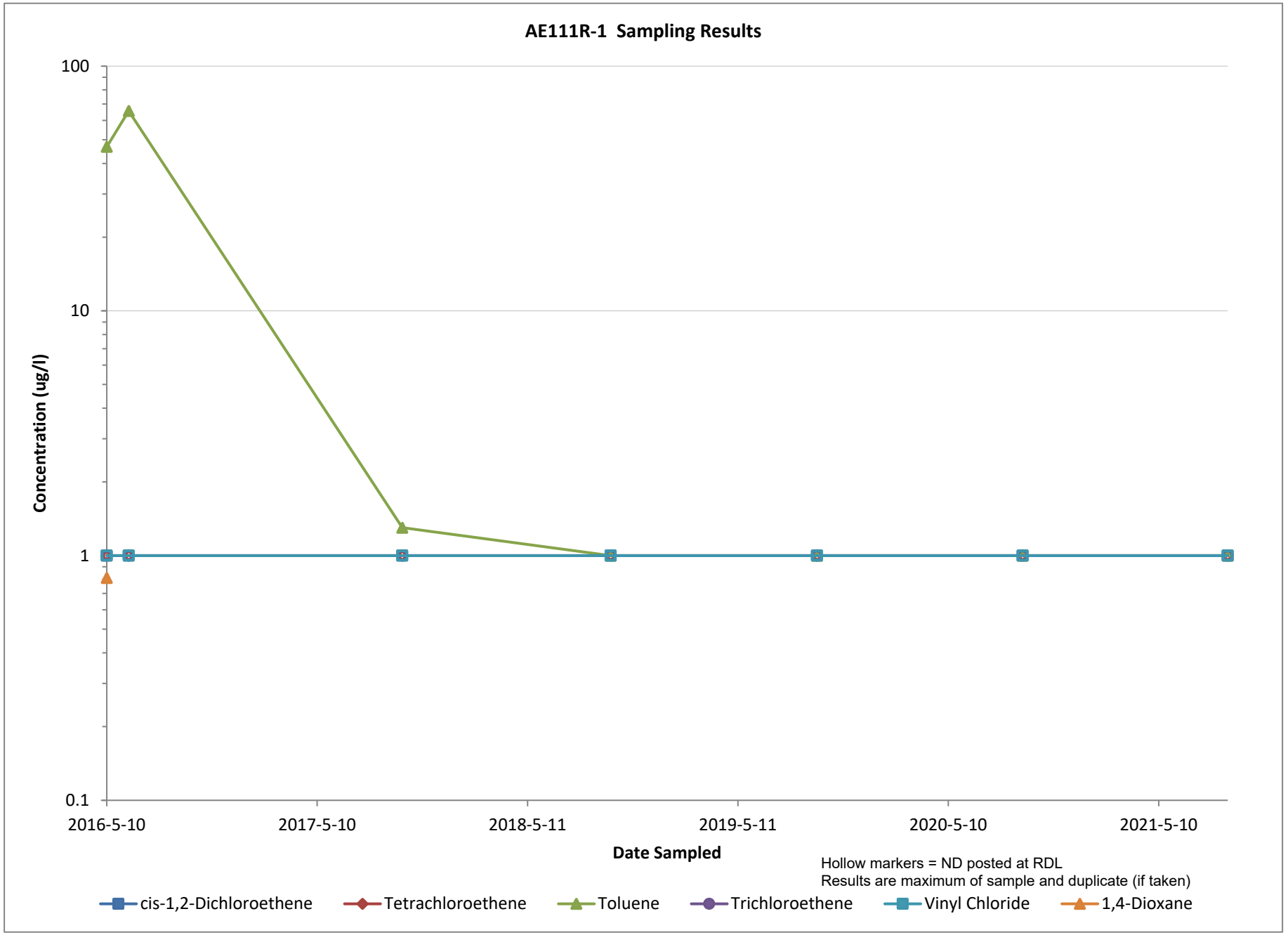

AE110R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

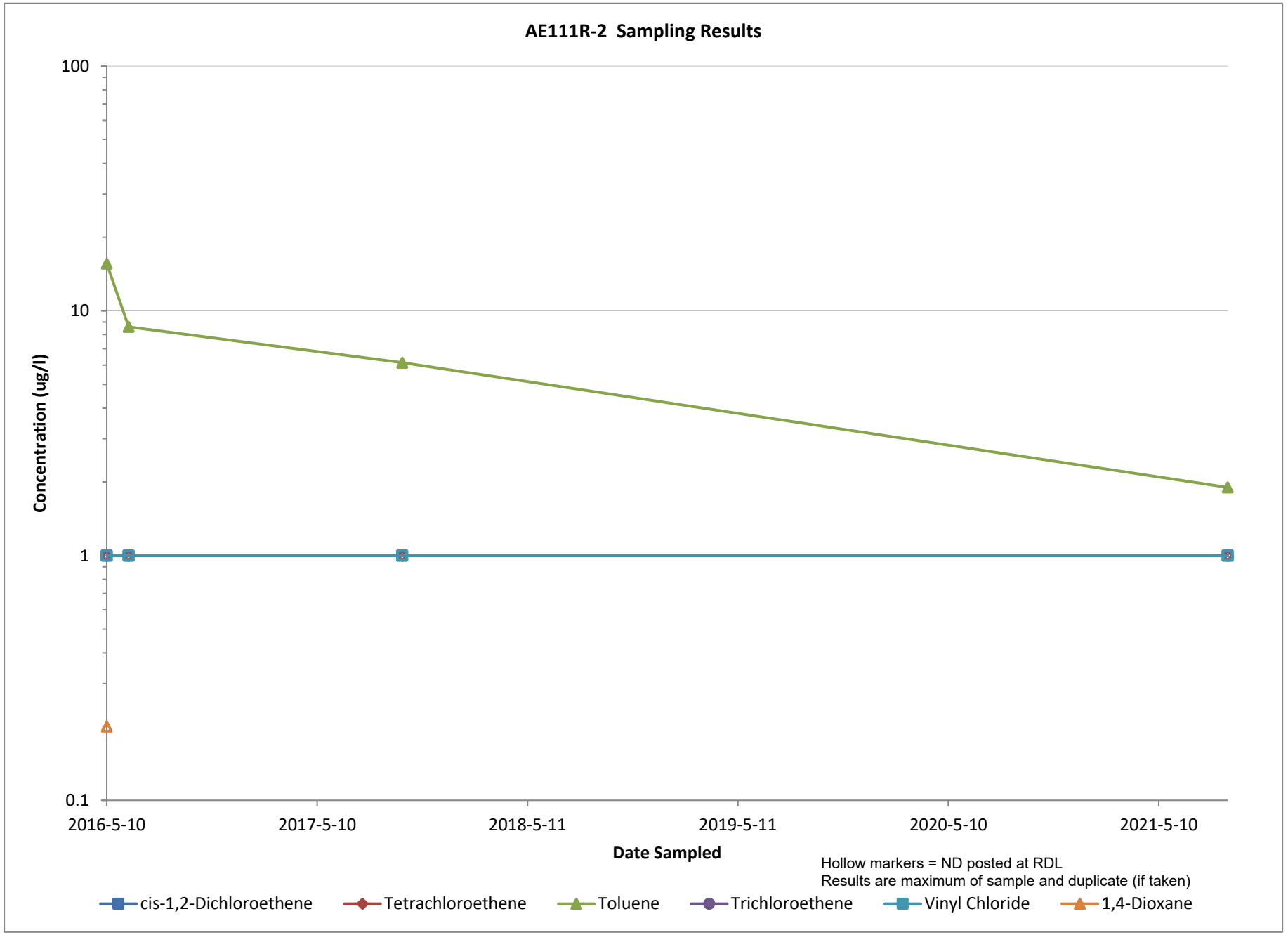

AE110R-4 Sampling Results
100
10
1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

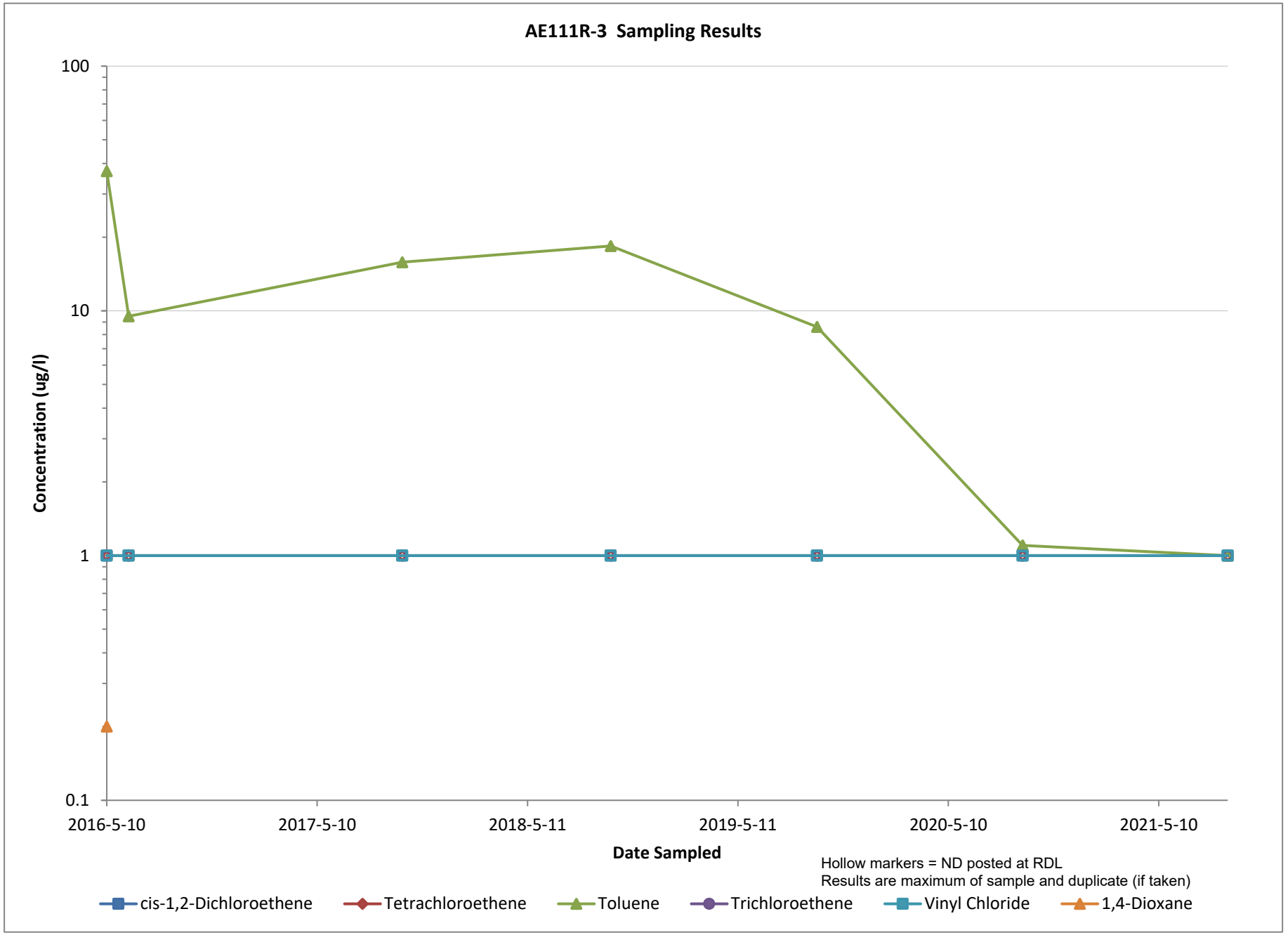

AE110R-5 Sampling Results
100
10
1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

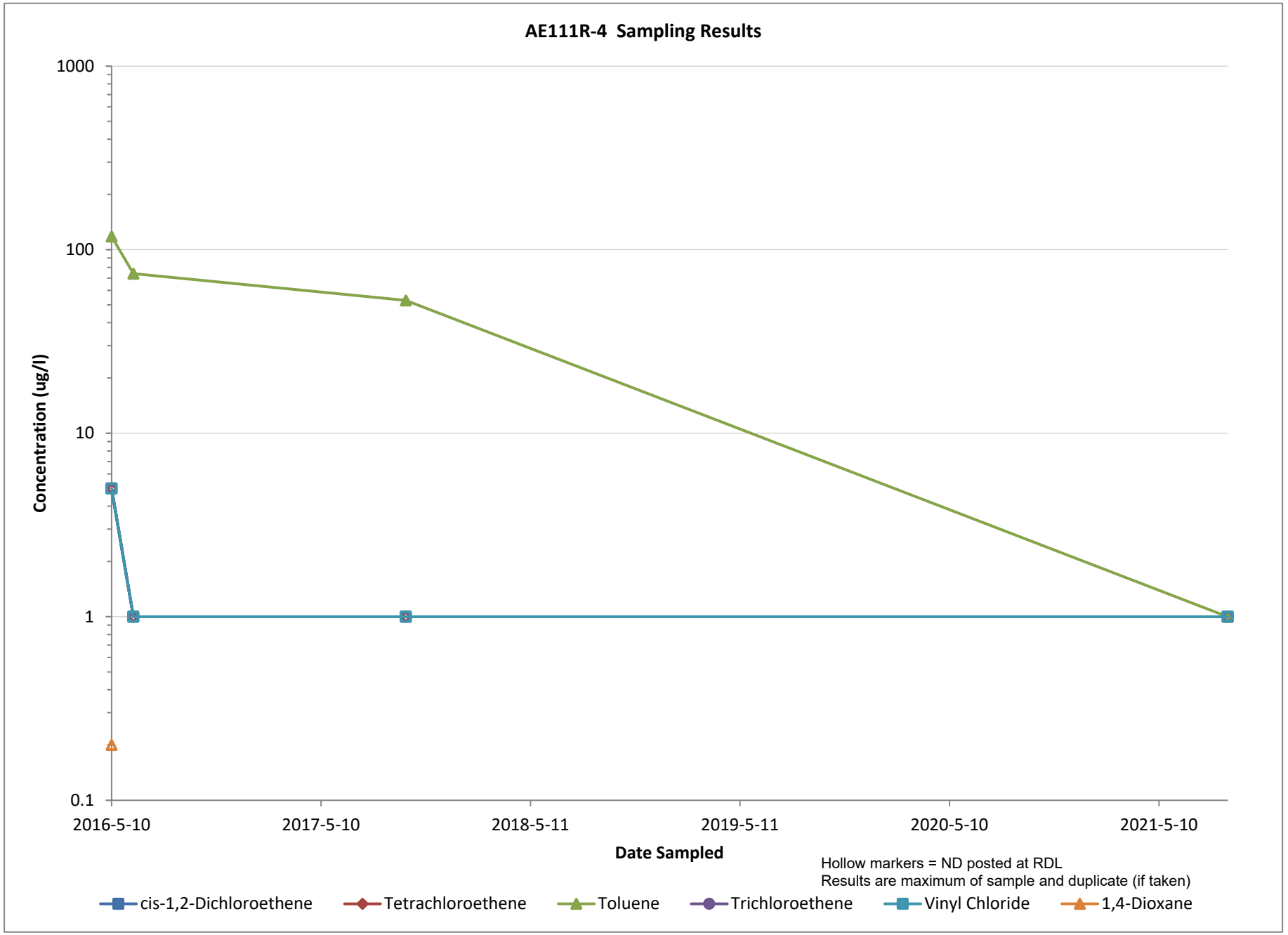

AE110R-6 Sampling Results
100
10
1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

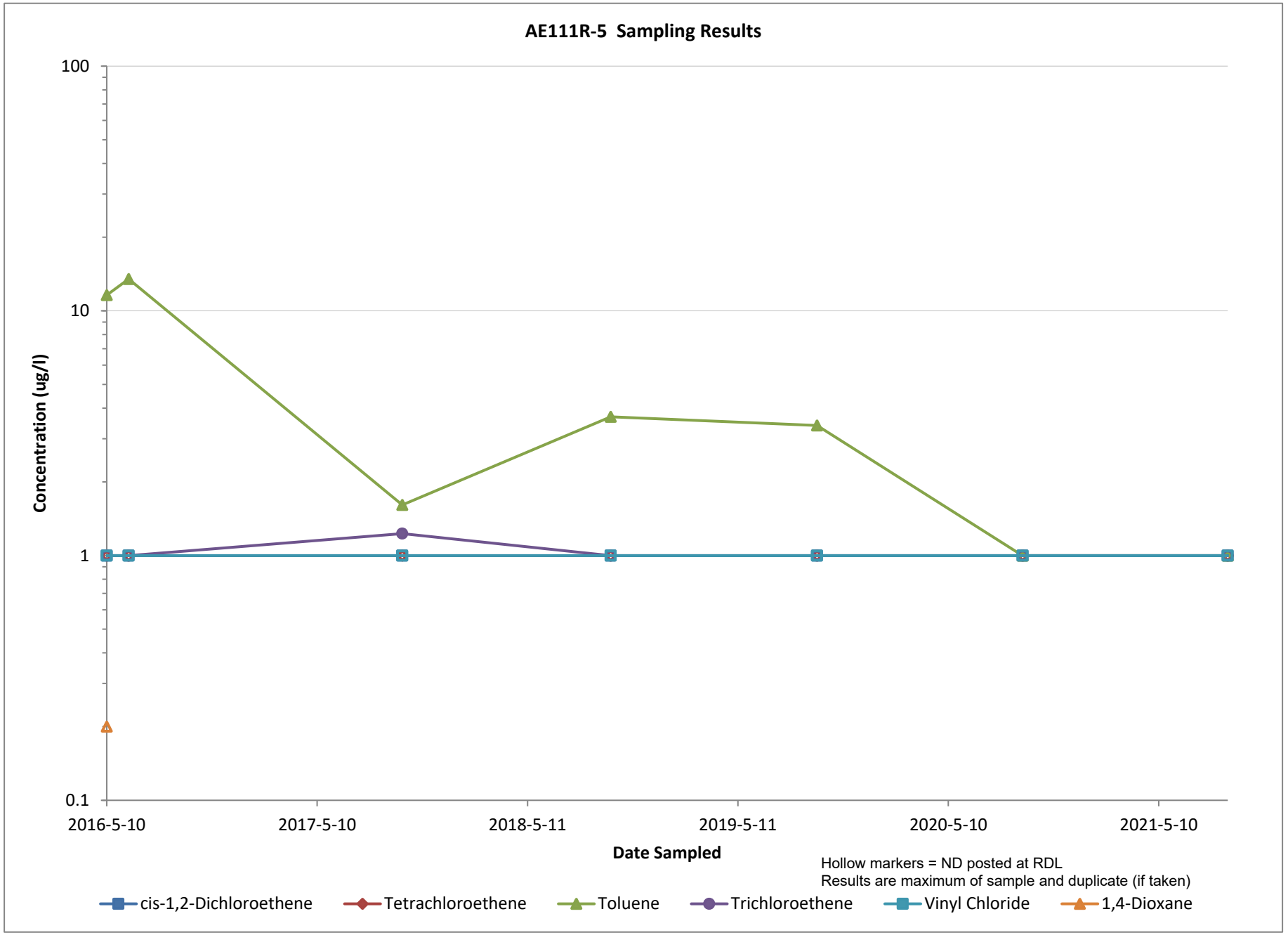

AE110R-7 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

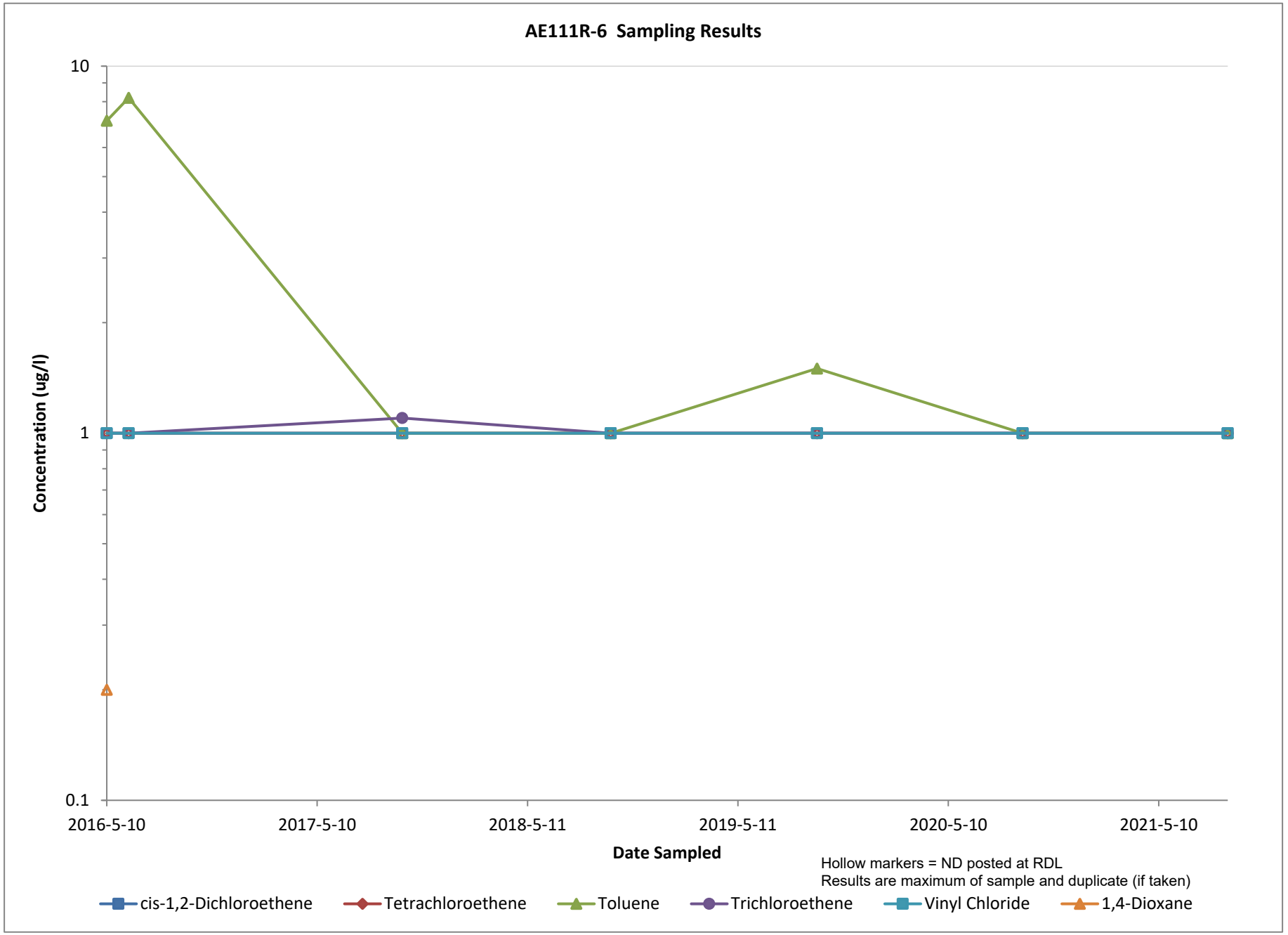

AE111R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

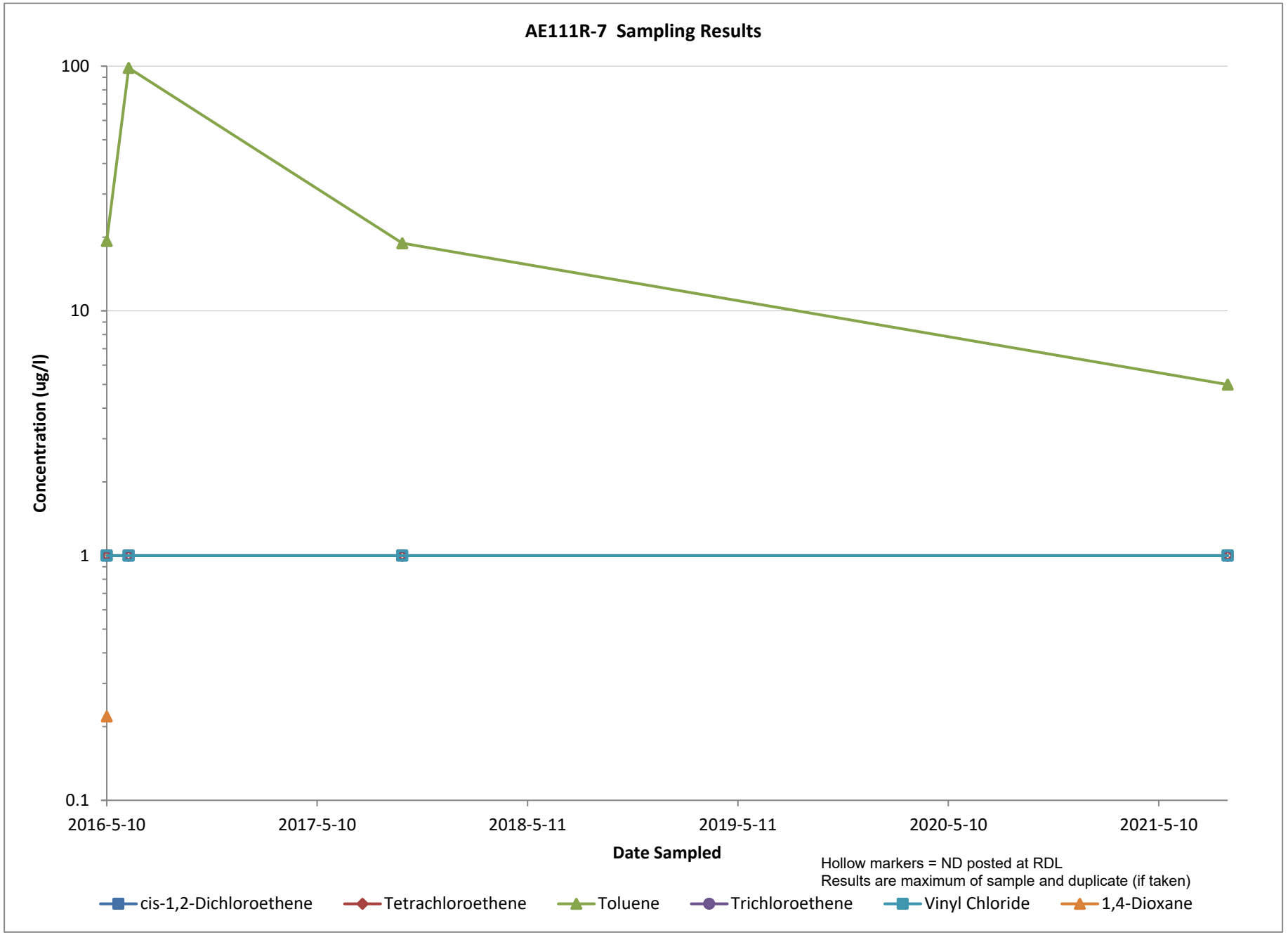

AE111R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

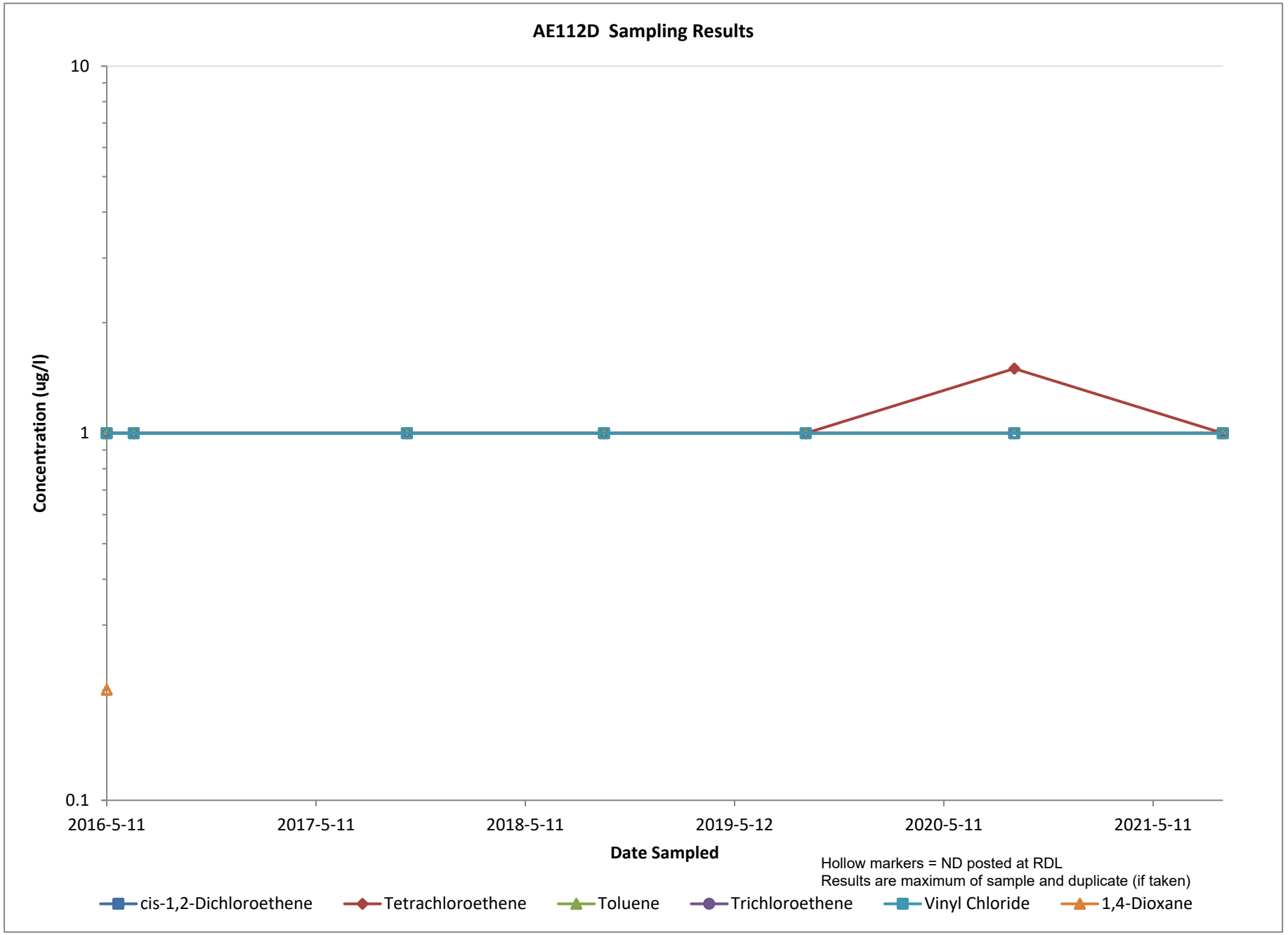

AE111R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

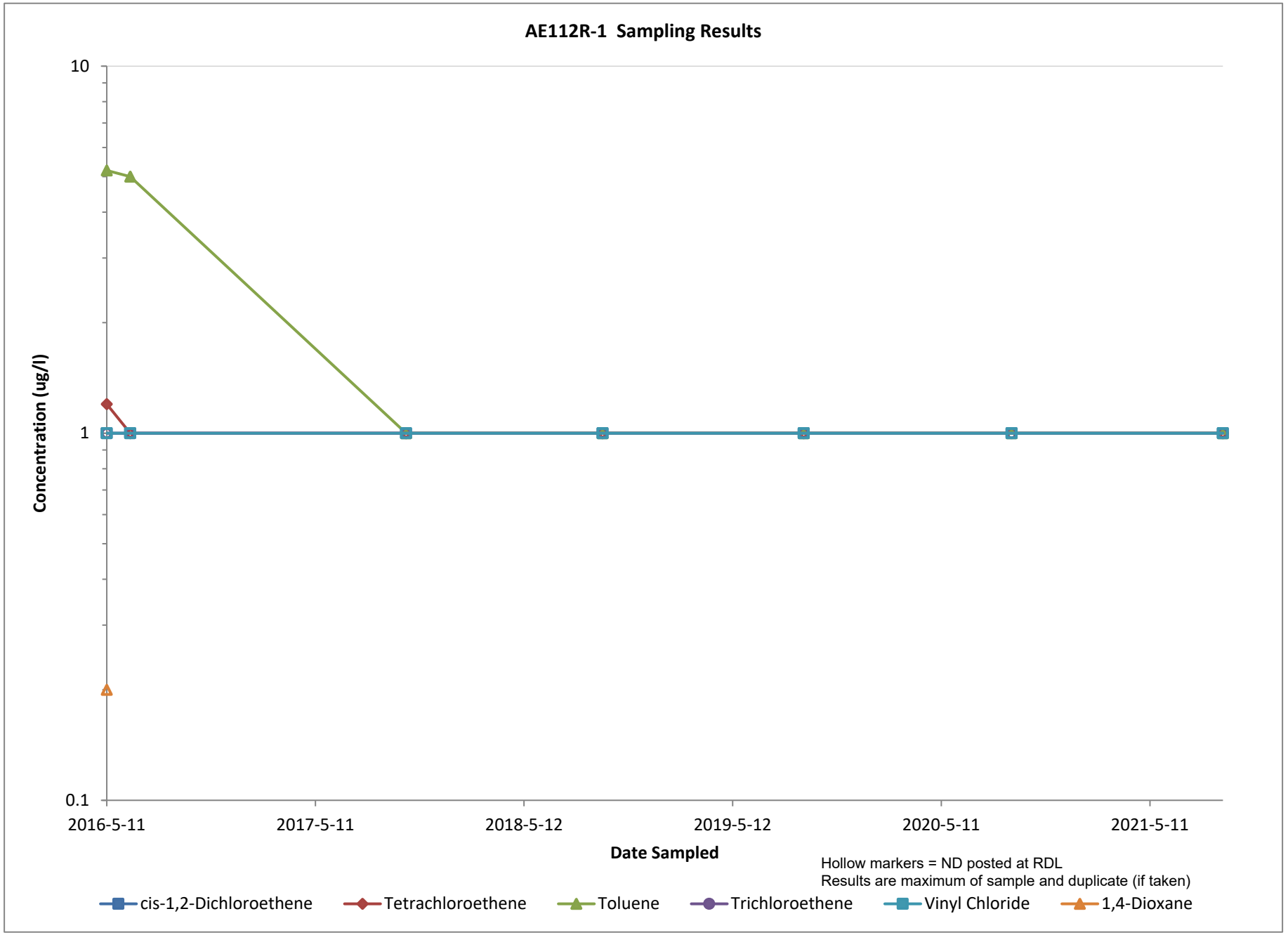

AE111R-4 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

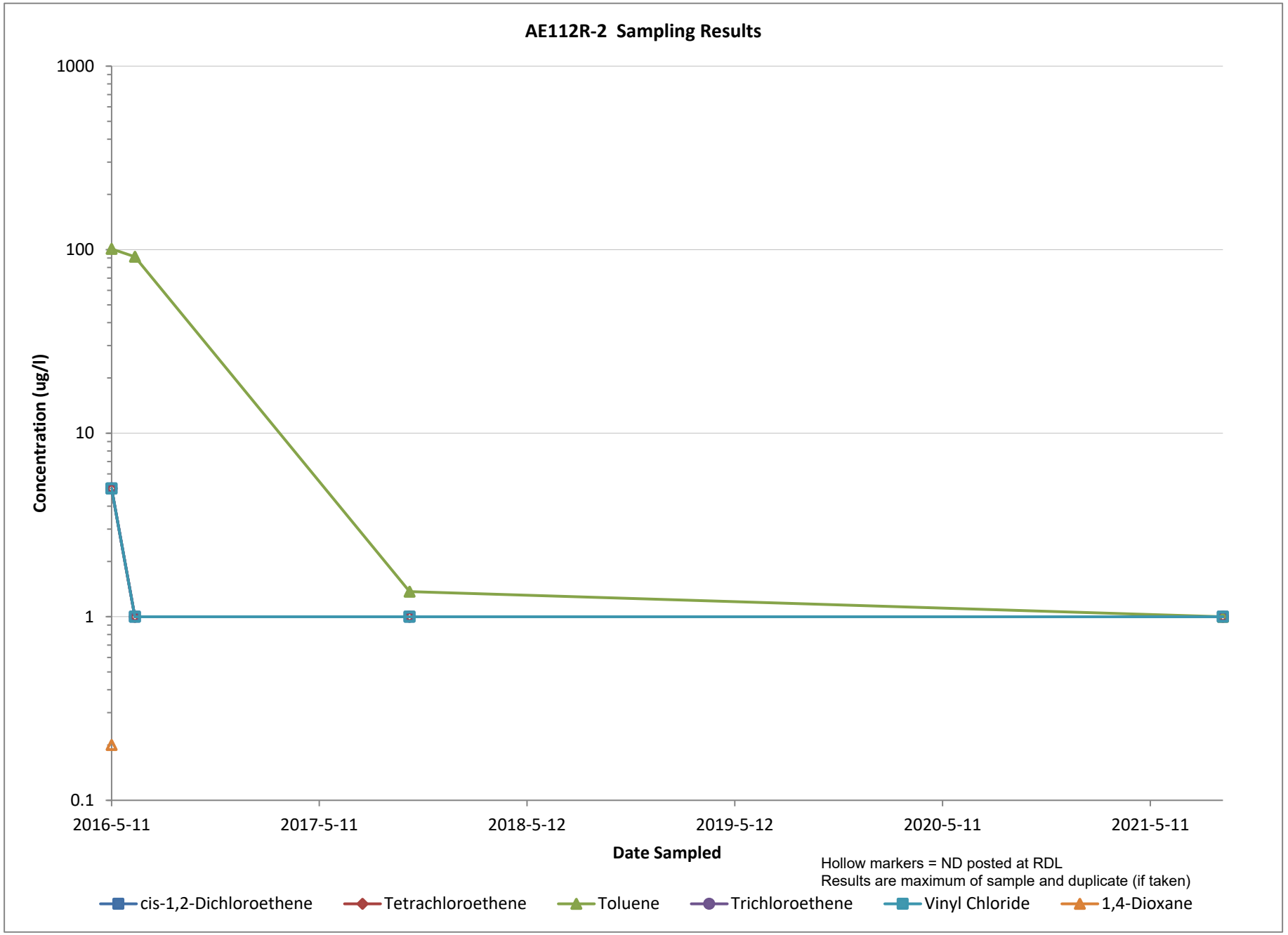

AE111R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

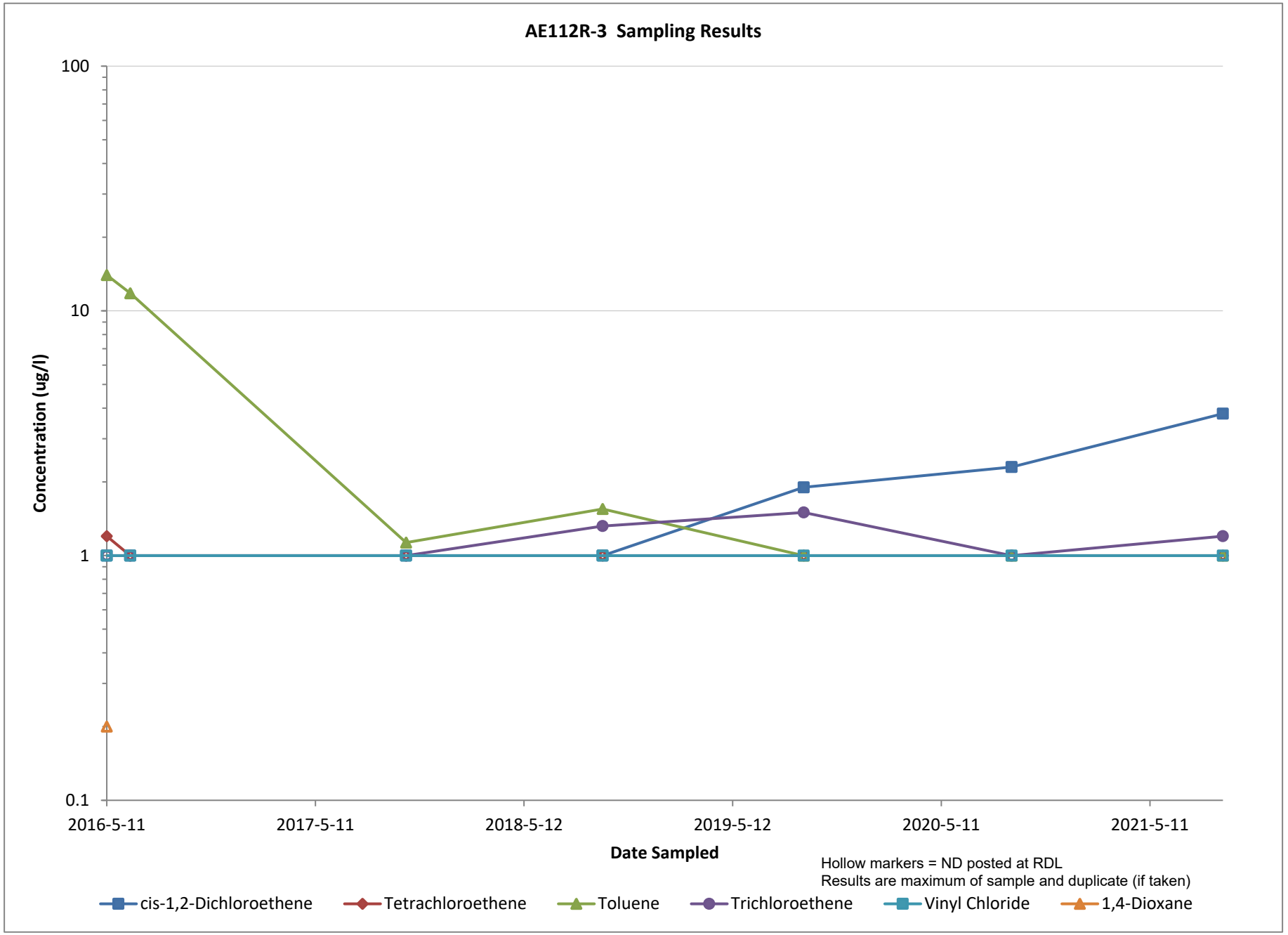

AE111R-6 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

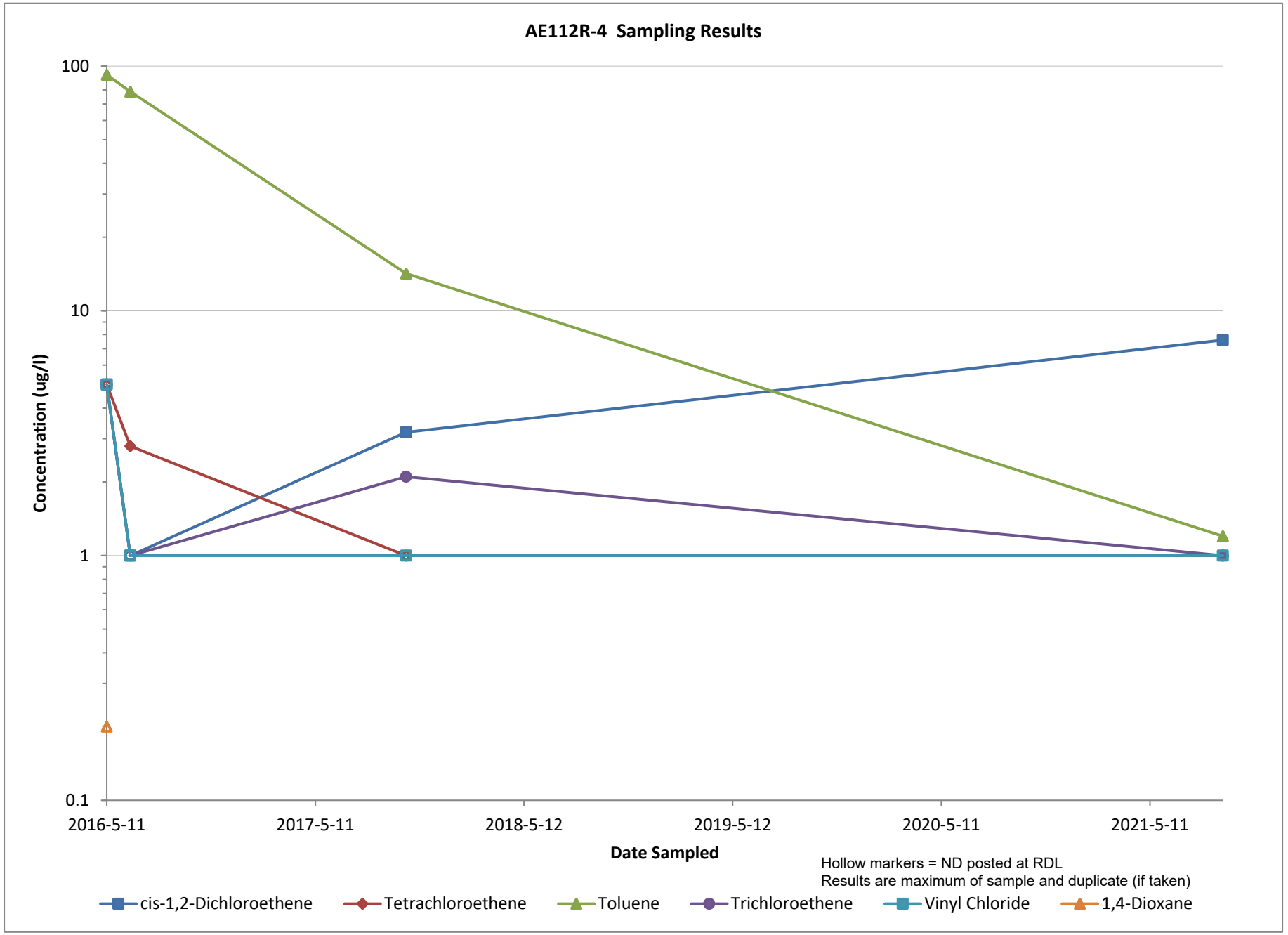

AE111R-7 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

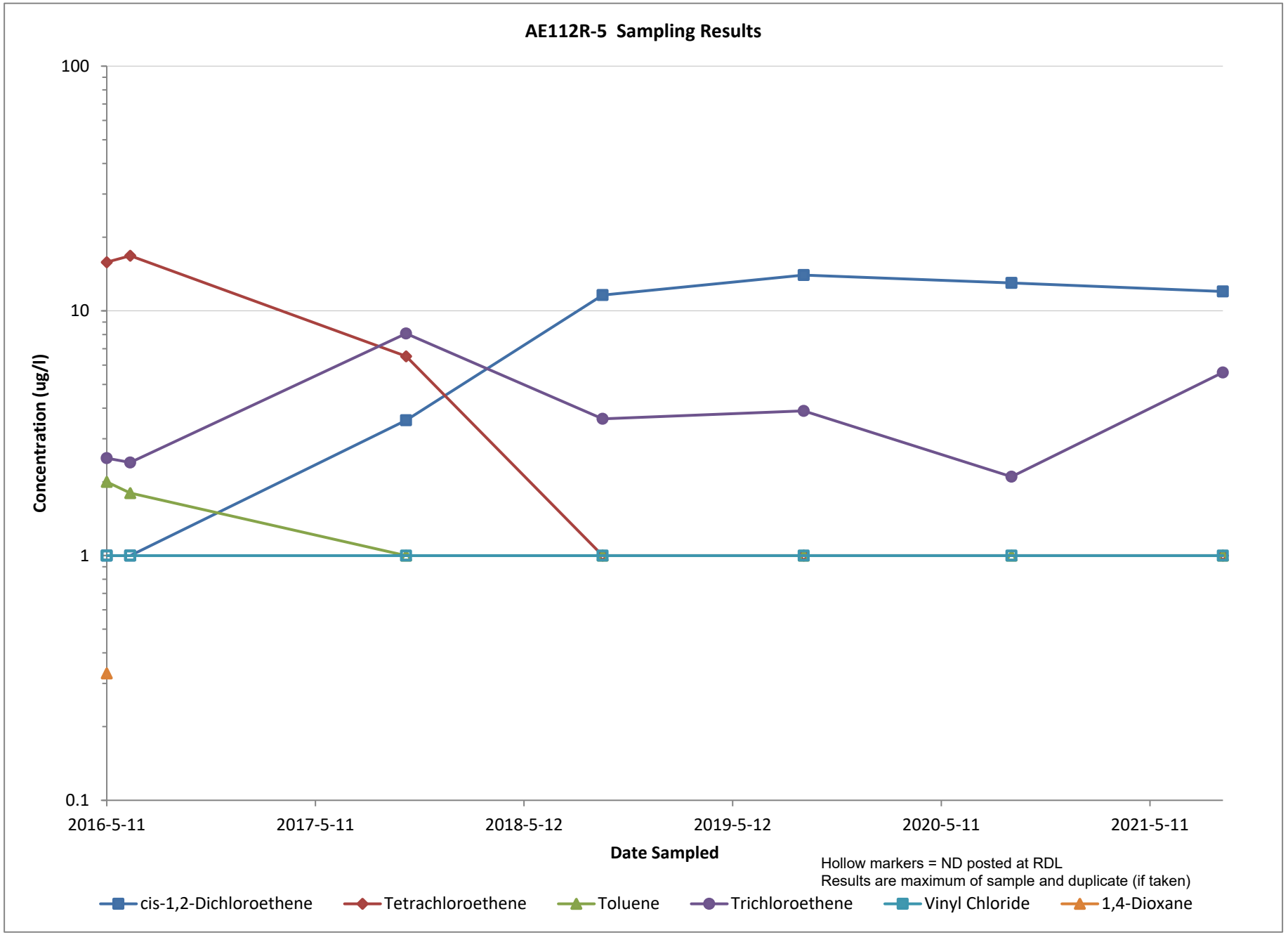

AE112D Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-11
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

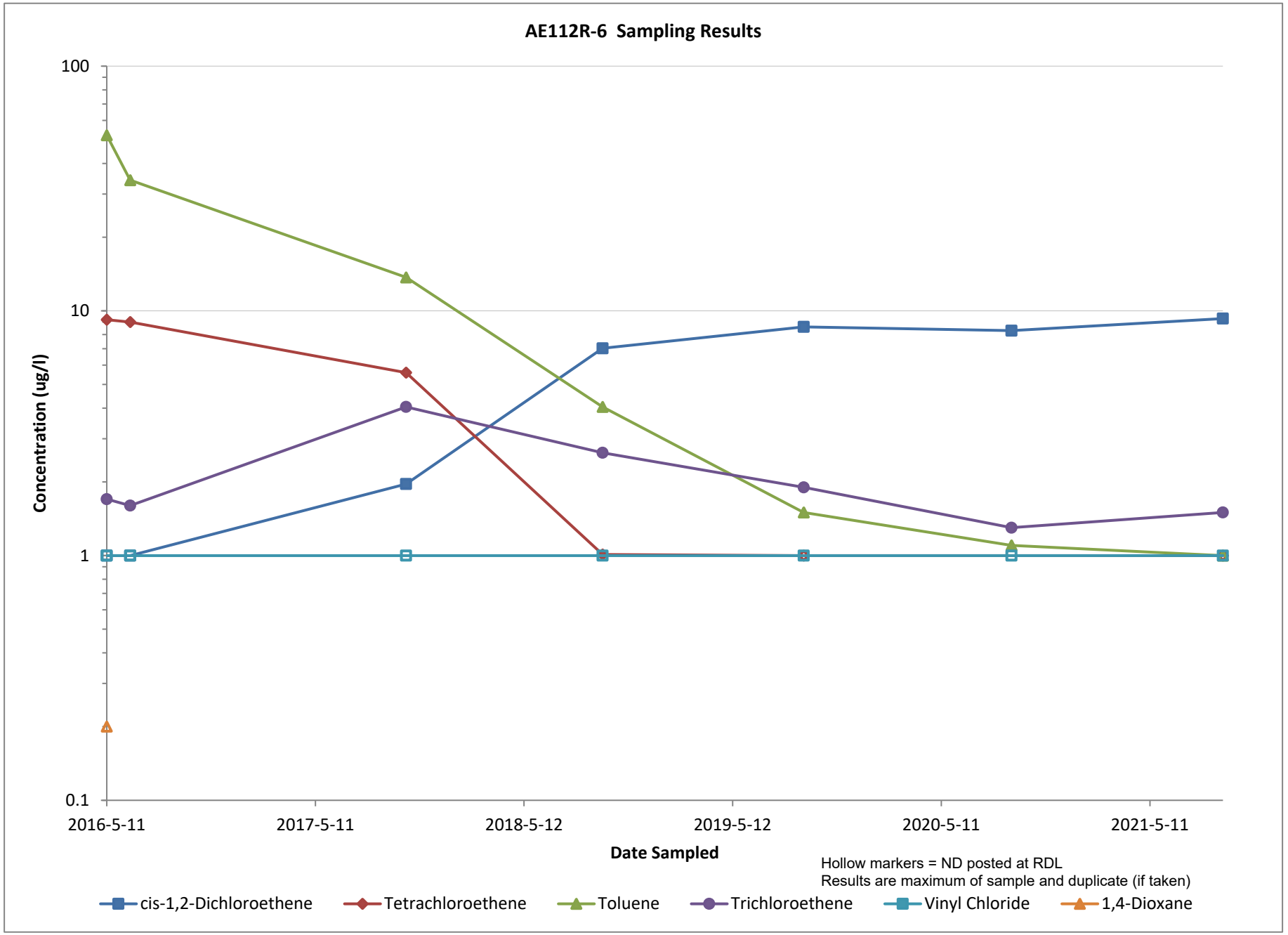

AE112R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

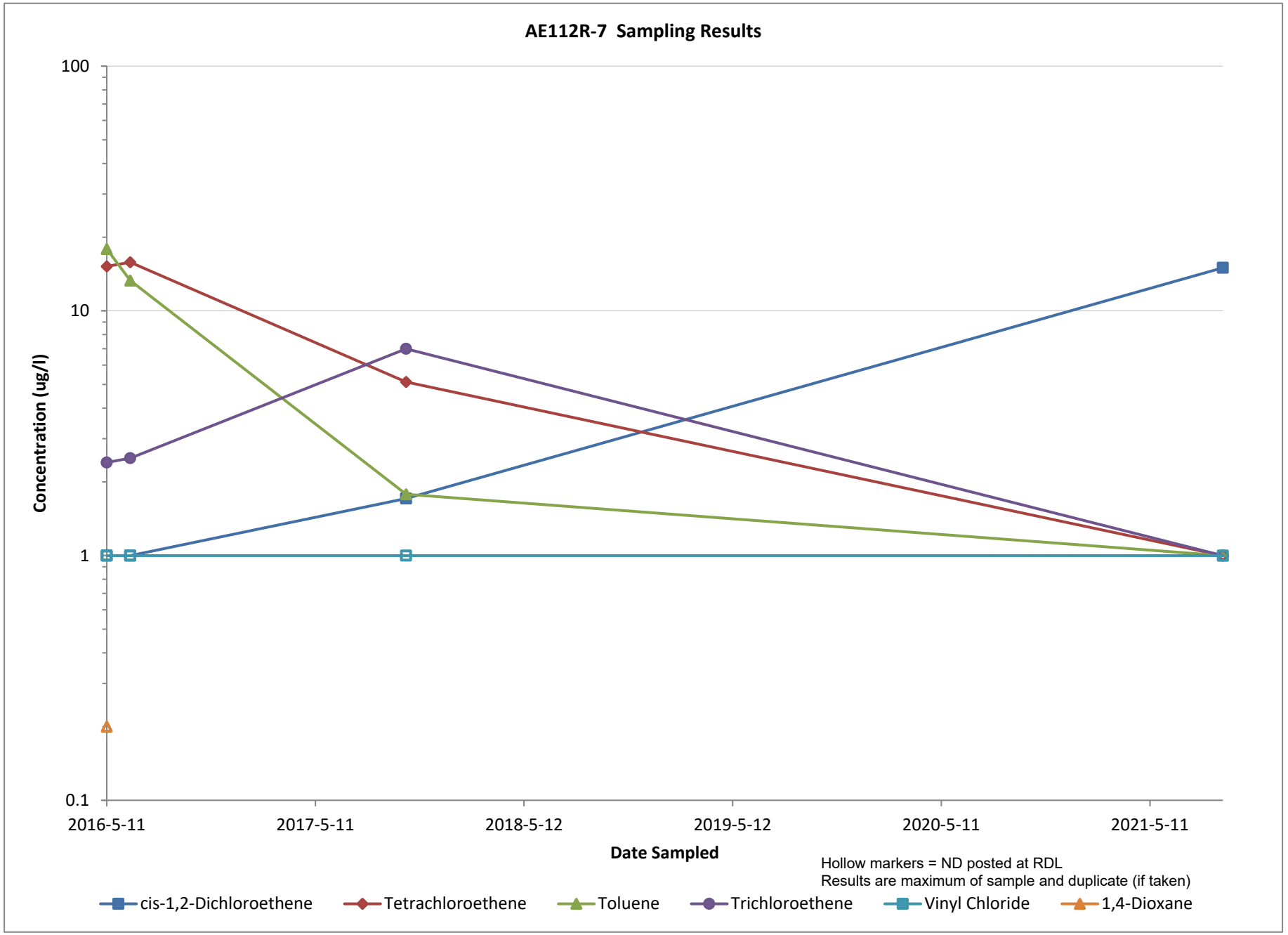

AE112R-2 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

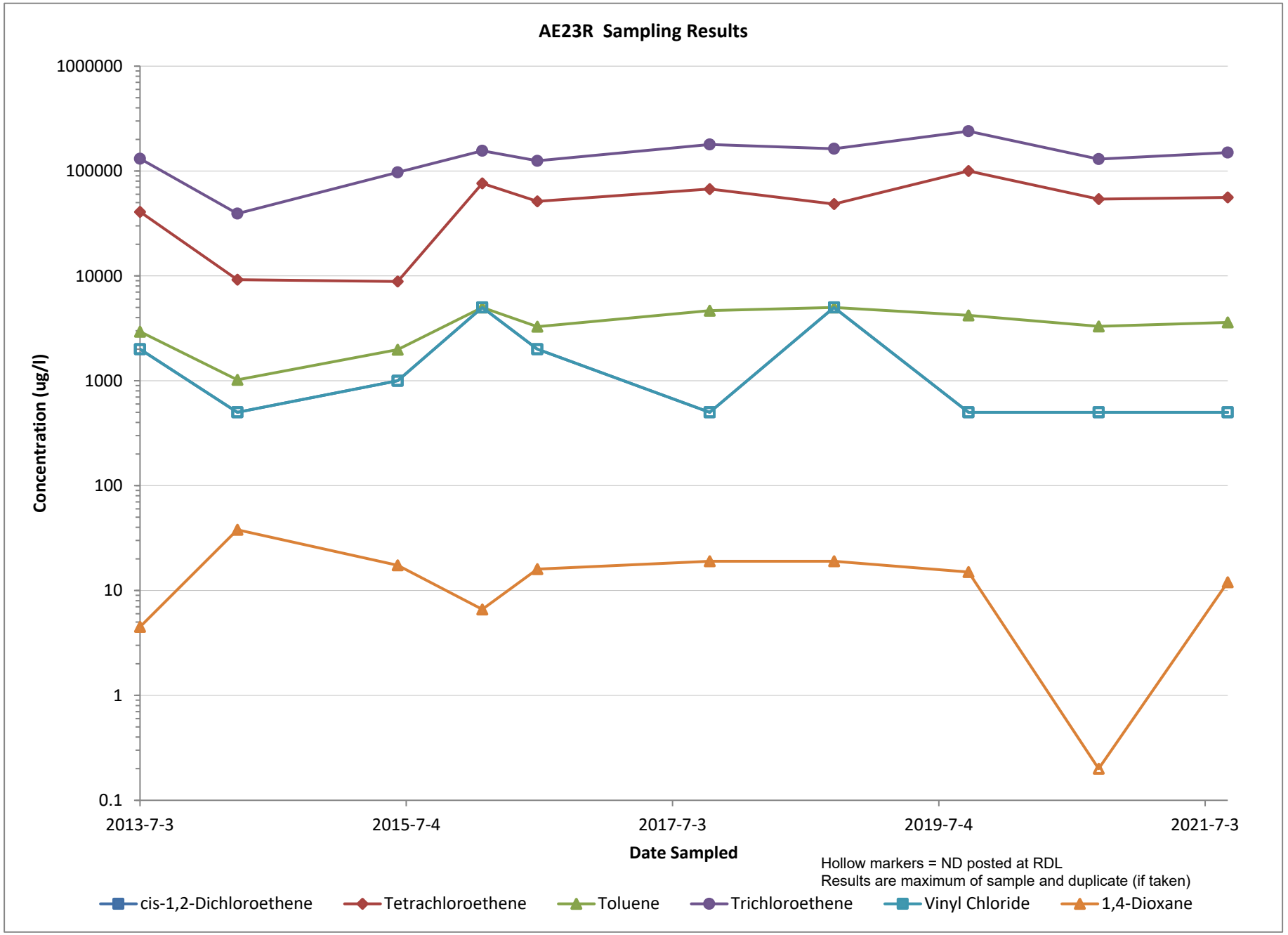

AE112R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

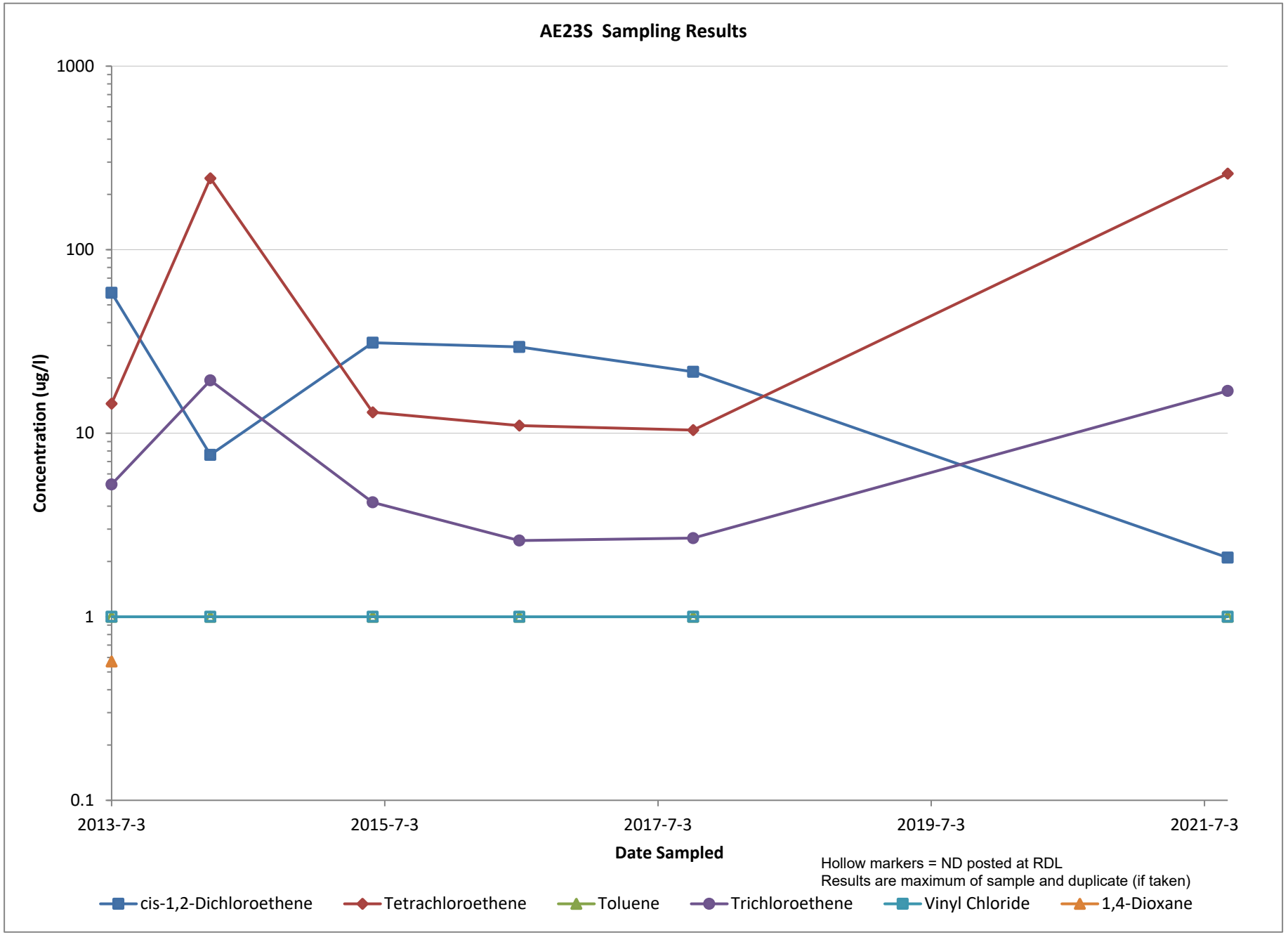

AE112R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

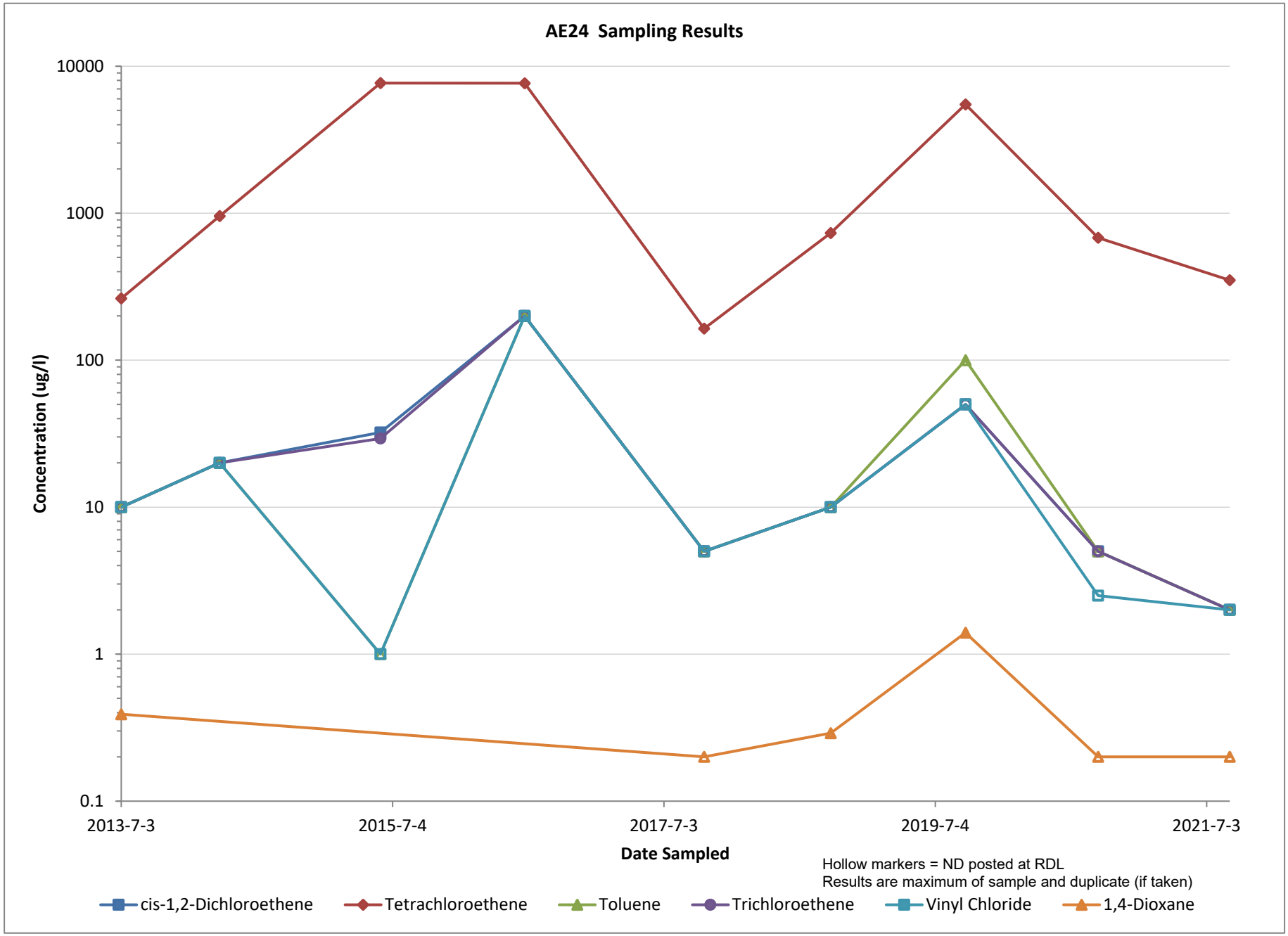

AE112R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

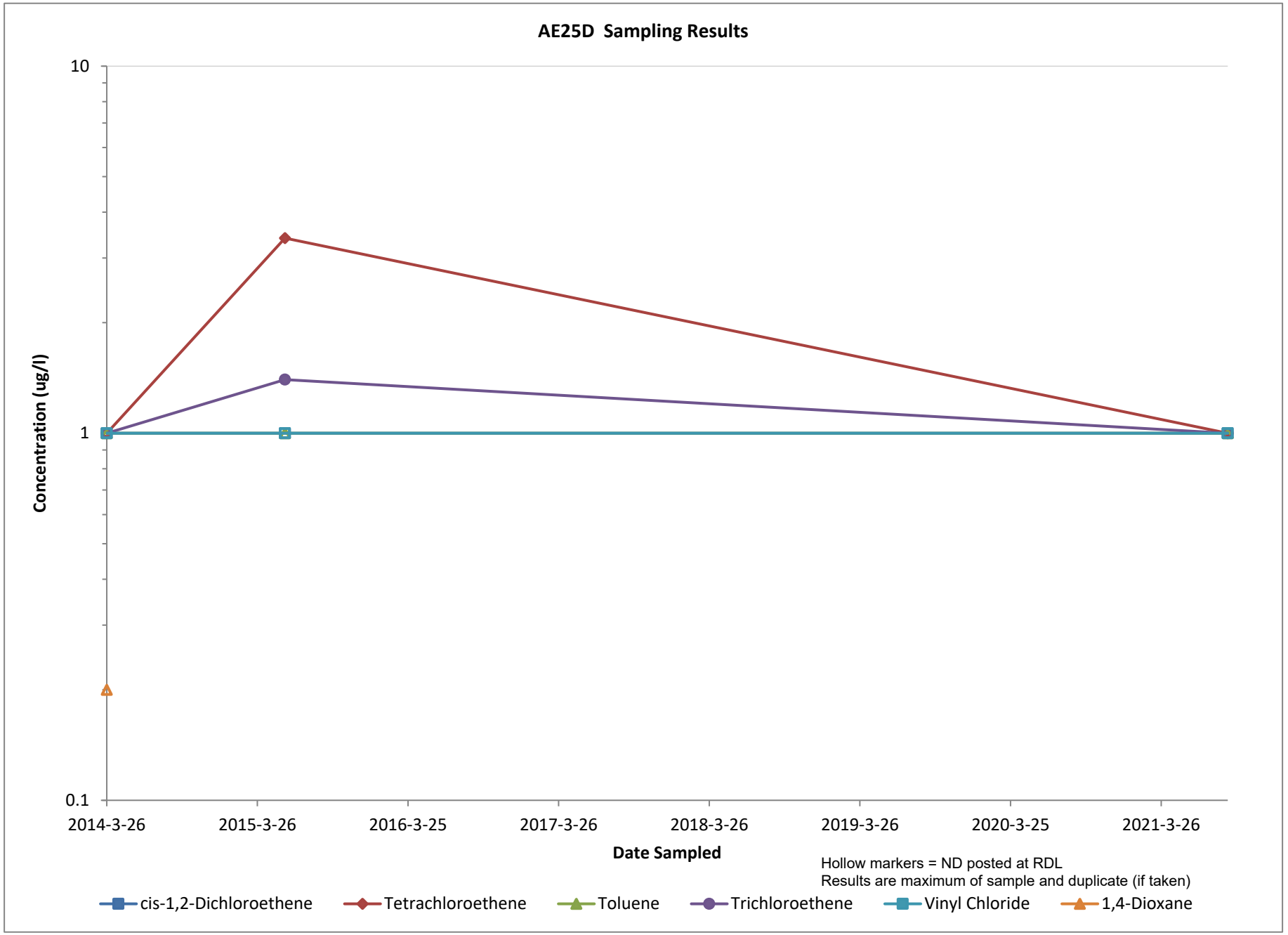

AE112R-6 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

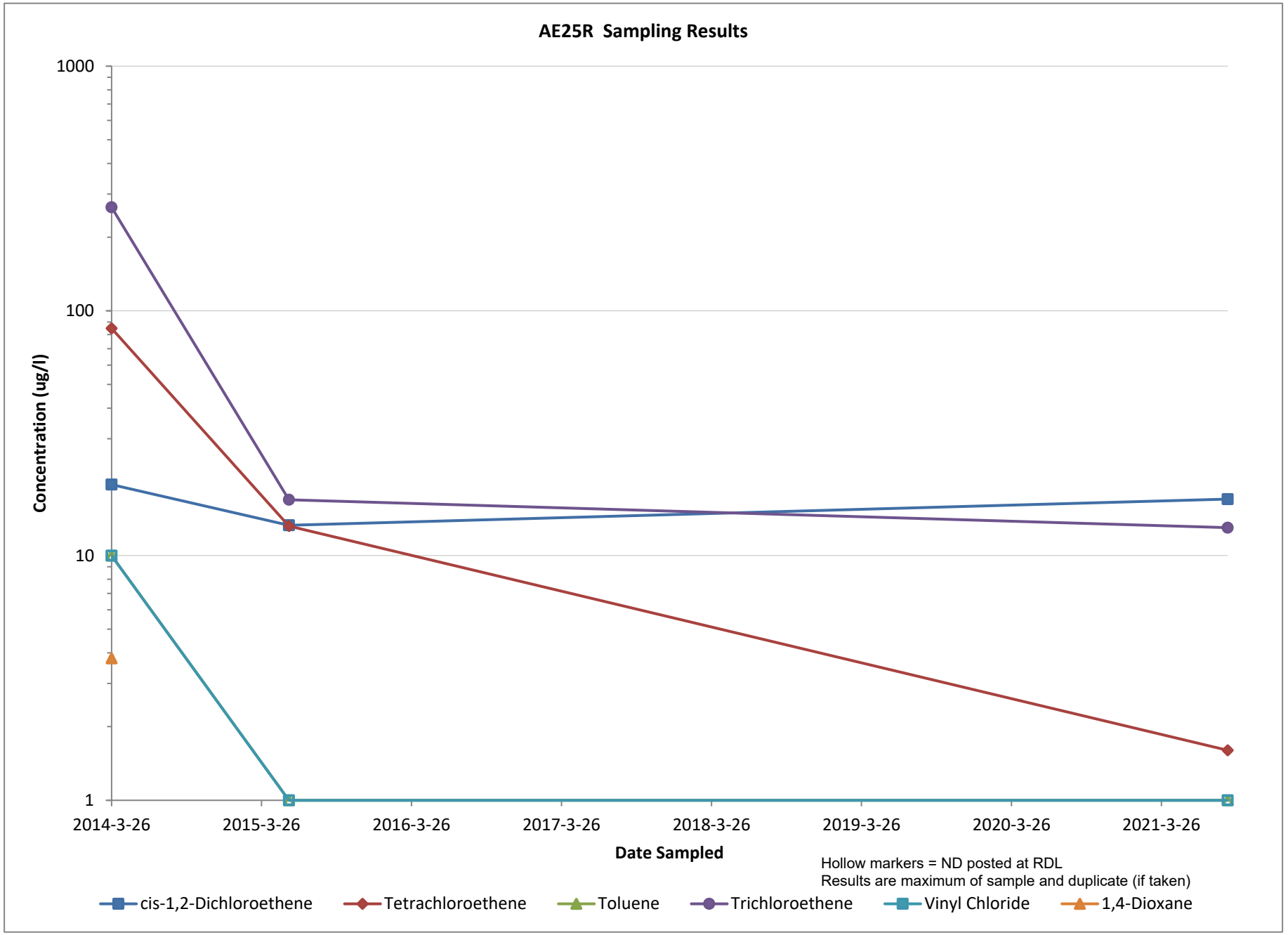

AE112R-7 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

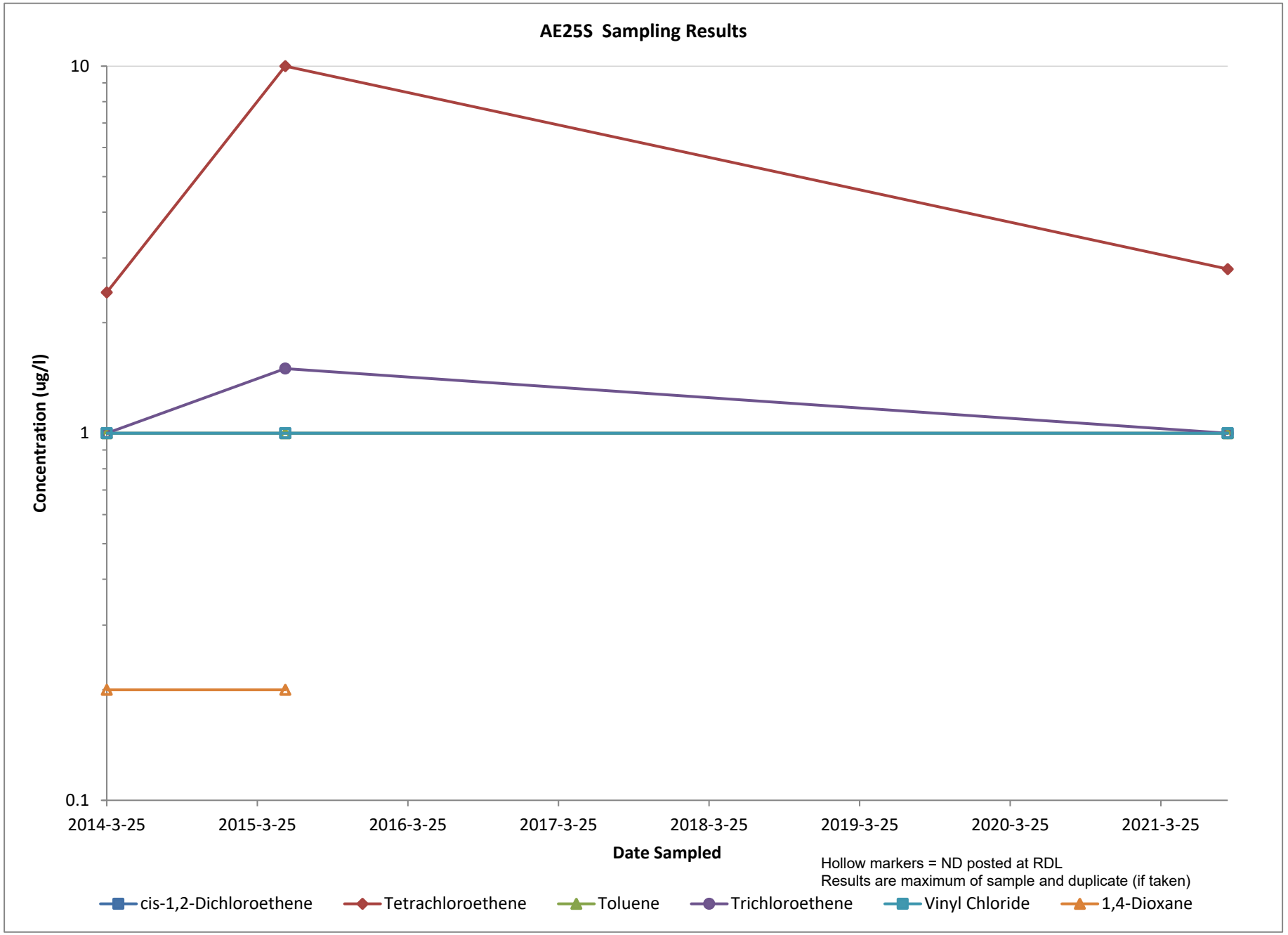

AE23R Sampling Results
1000000
100000
10000
1000
100
10
1
0.1
Concentration (ug/l)
2013-7-3
2015-7-4
2017-7-3
2019-7-4
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

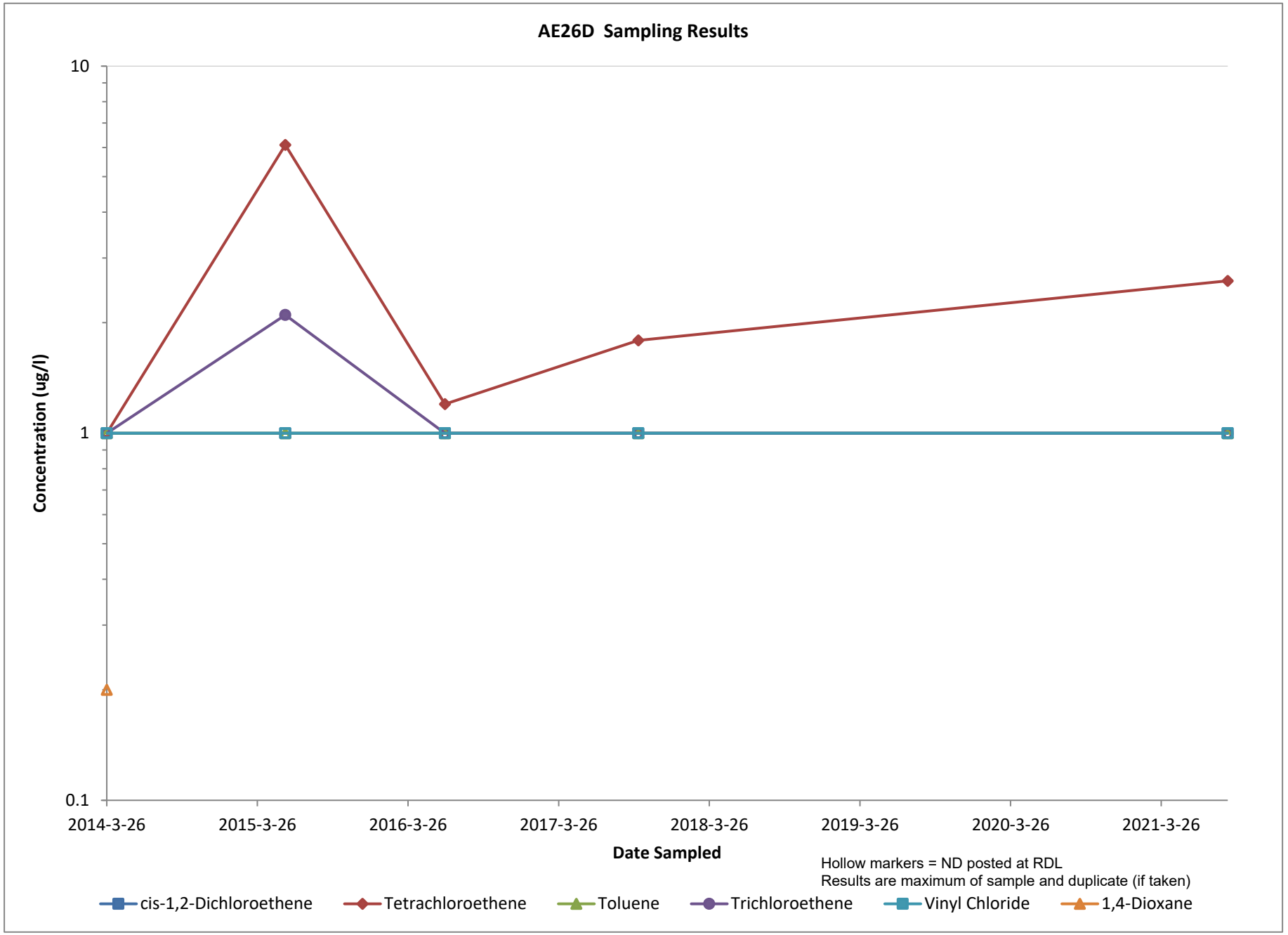

AE23S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2013-7-3
2015-7-3
2017-7-3
2019-7-3
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

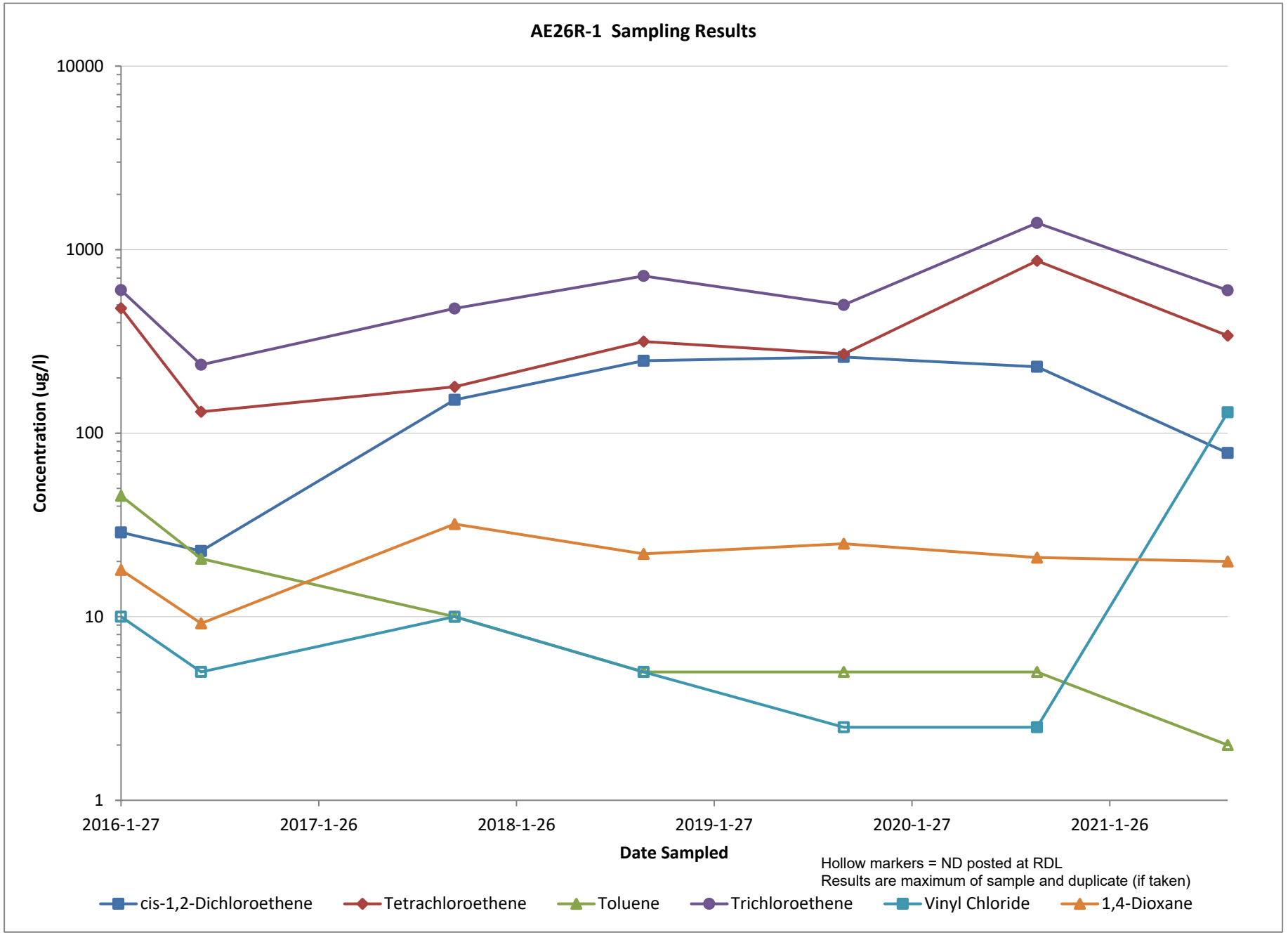

AE24 Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
2013-7-3
2015-7-4
2017-7-3
2019-7-4
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

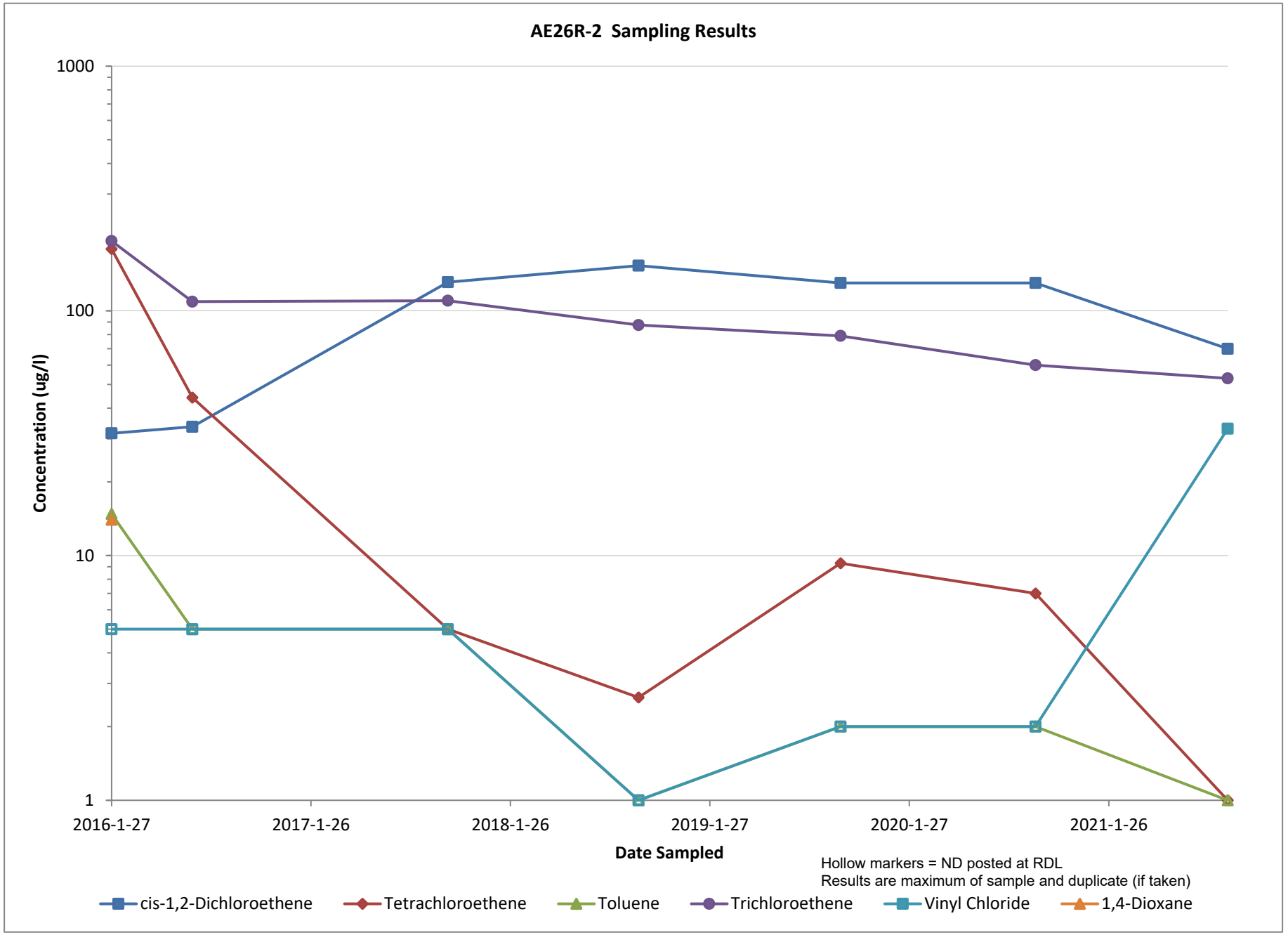

AE25D Sampling Results
10
1
0.1
Concentration (ug/l)
2014-3-26
2015-3-26
2016-3-25
2017-3-26
2018-3-26
2019-3-26
2020-3-25
2021-3-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

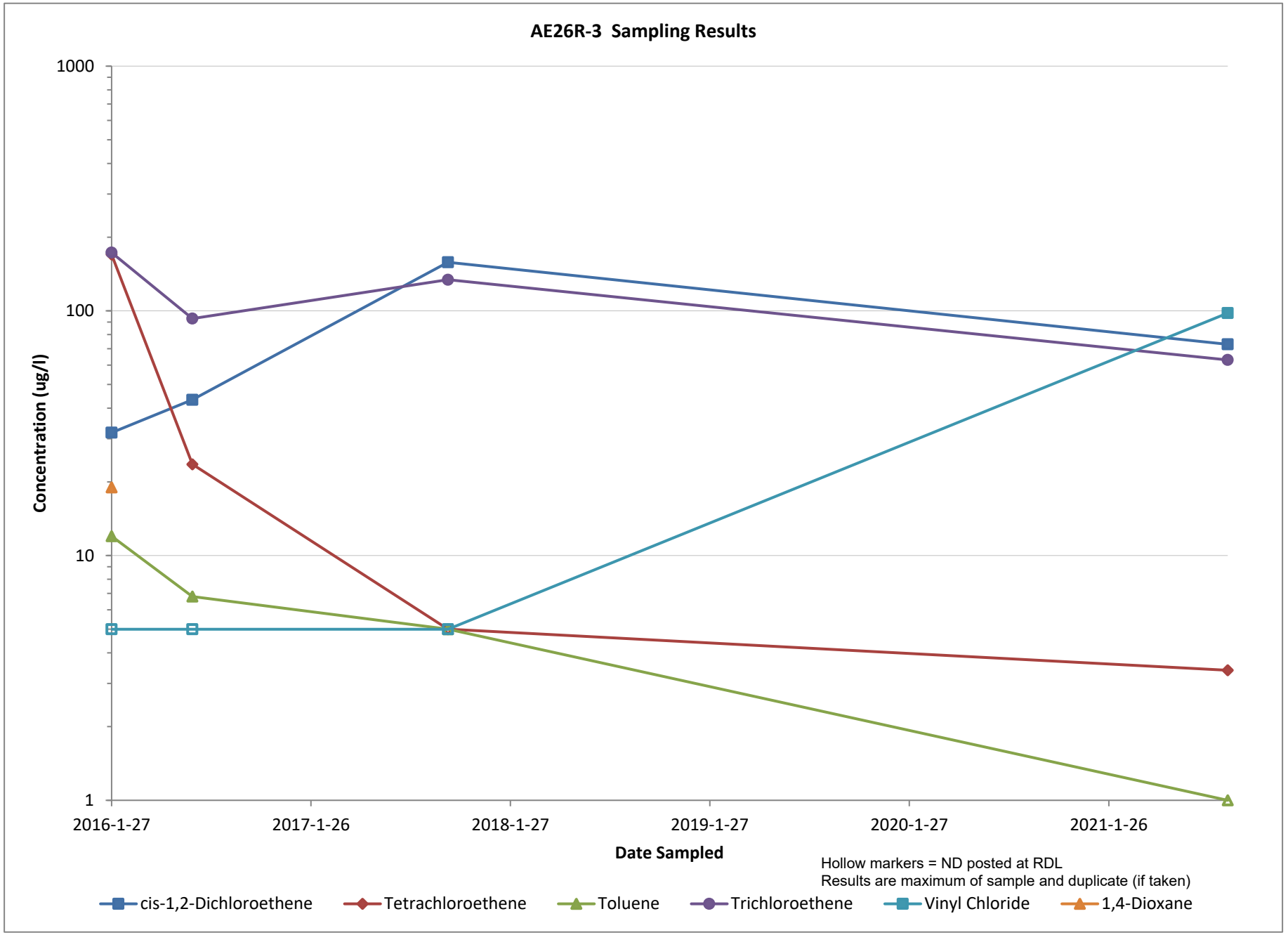

AE25R Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-3-26
2015-3-26
2016-3-26
2017-3-26
2018-3-26
2019-3-26
2020-3-26
2021-3-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

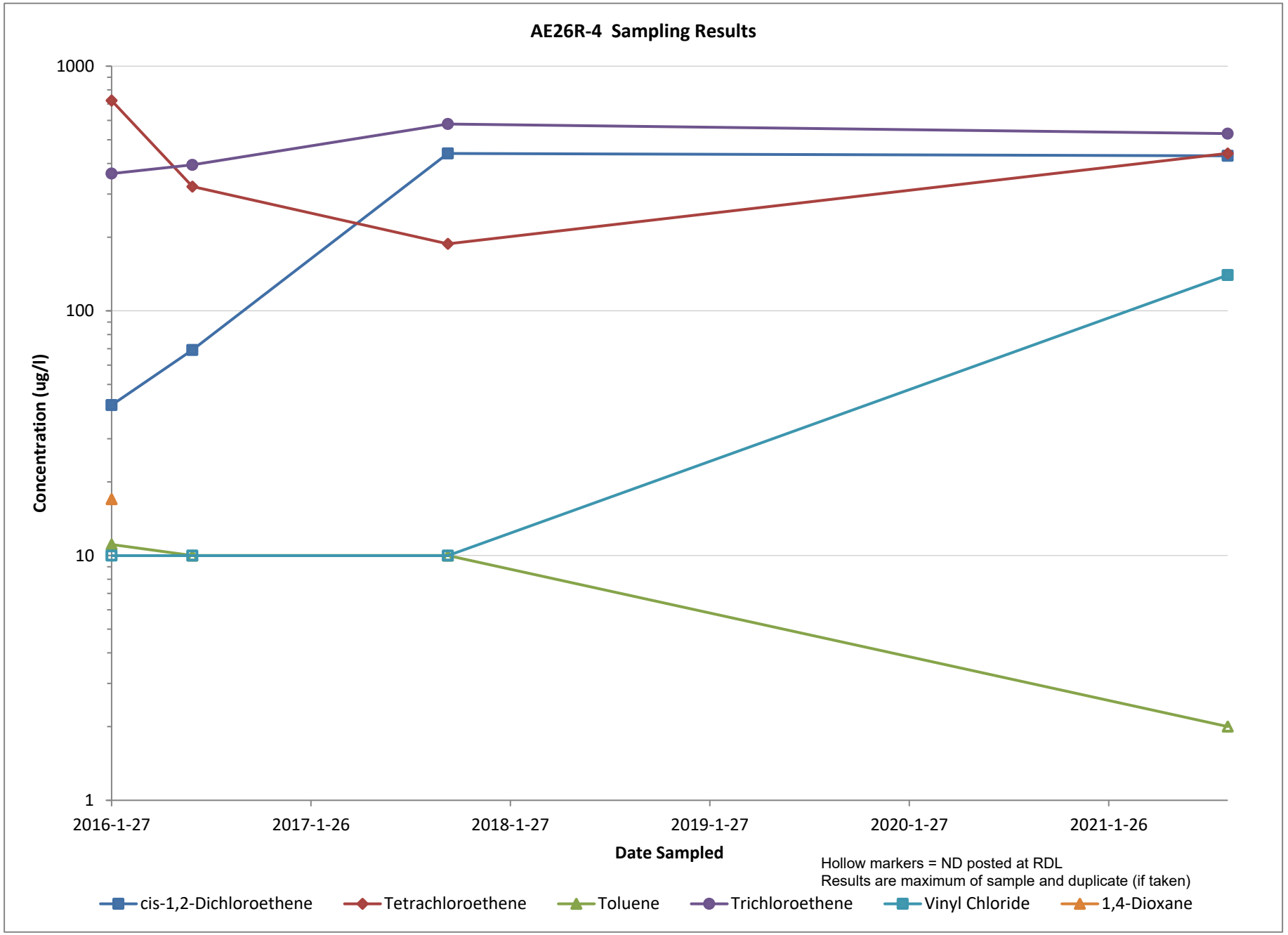

AE25S Sampling Results
10
1
0.1
Concentration (ug/l)
2014-3-25
2015-3-25
2016-3-25
2017-3-25
2018-3-25
2019-3-25
2020-3-25
2021-3-25
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

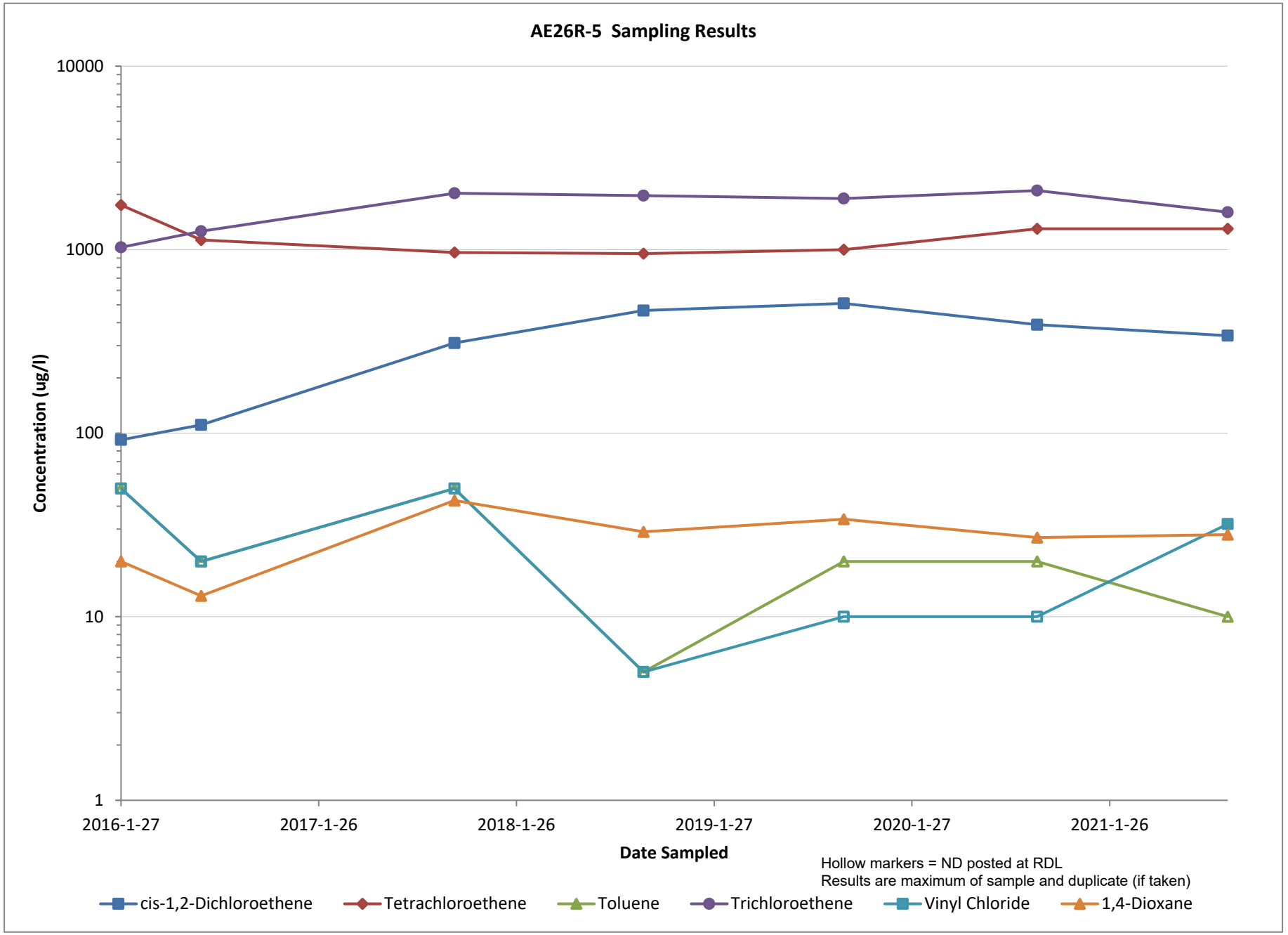

AE26D Sampling Results
10
1
0.1
Concentration (ug/l)
2014-3-26
2015-3-26
2016-3-26
2017-3-26
2018-3-26
2019-3-26
2020-3-26
2021-3-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

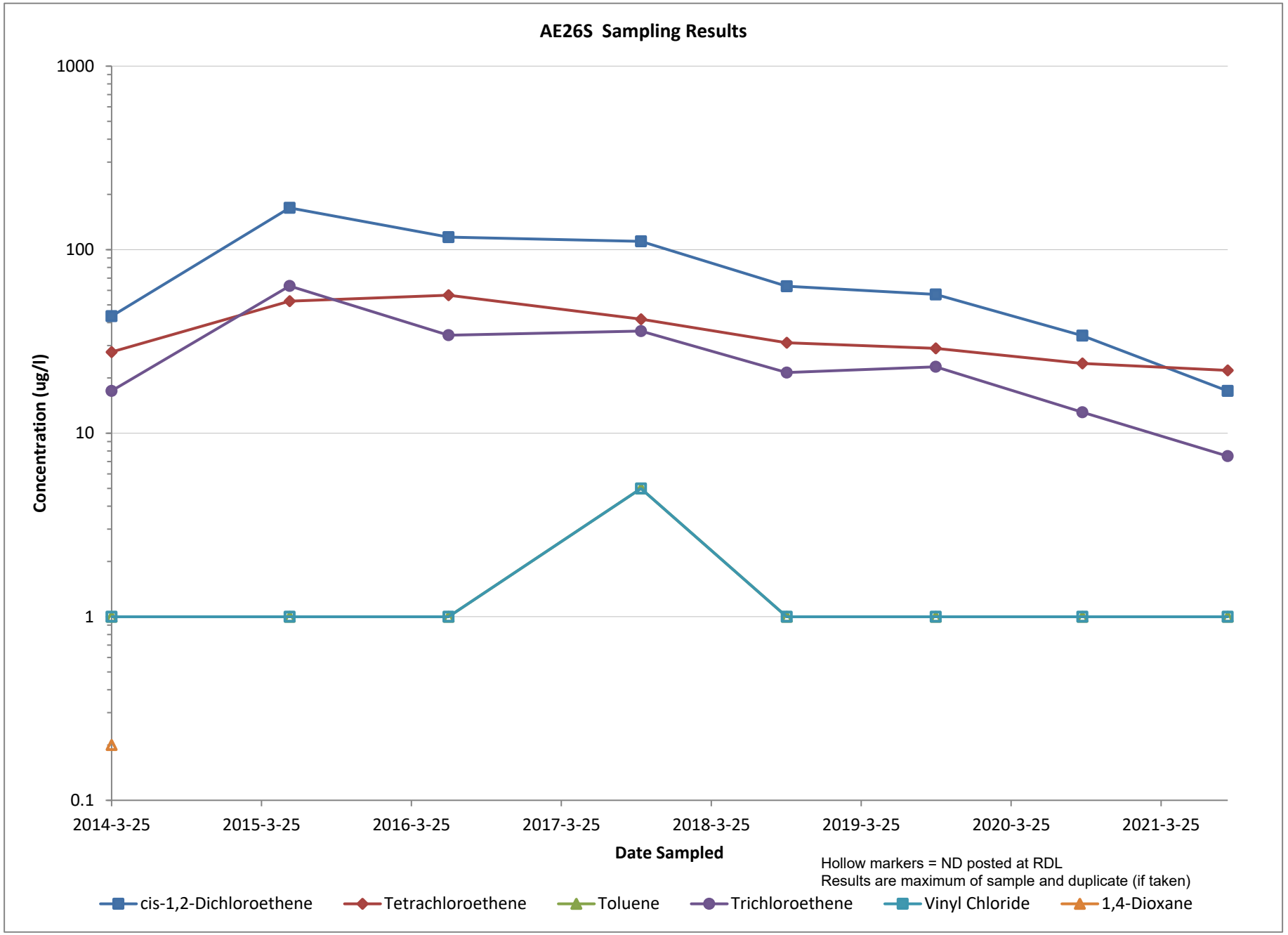

AE26R-1 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

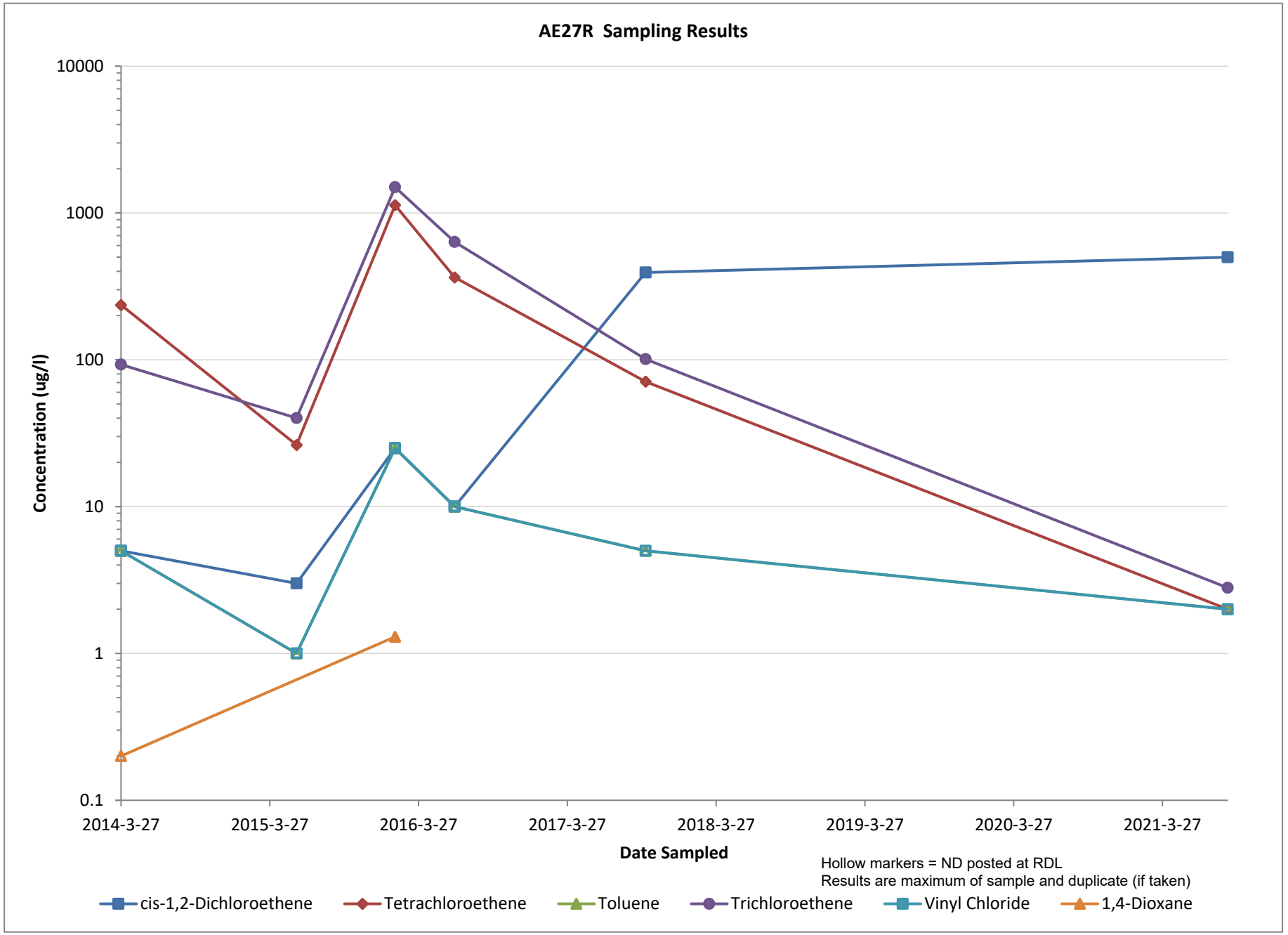

AE26R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

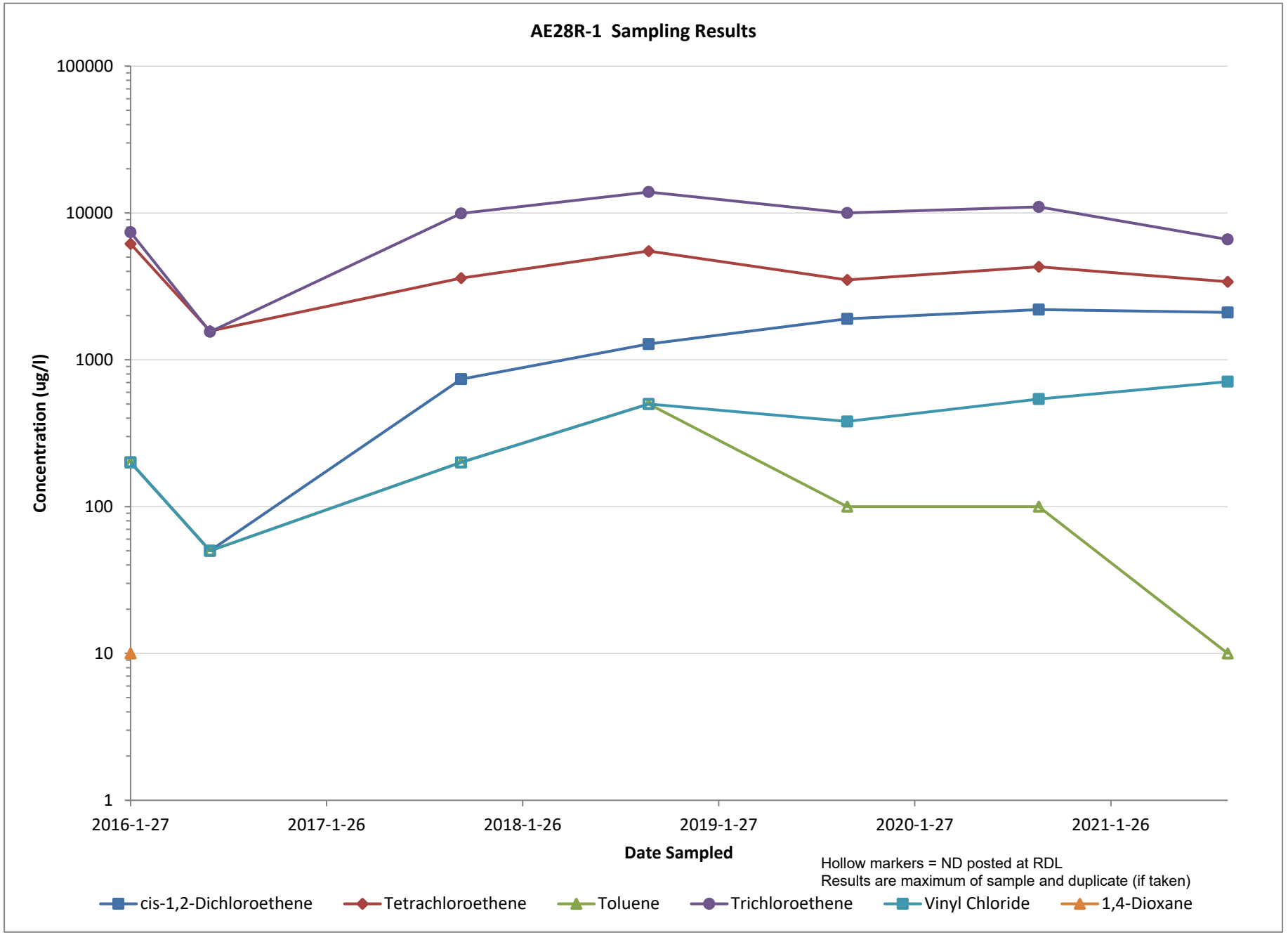

AE26R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

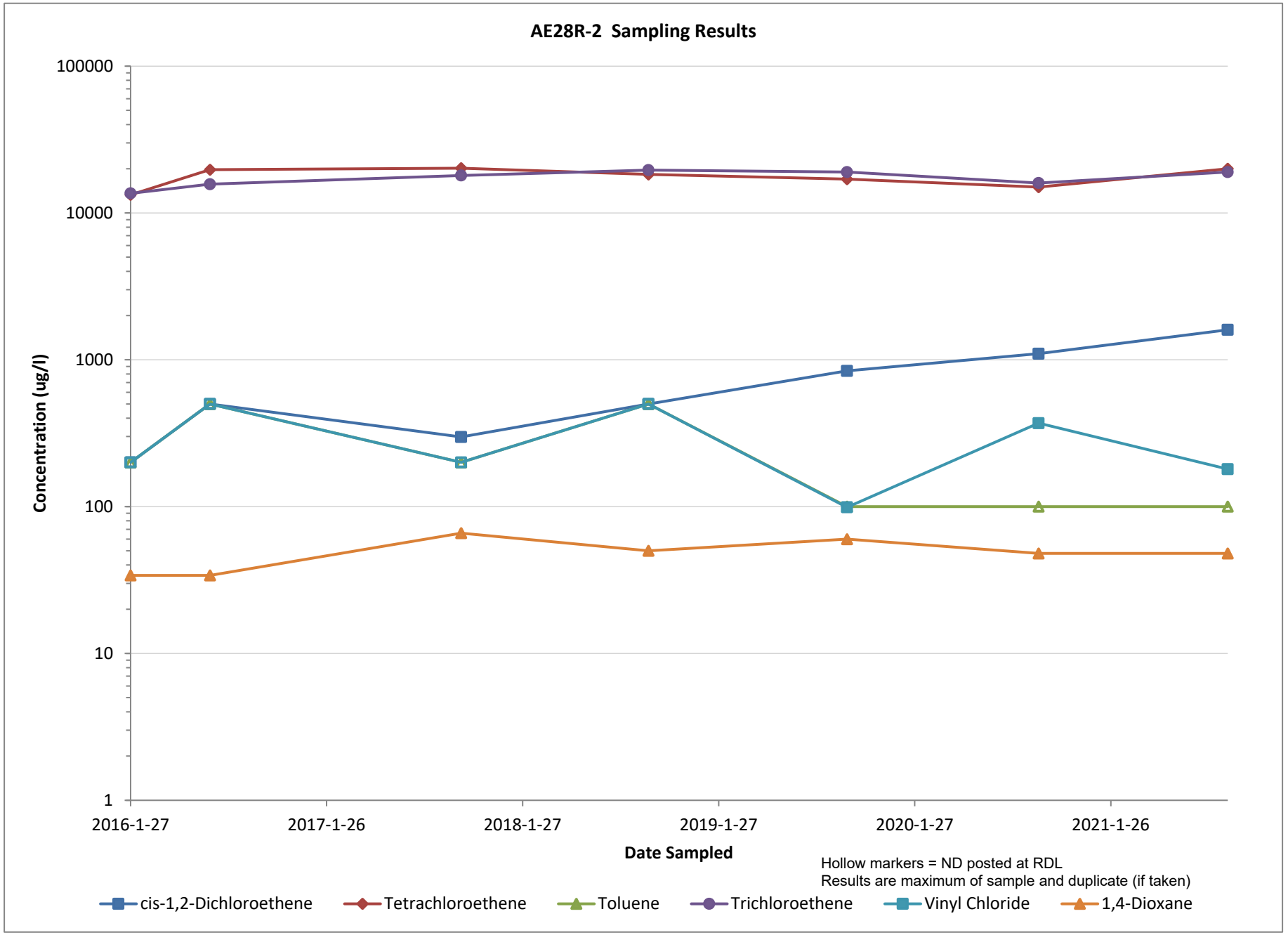

AE26R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

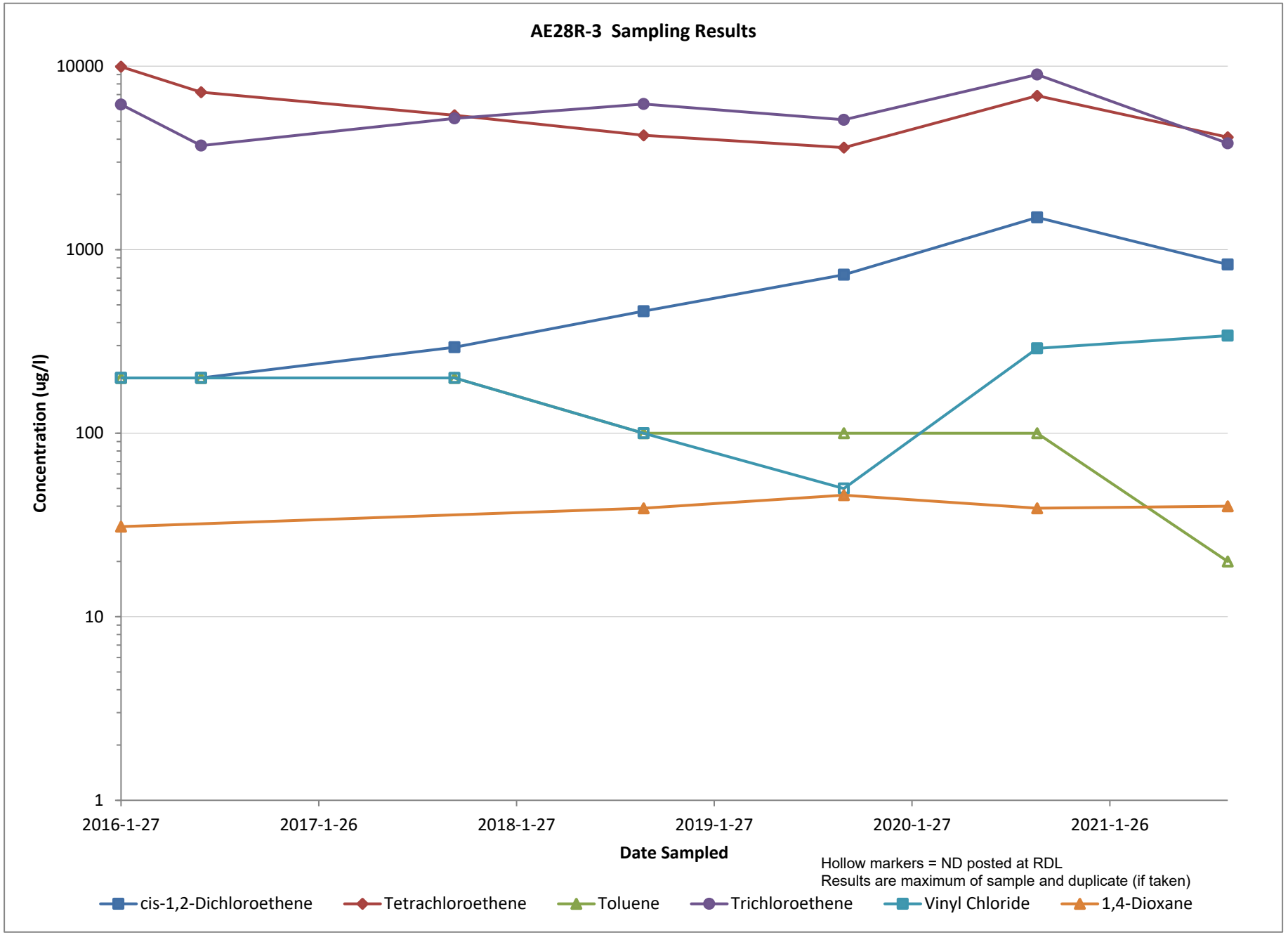

AE26R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

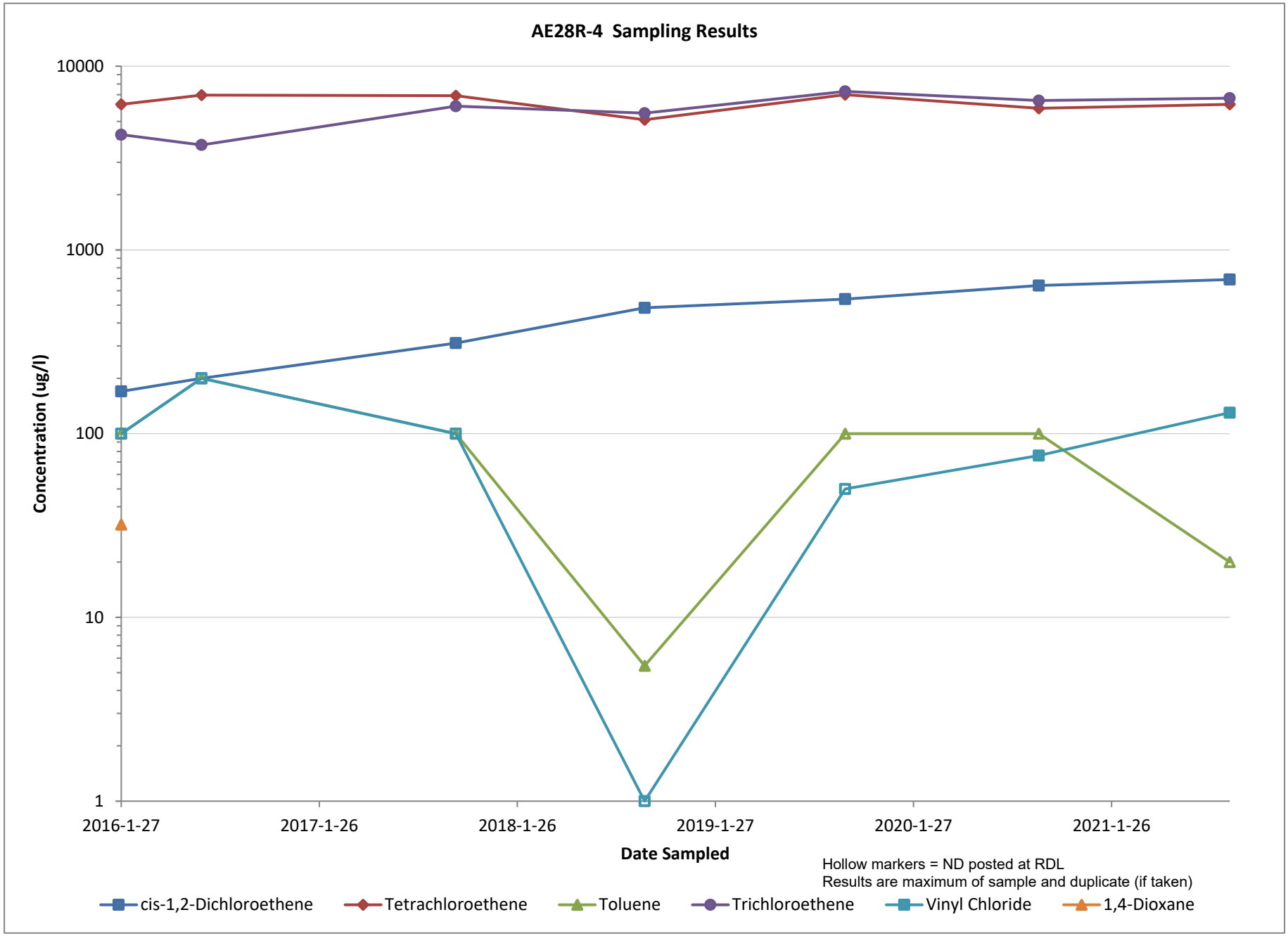

AE26S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-3-25
2015-3-25
2016-3-25
2017-3-25
2018-3-25
2019-3-25
2020-3-25
2021-3-25
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

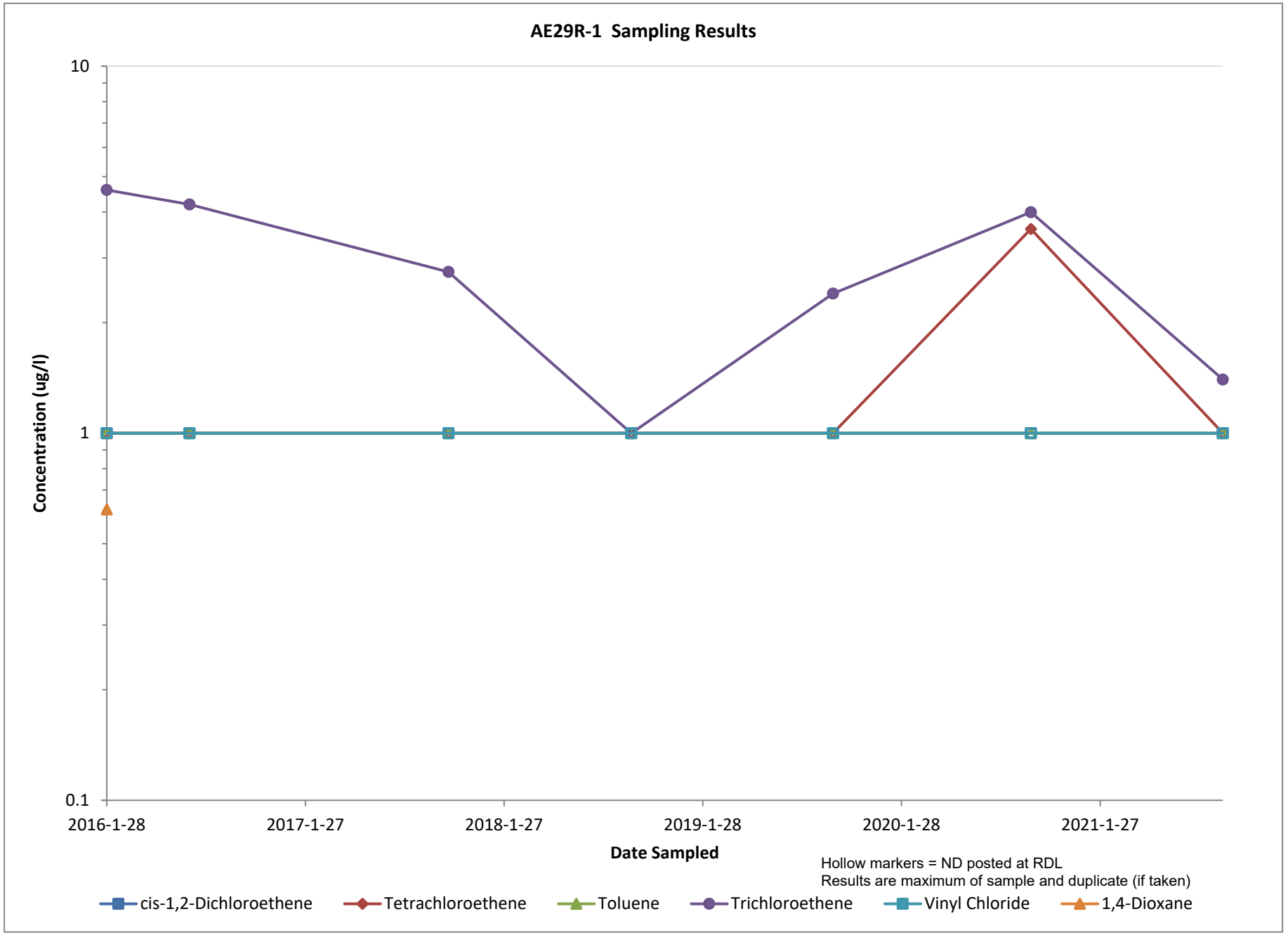

AE27R Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
2014-3-27
2015-3-27
2016-3-27
2017-3-27
2018-3-27
2019-3-27
2020-3-27
2021-3-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

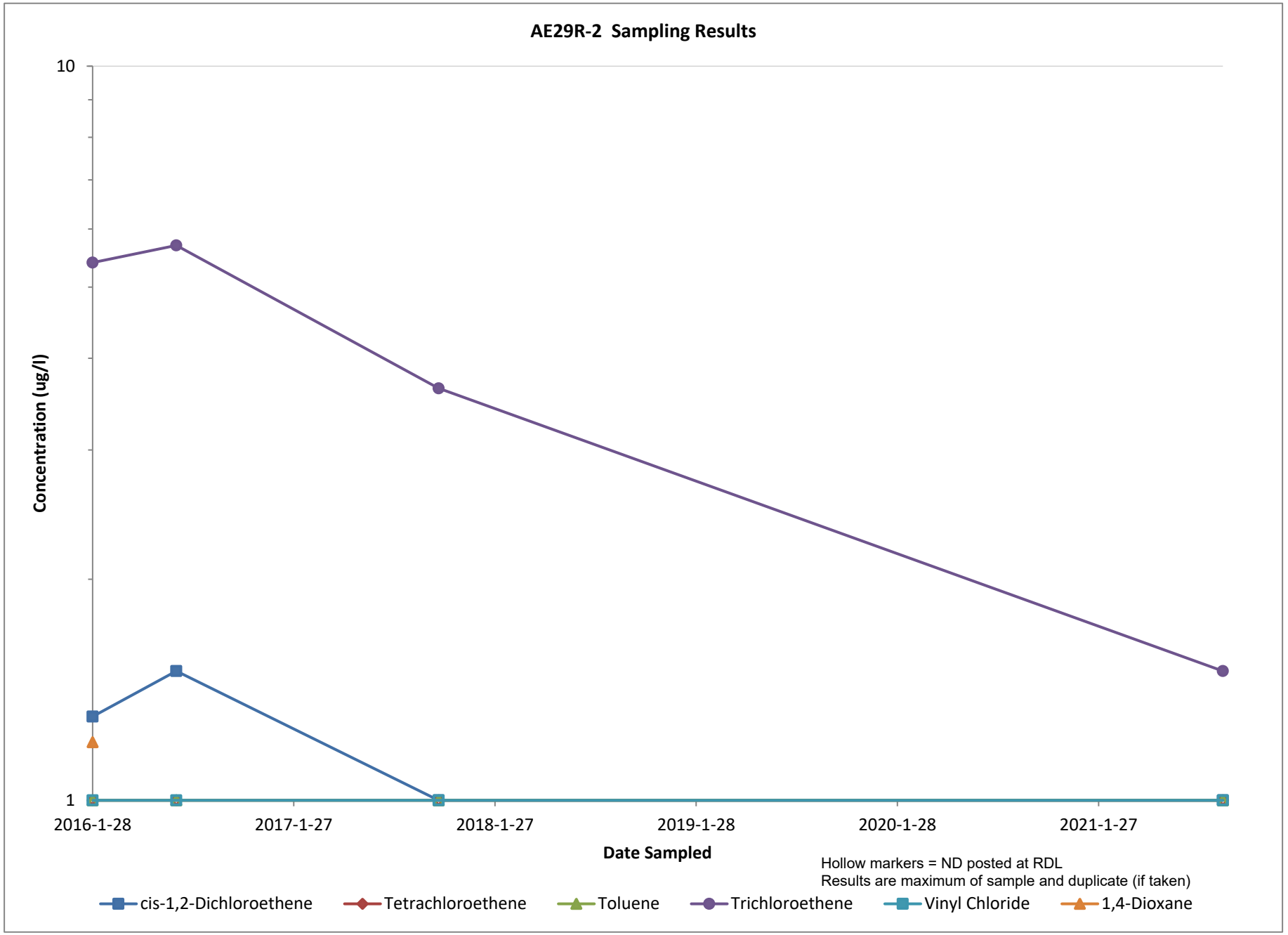

AE28R-1 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

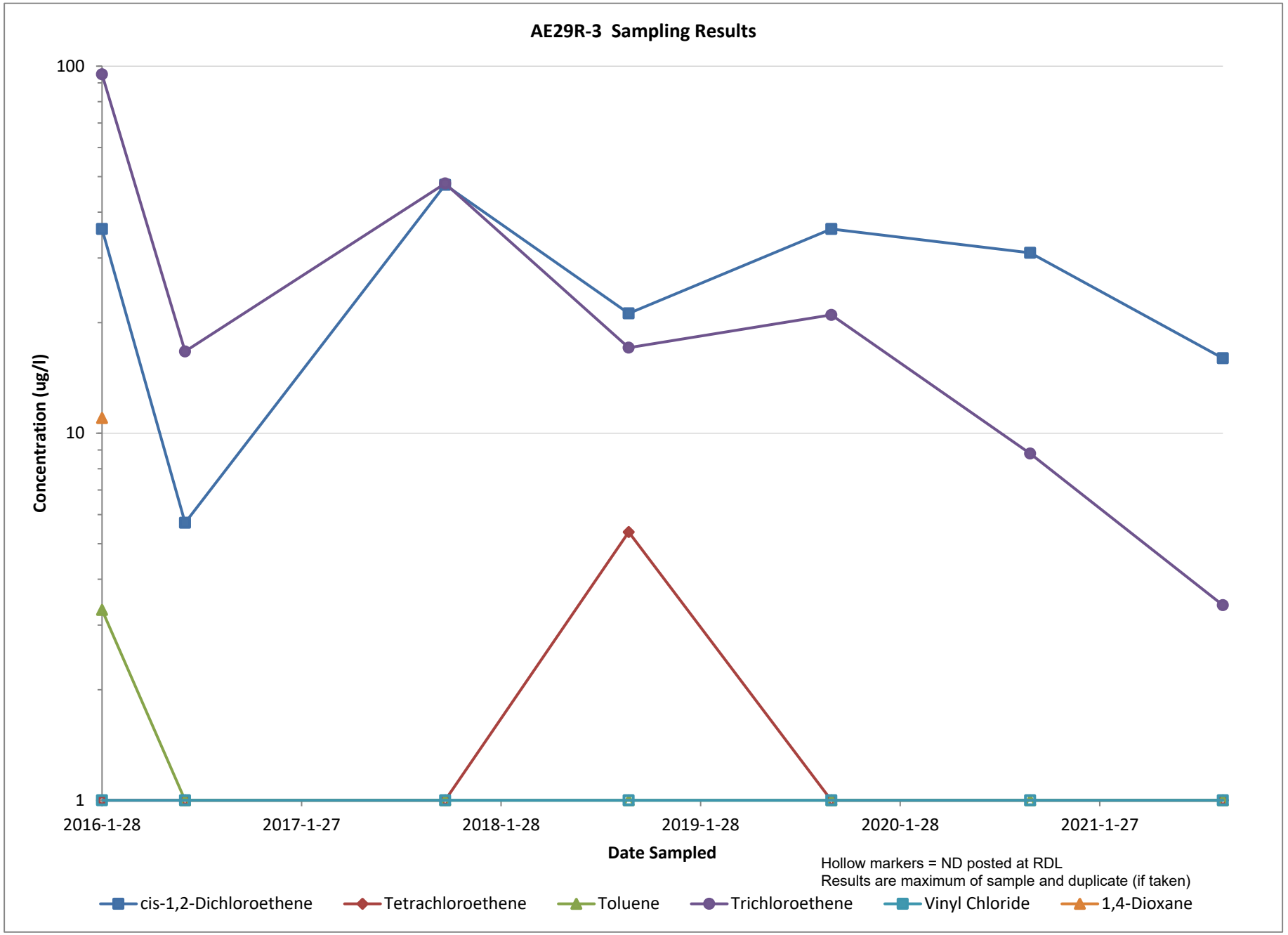

AE28R-2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

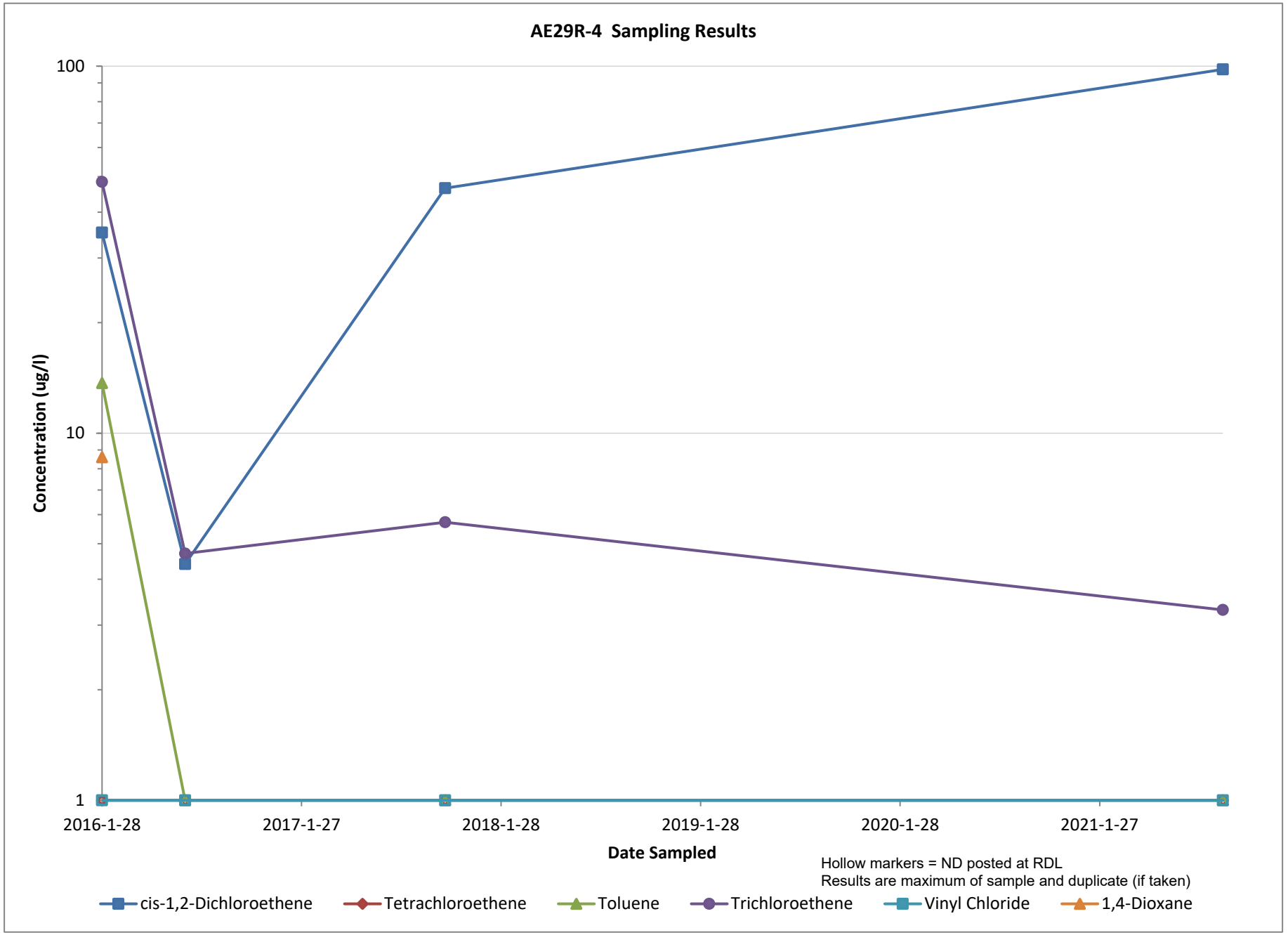

AE28R-3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

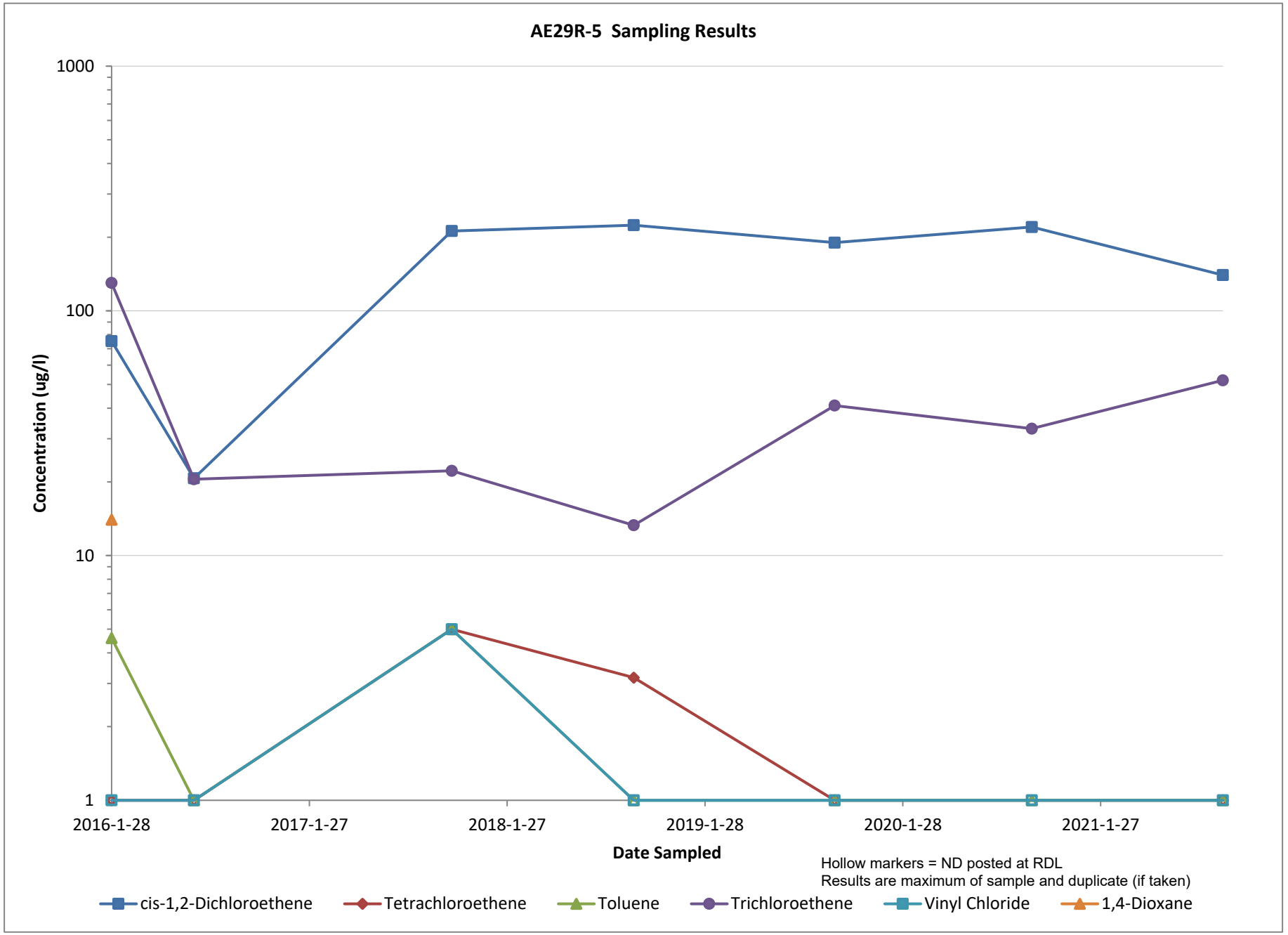

AE28R-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

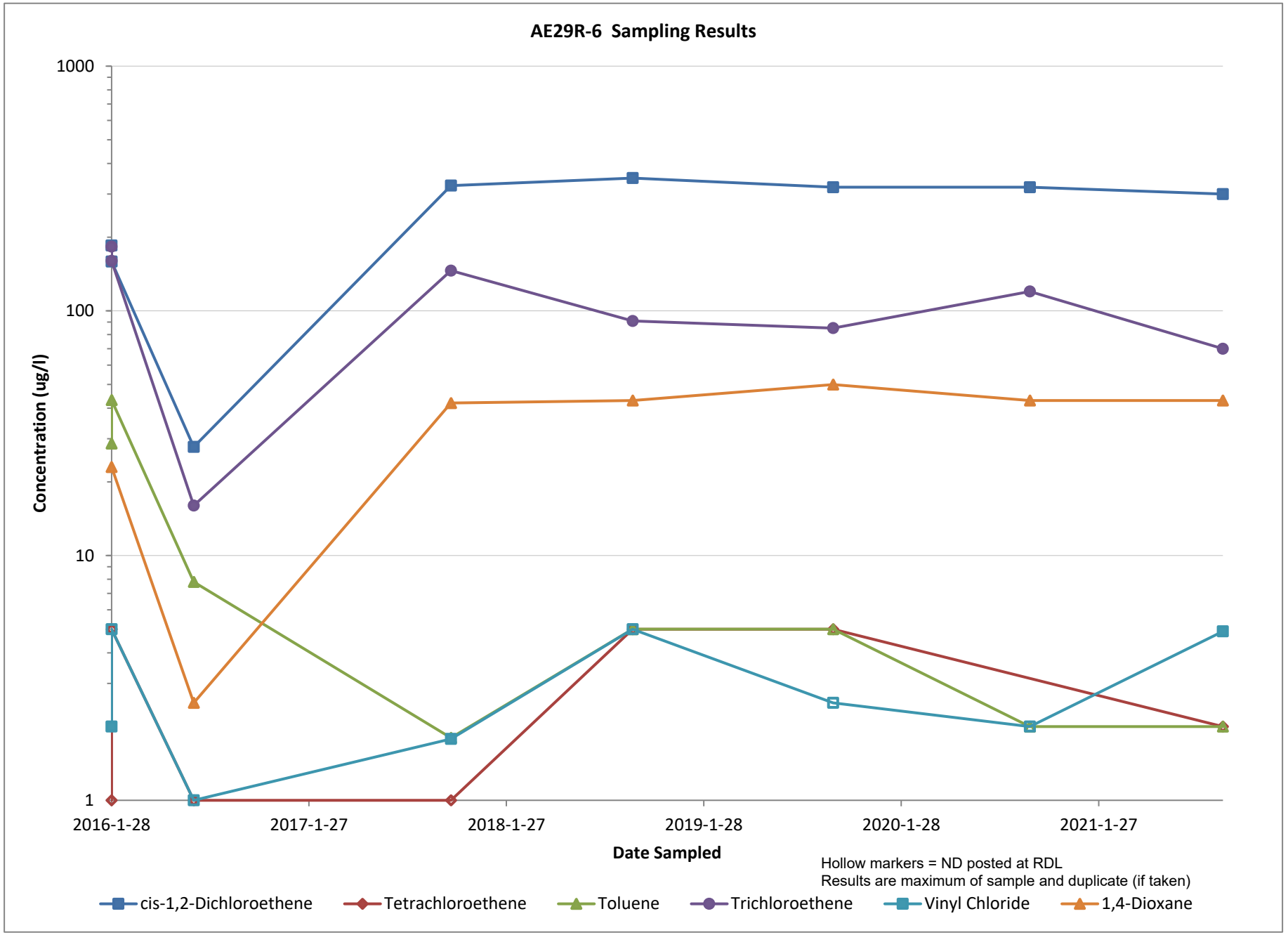

AE29R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

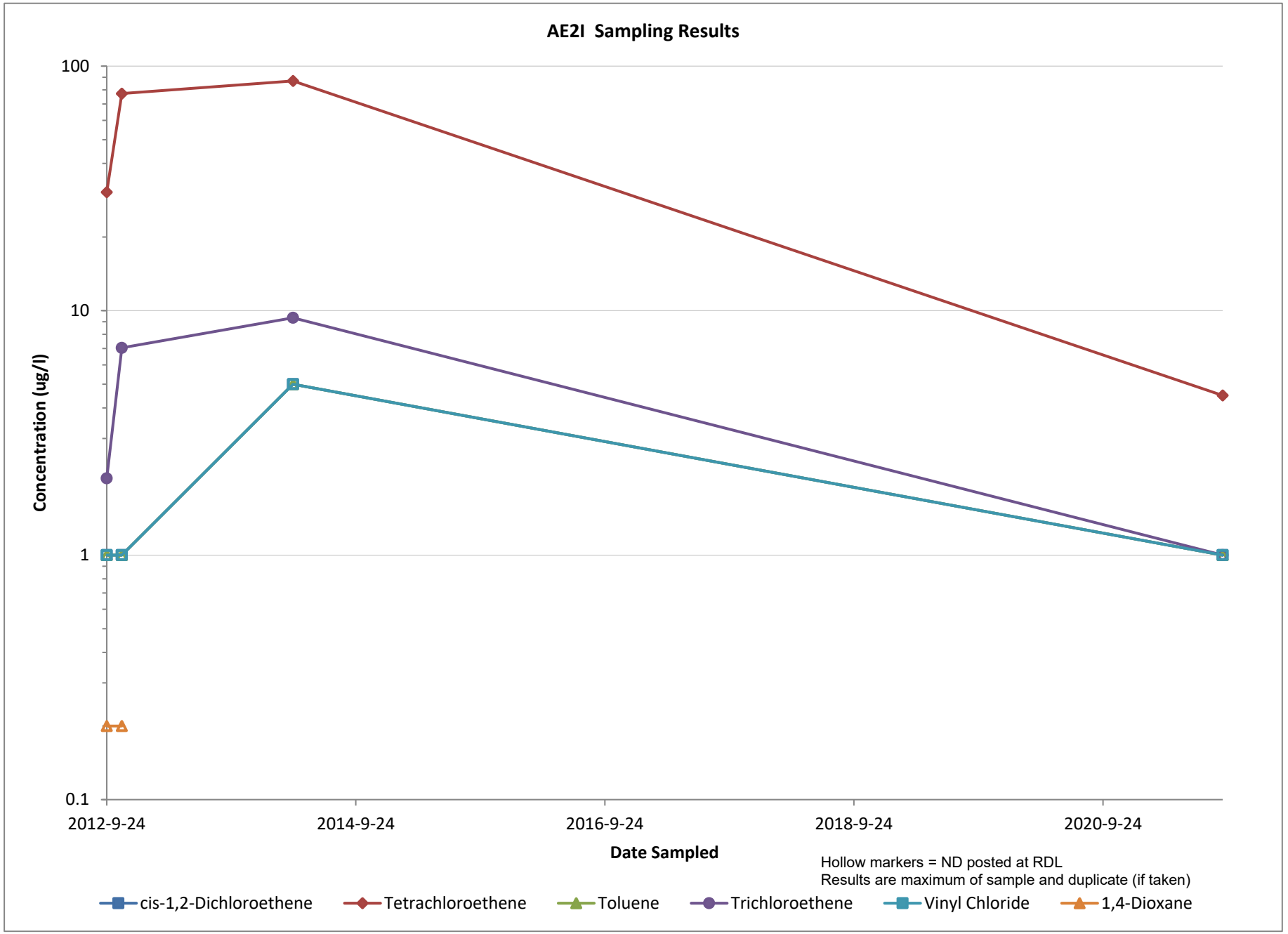

AE29R-2 Sampling Results
10
1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

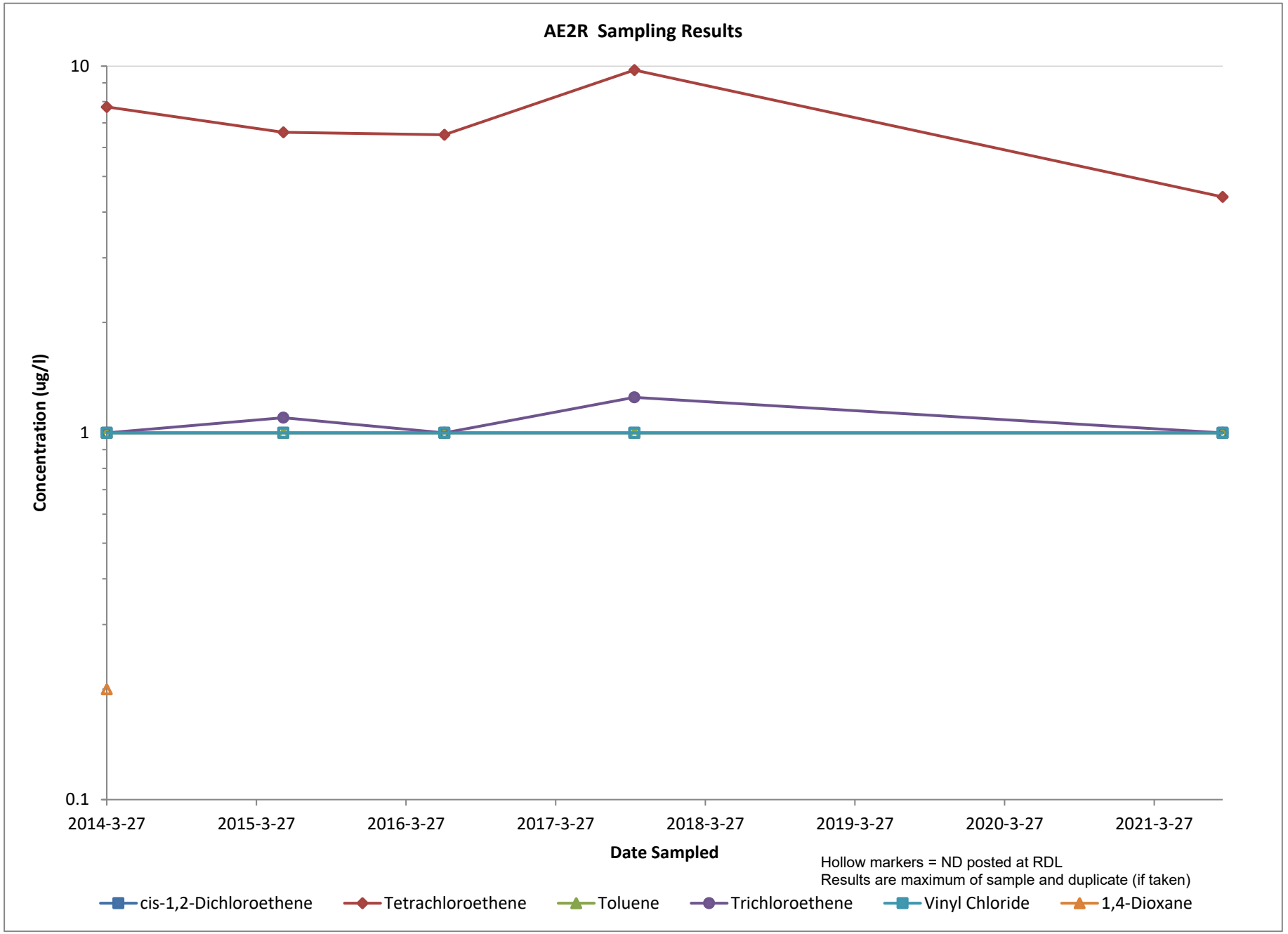

AE29R-3 Sampling Results
100
10
1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-28
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

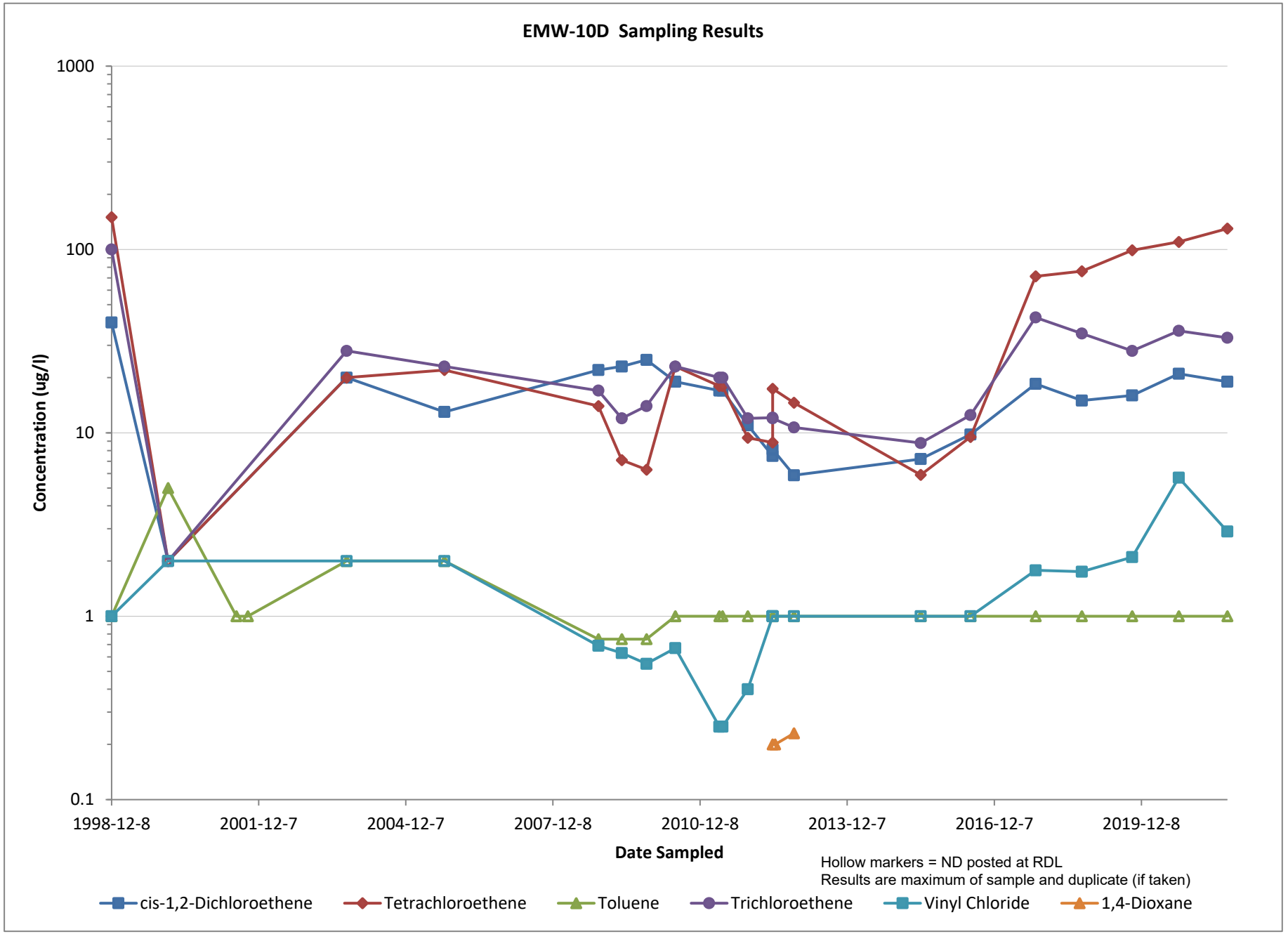

AE29R-4 Sampling Results
100
10
1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-28
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

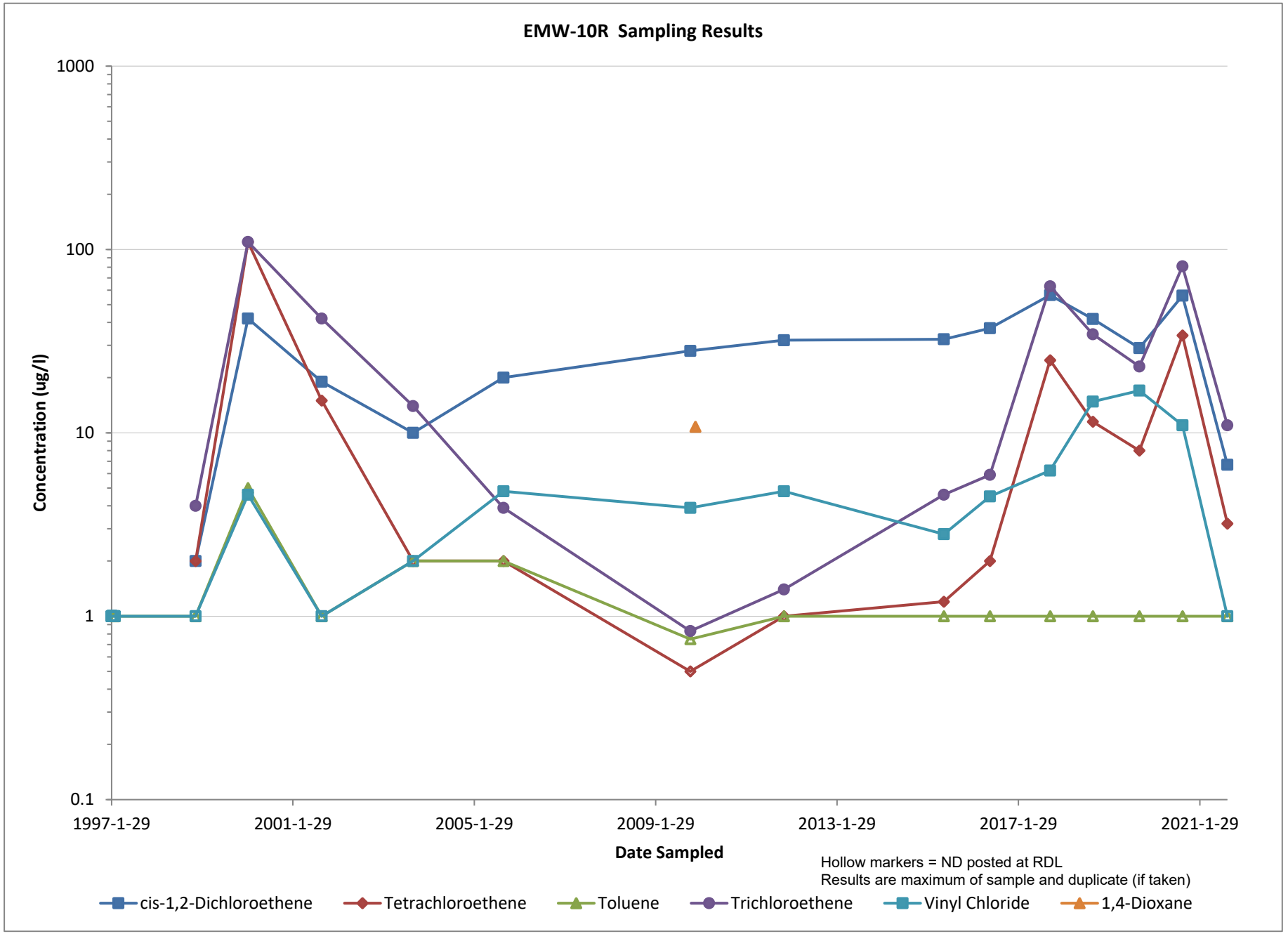

AE29R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

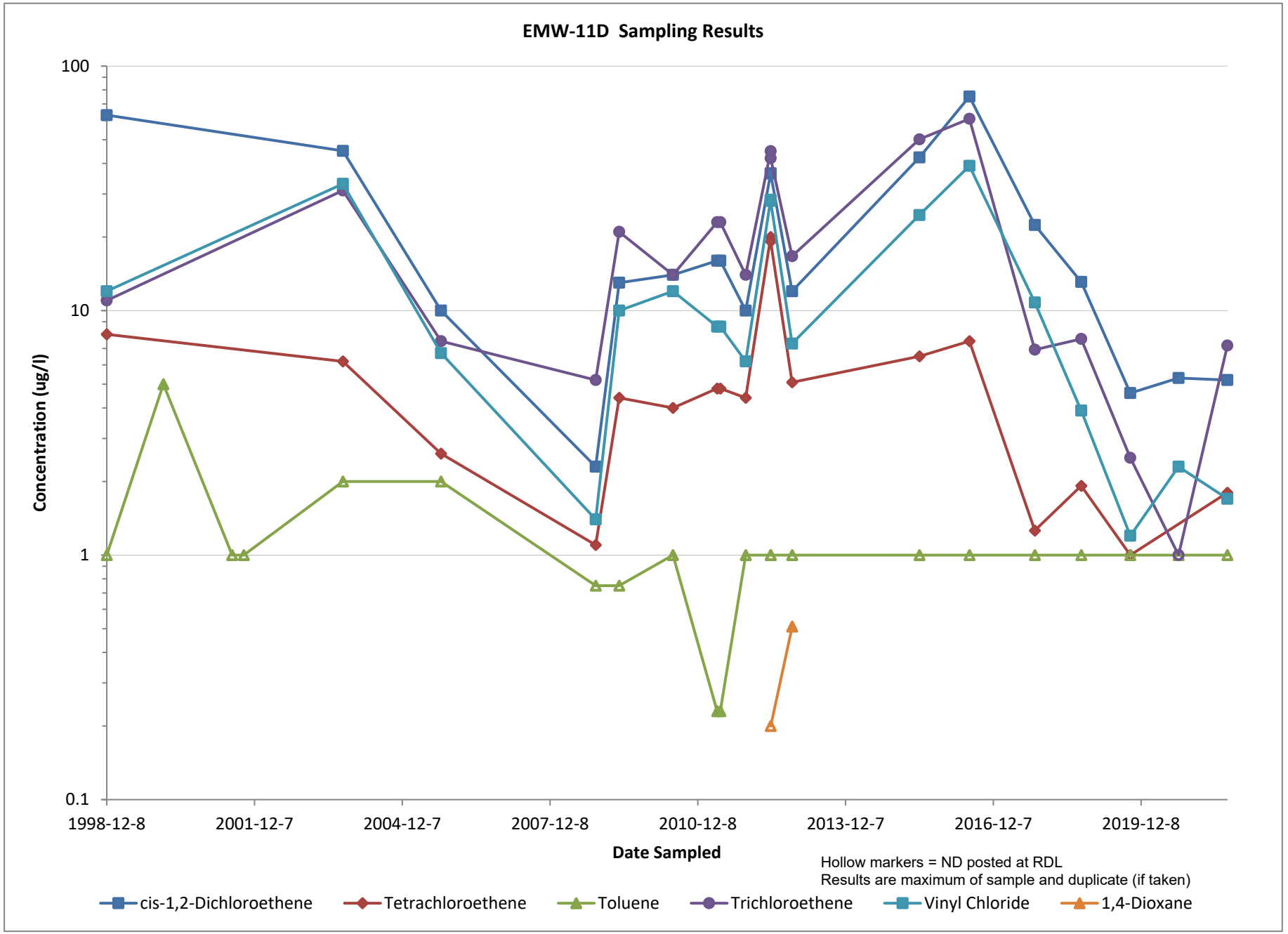

AE29R-6 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

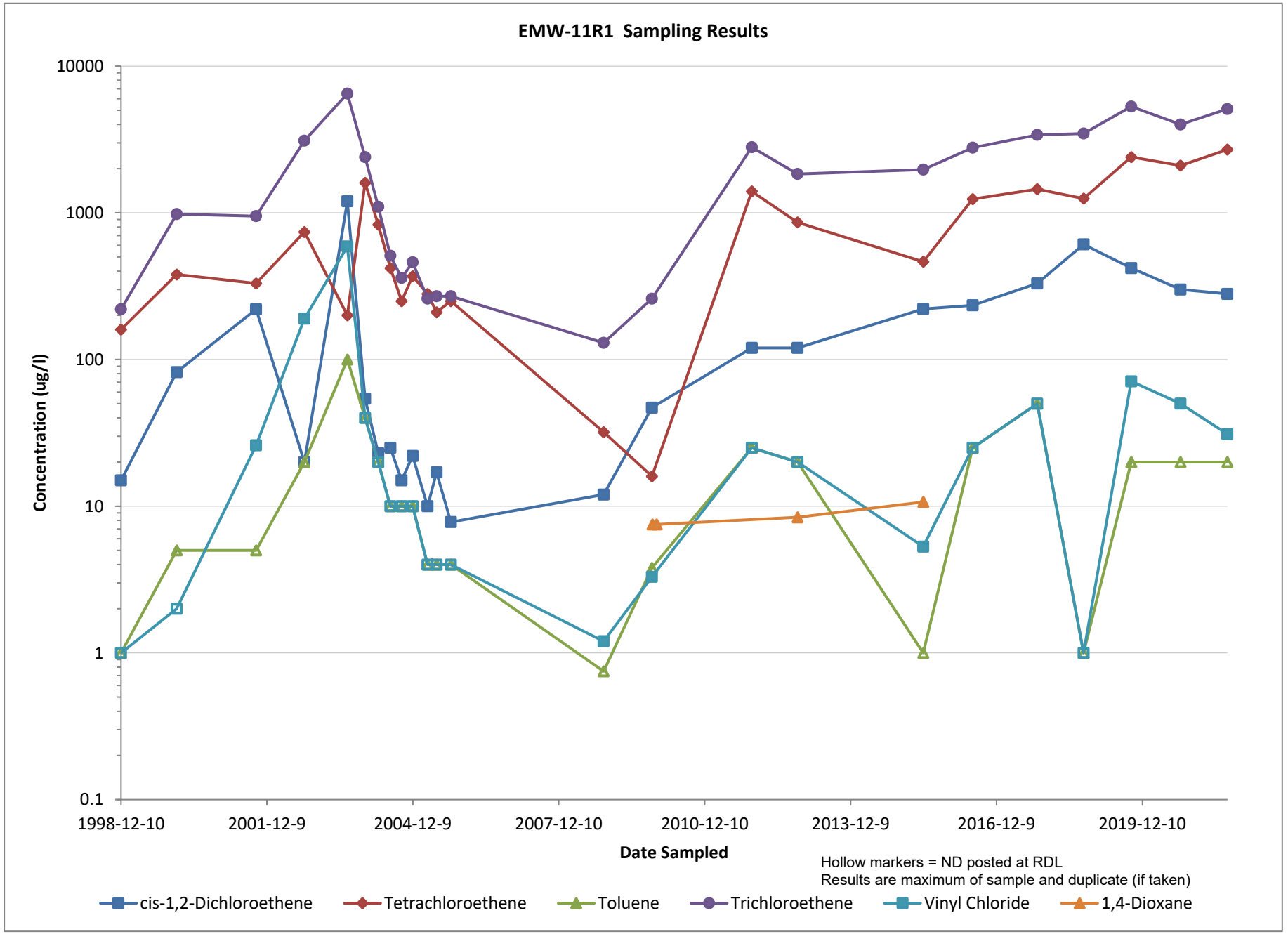

AE2I Sampling Results
100
10
1
0.1
Concentration (ug/l)
2012-9-24
2014-9-24
2016-9-24
2018-9-24
2020-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

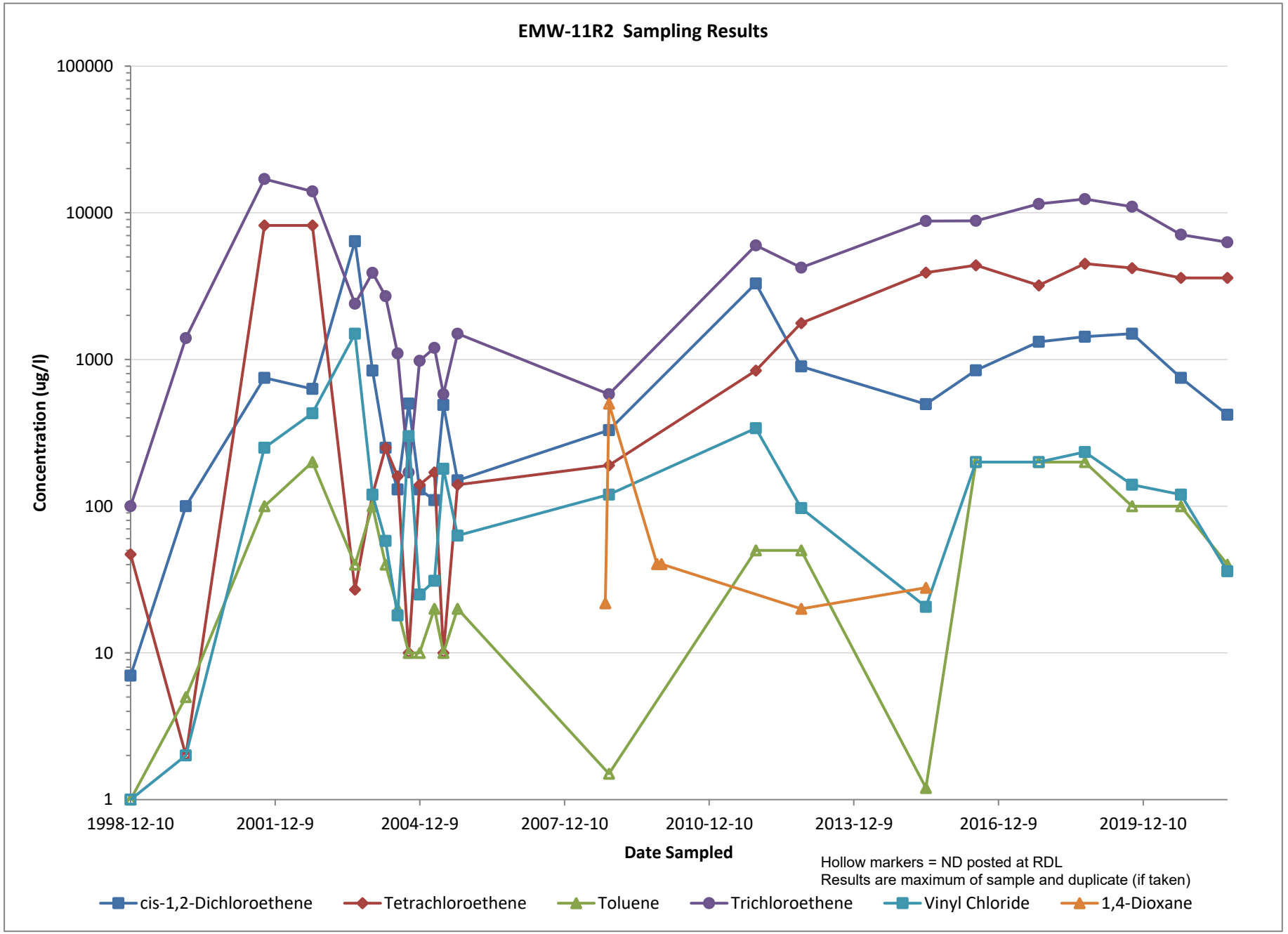

AE2R Sampling Results
10
1
0.1
Concentration (ug/l)
2014-3-27
2015-3-27
2016-3-27
2017-3-27
2018-3-27
2019-3-27
2020-3-27
2021-3-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

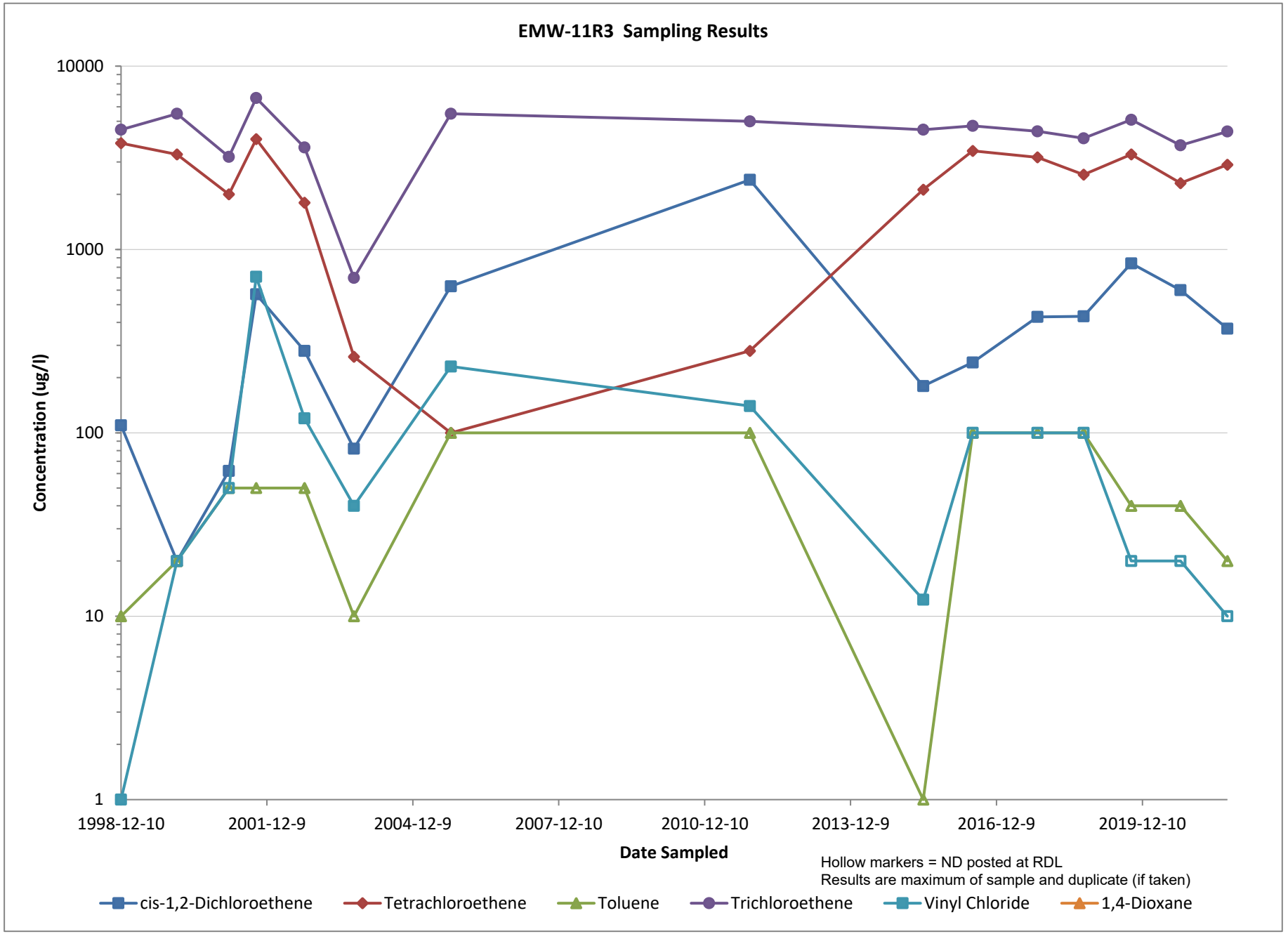

EMW-10D Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1998-12-8
2001-12-7
2004-12-7
2007-12-8
2010-12-8
2013-12-7
2016-12-7
2019-12-8
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

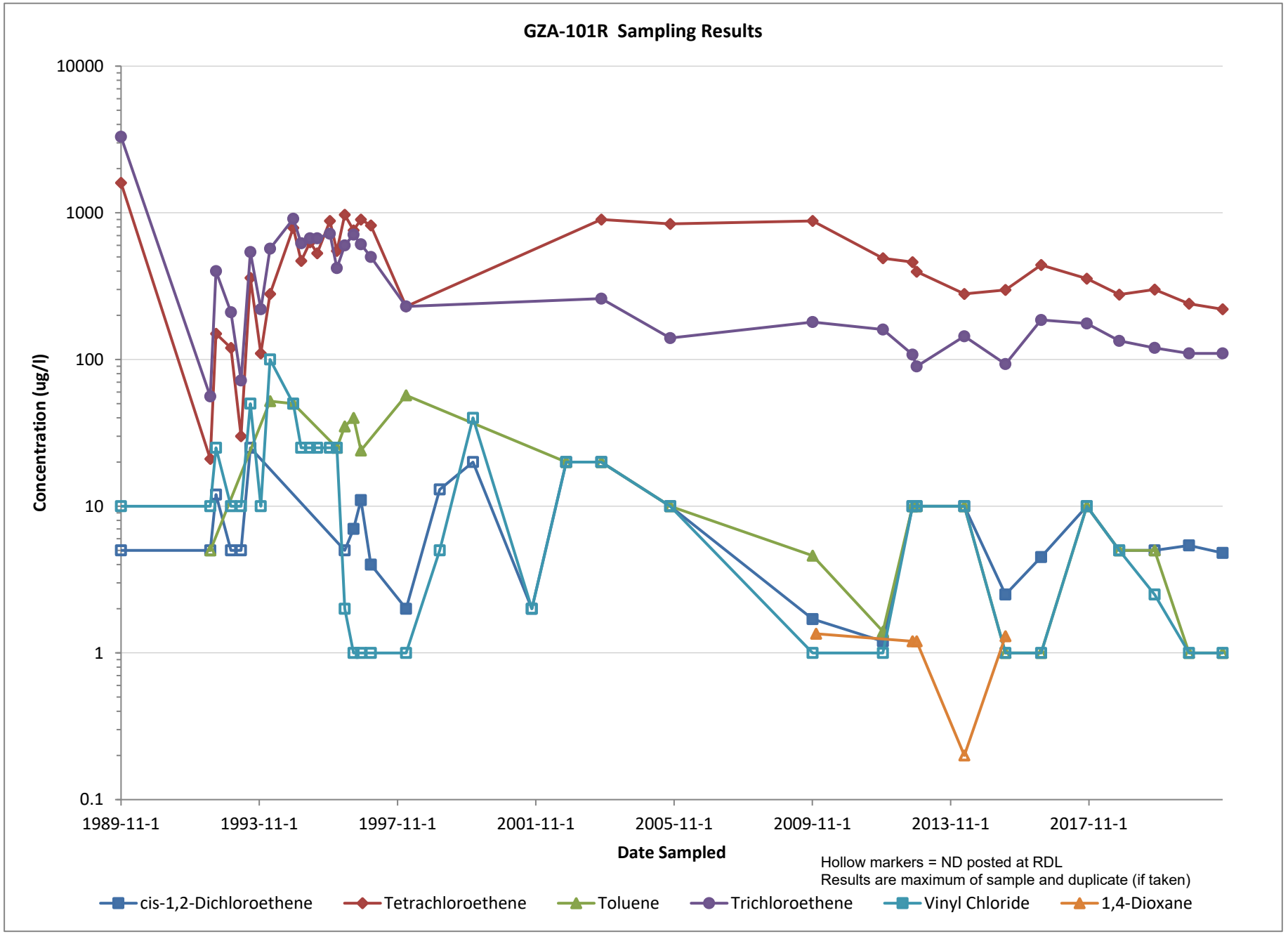

EMW-10R Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1997-1-29
2001-1-29
2005-1-29
2009-1-29
2013-1-29
2017-1-29
2021-1-29
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

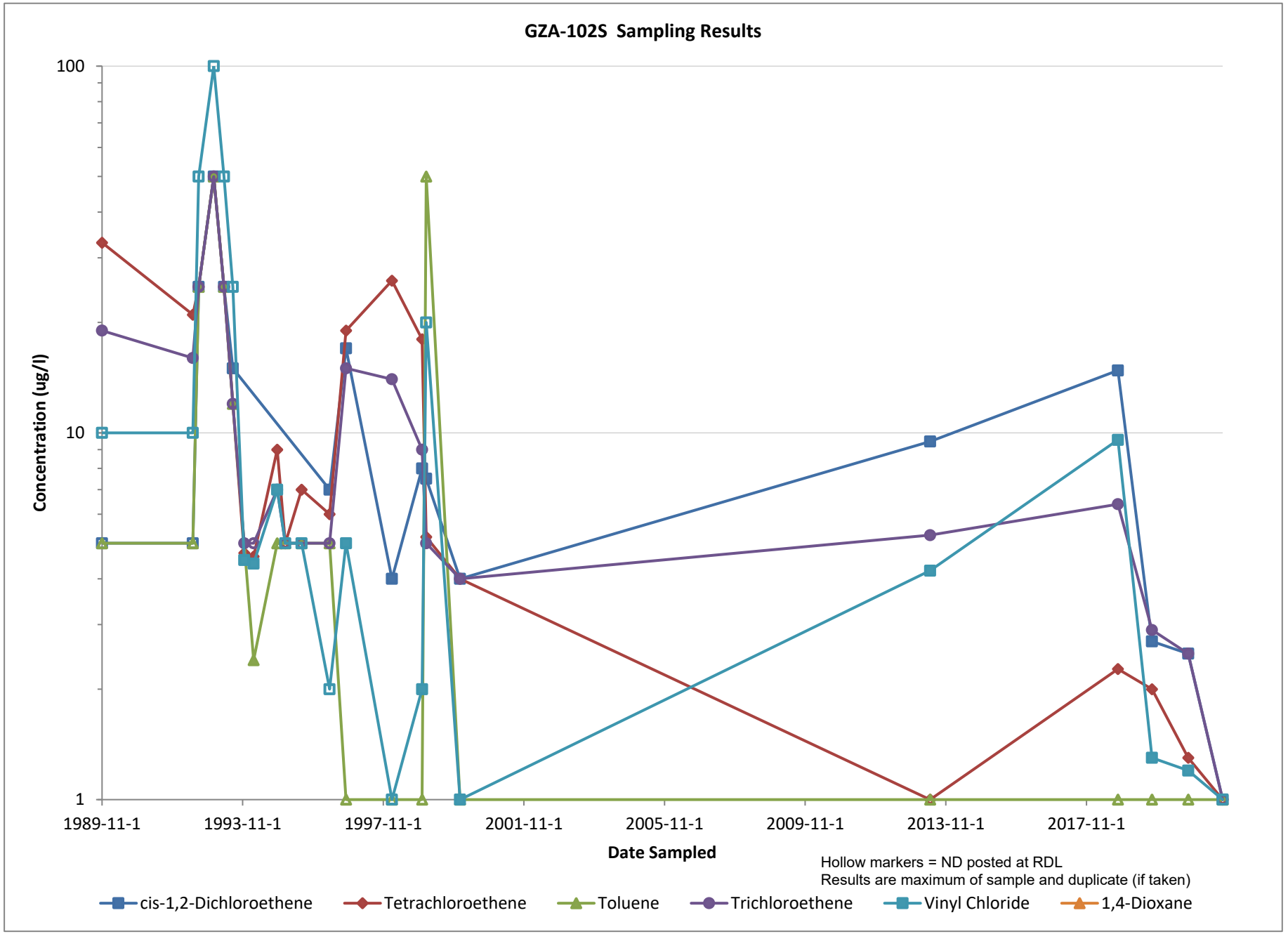

EMW-11D Sampling Results
100
10
1
0.1
Concentration (ug/l)
1998-12-8
2001-12-7
2004-12-7
2007-12-8
2010-12-8
2013-12-7
2016-12-7
2019-12-8
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

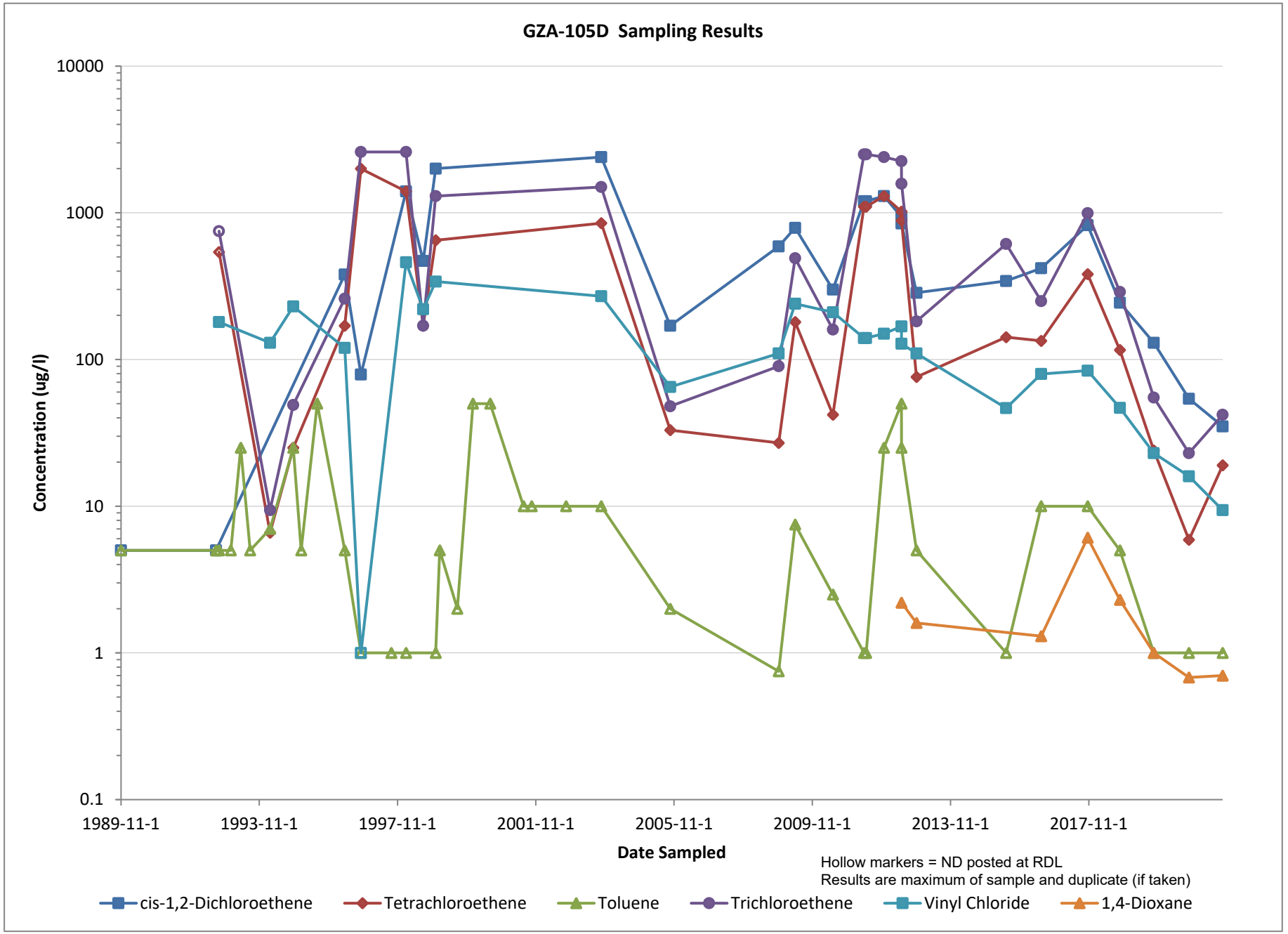

EMW-11R1 Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1998-12-10
2001-12-9
2004-12-9
2007-12-10
2010-12-10
2013-12-9
2016-12-9
2019-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

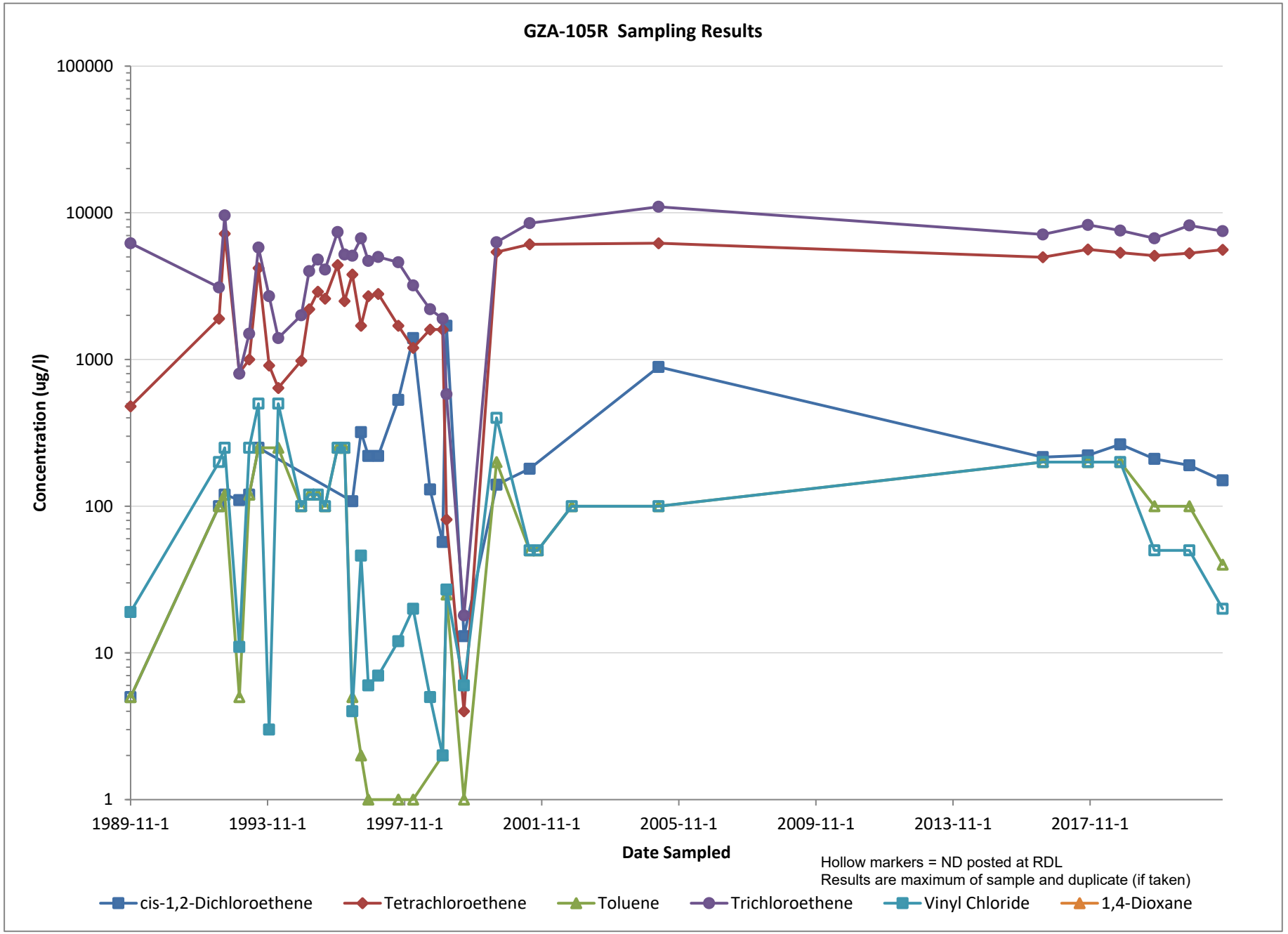

EMW-11R2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
1998-12-10
2001-12-9
2004-12-9
2007-12-10
2010-12-10
2013-12-9
2016-12-9
2019-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

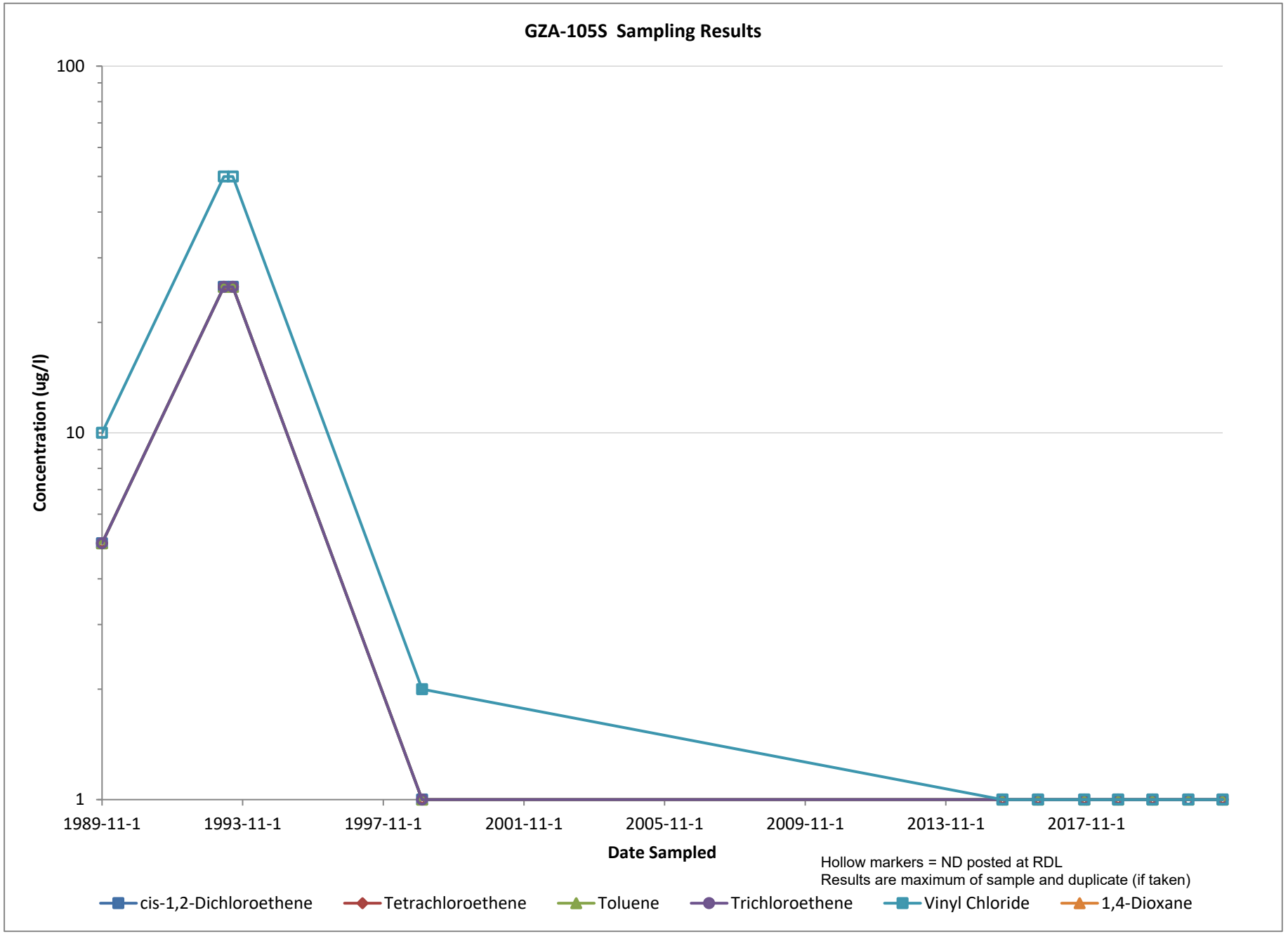

EMW-11R3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
1998-12-10
2001-12-9
2004-12-9
2007-12-10
2010-12-10
2013-12-9
2016-12-9
2019-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

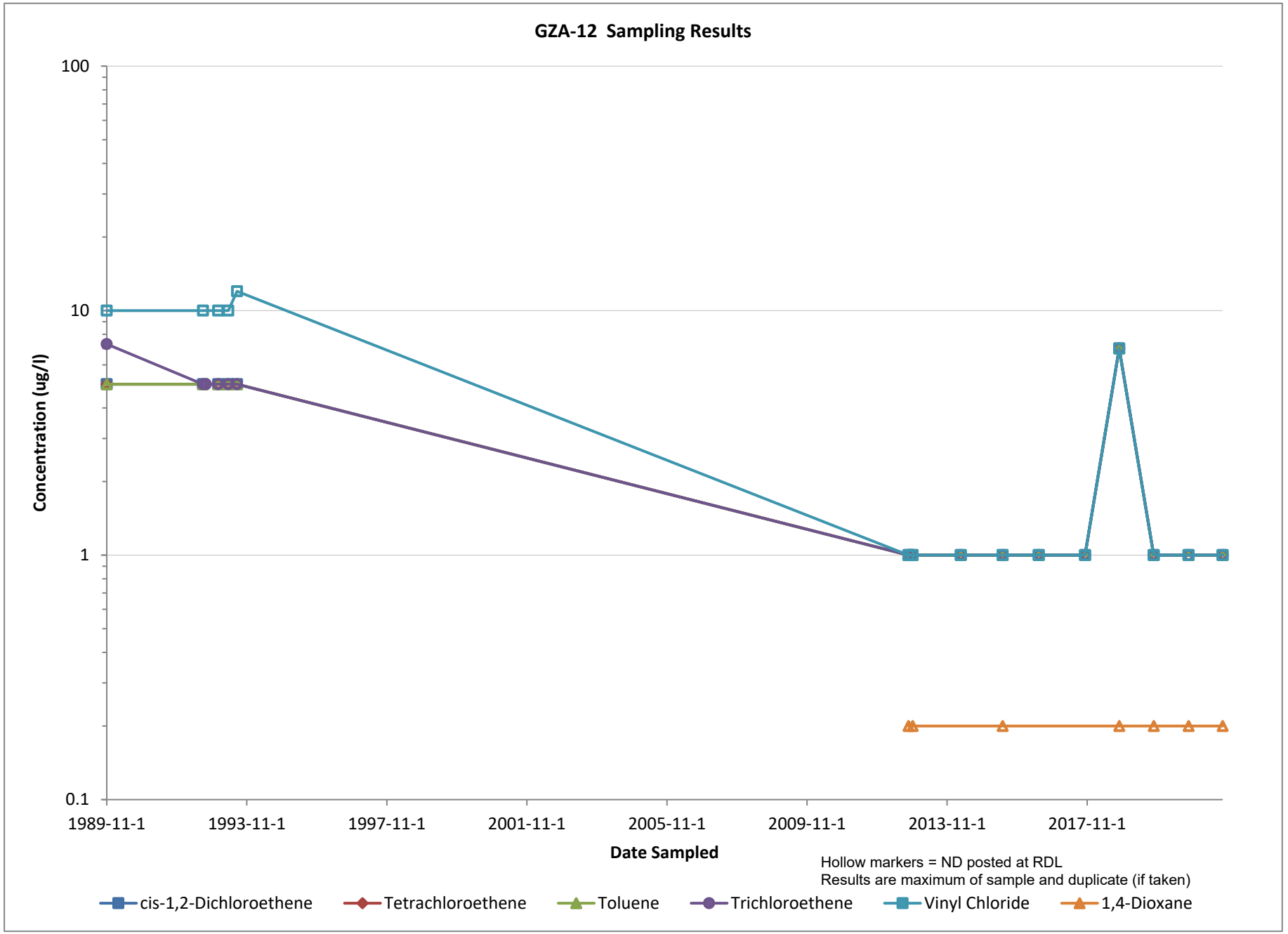

GZA-101R Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

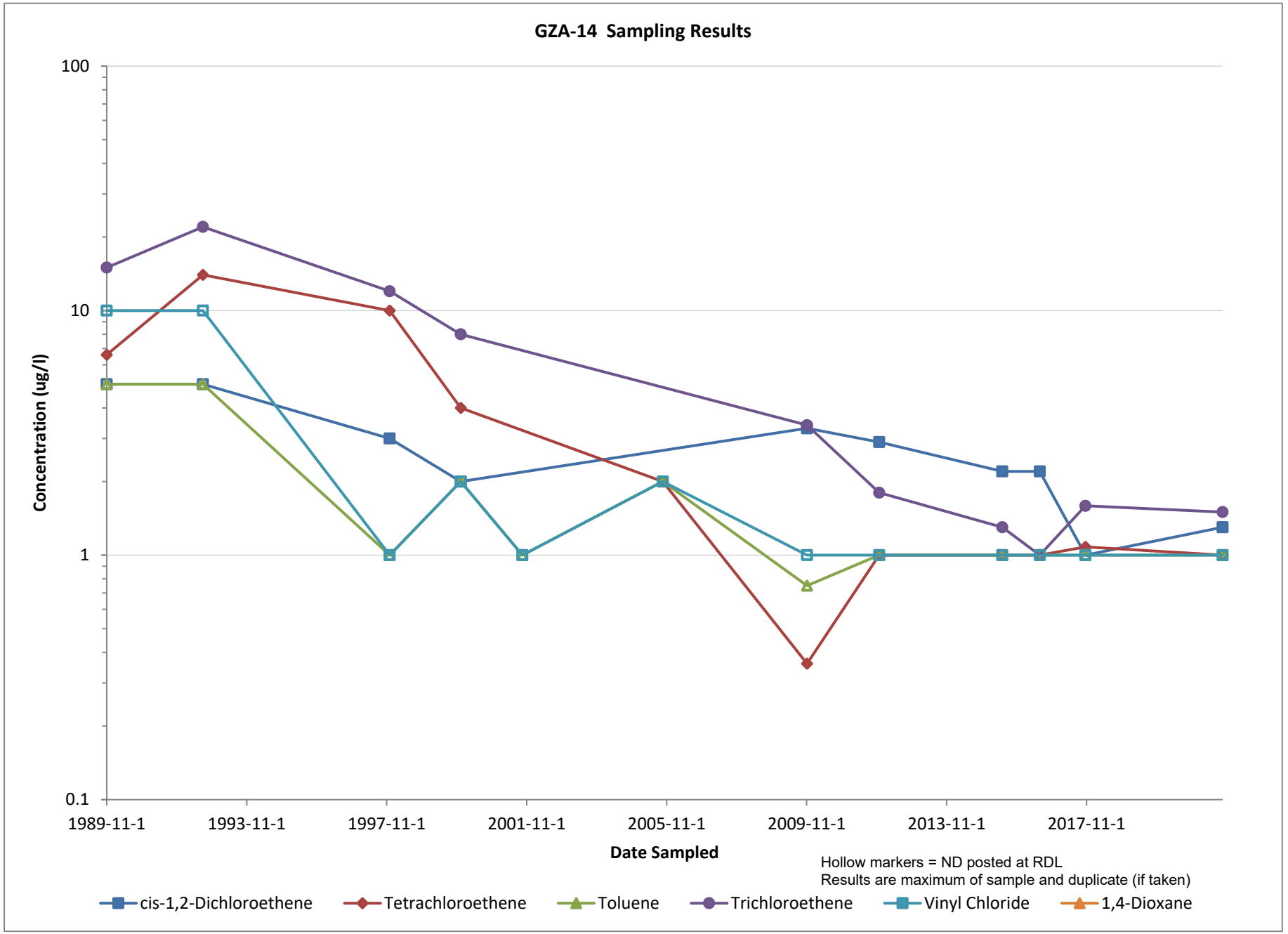

GZA-102S Sampling Results
100
10
1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

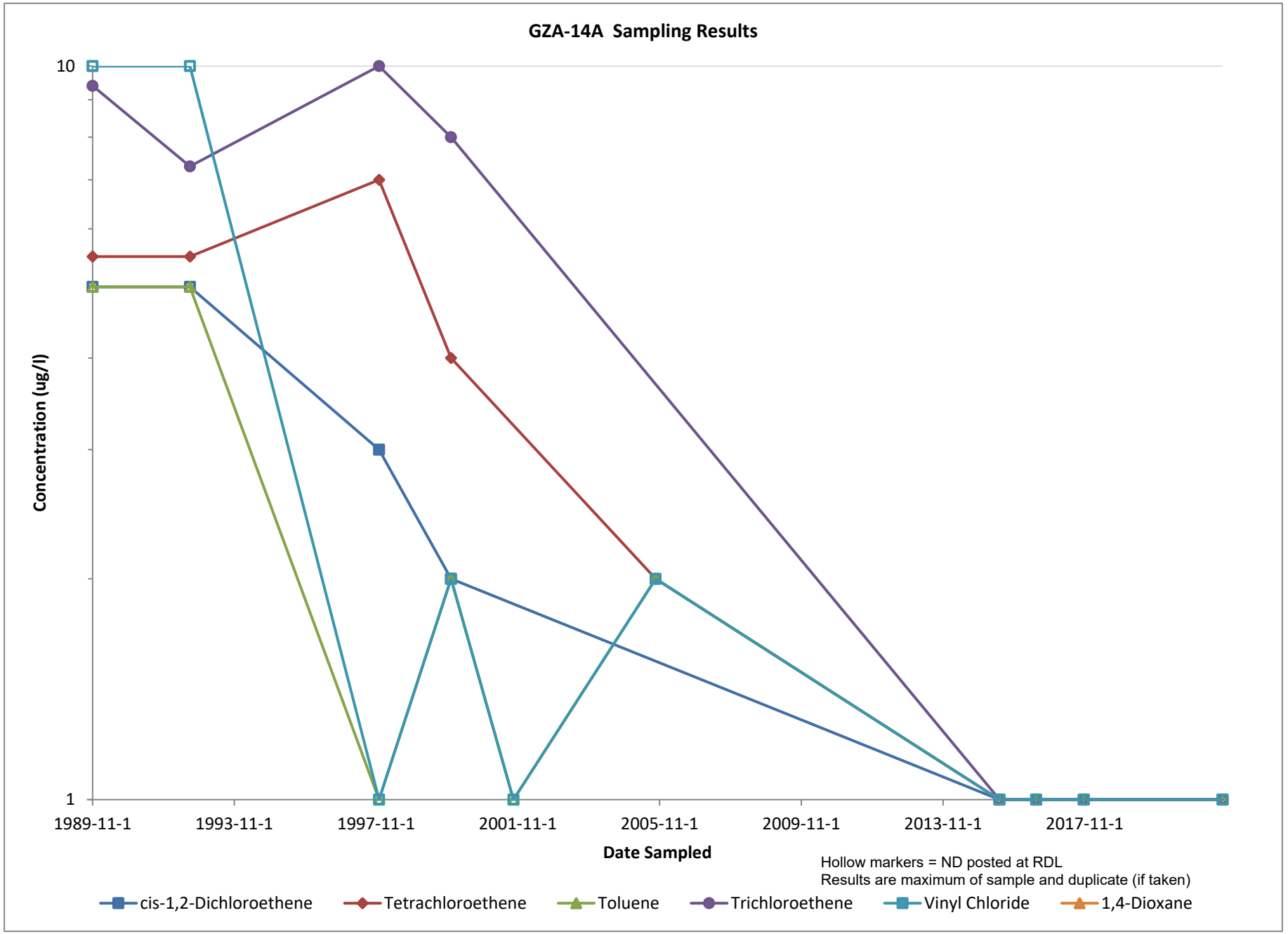

GZA-105D Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

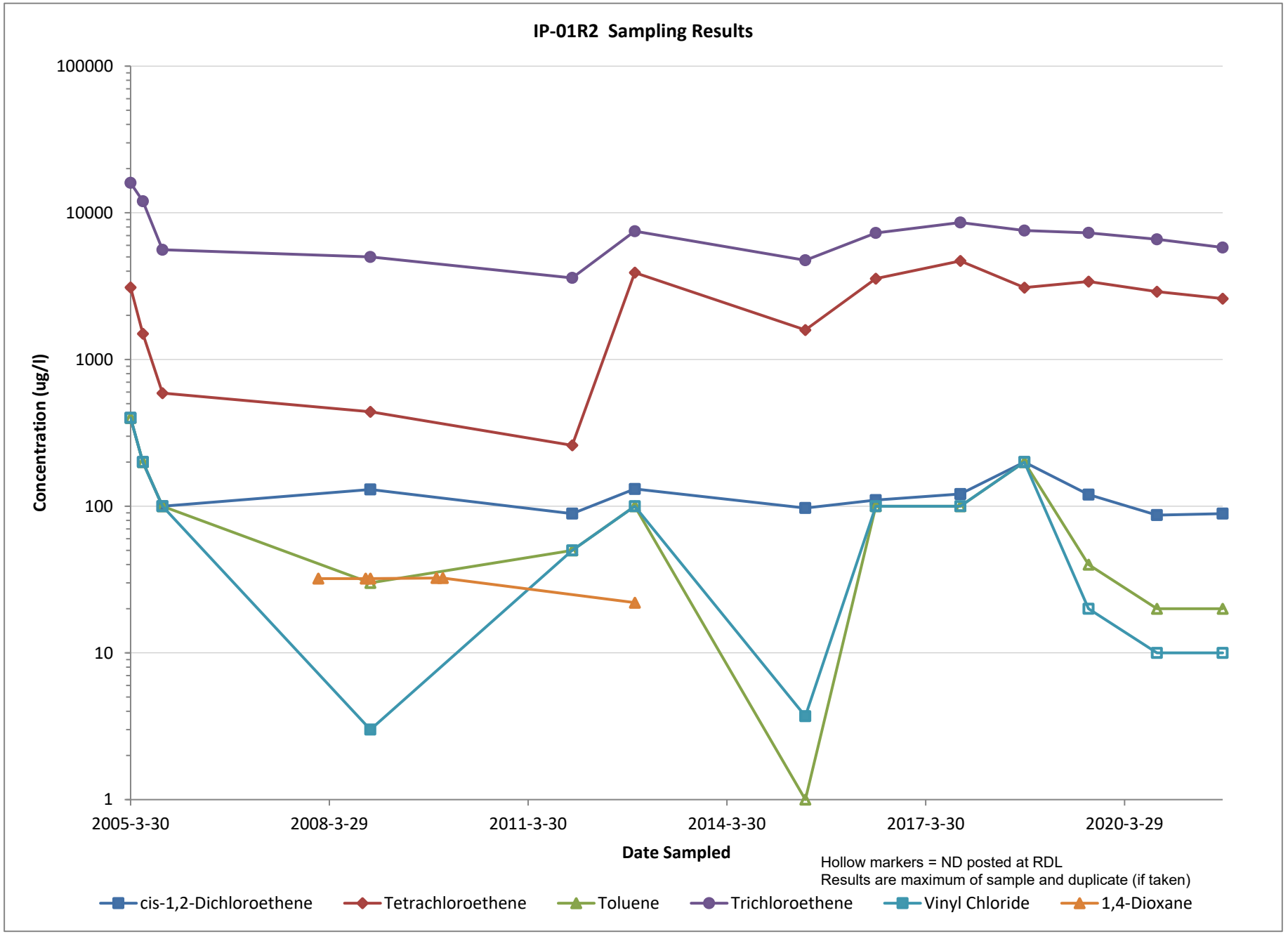

GZA-105R Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

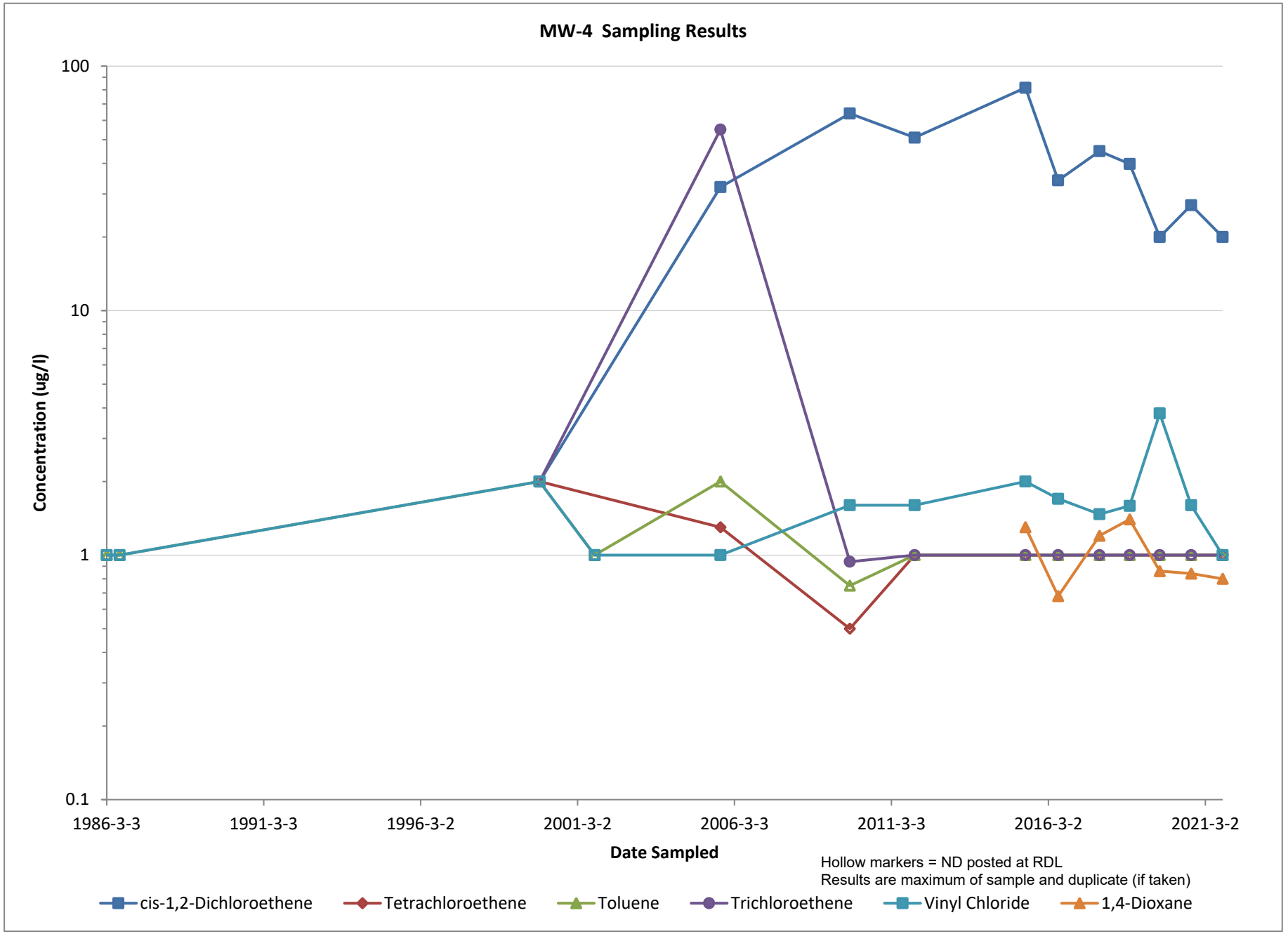

GZA-105S Sampling Results
100
10
1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

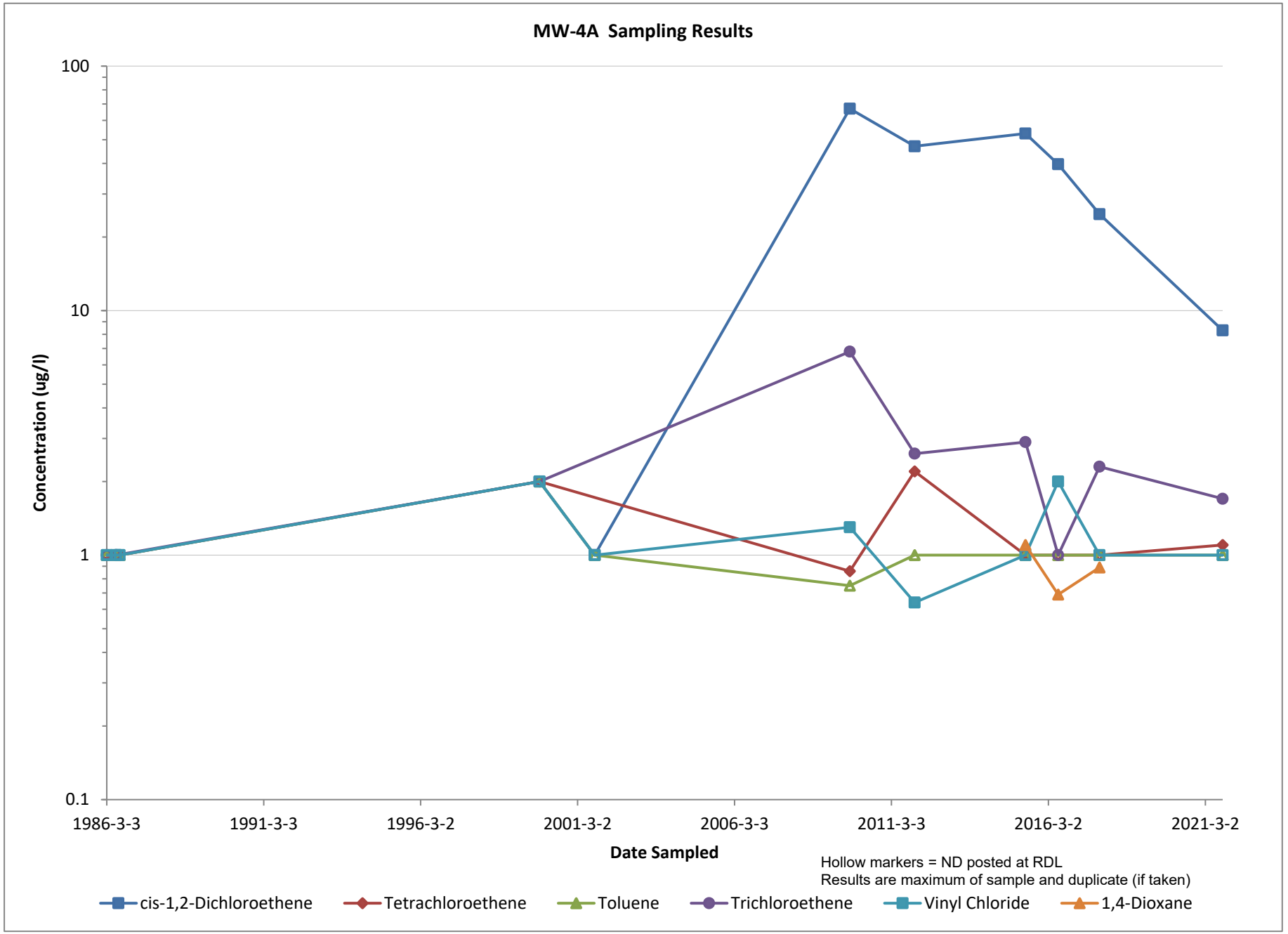

GZA-12 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

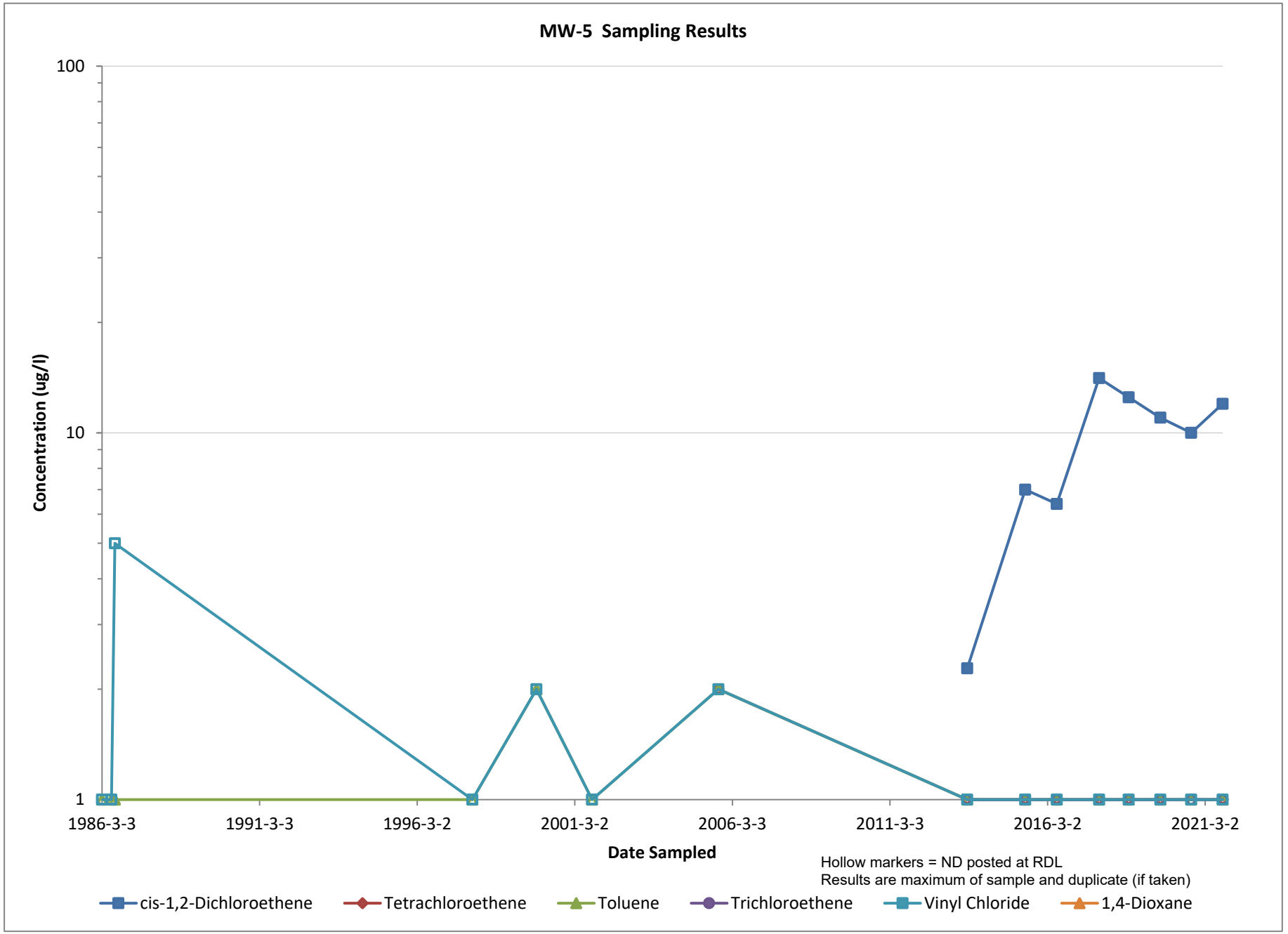

GZA-14 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

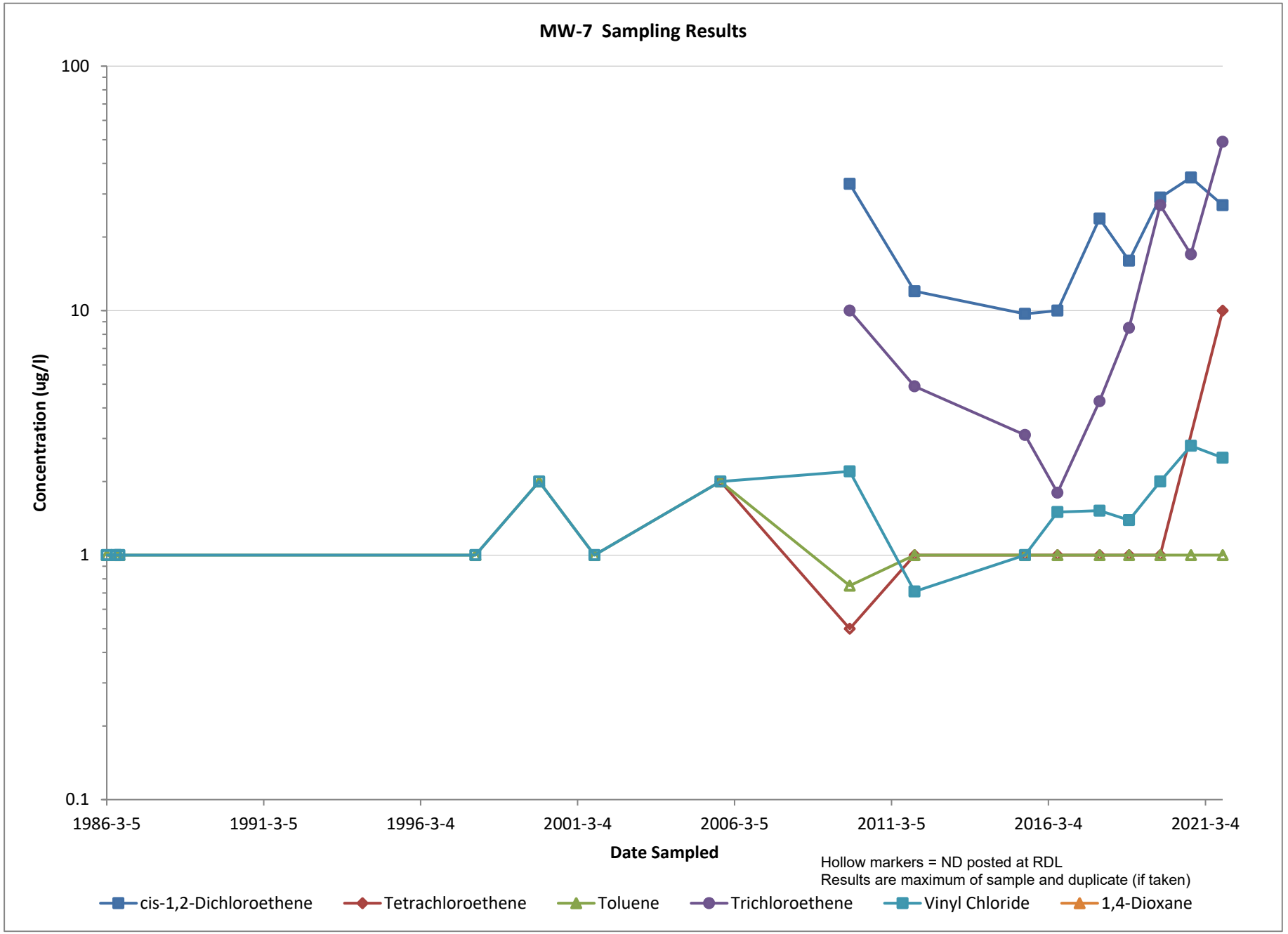

GZA-14A Sampling Results
10
1
Concentration (ug/l)
1989-11-1
1993-11-1
1997-11-1
2001-11-1
2005-11-1
2009-11-1
2013-11-1
2017-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

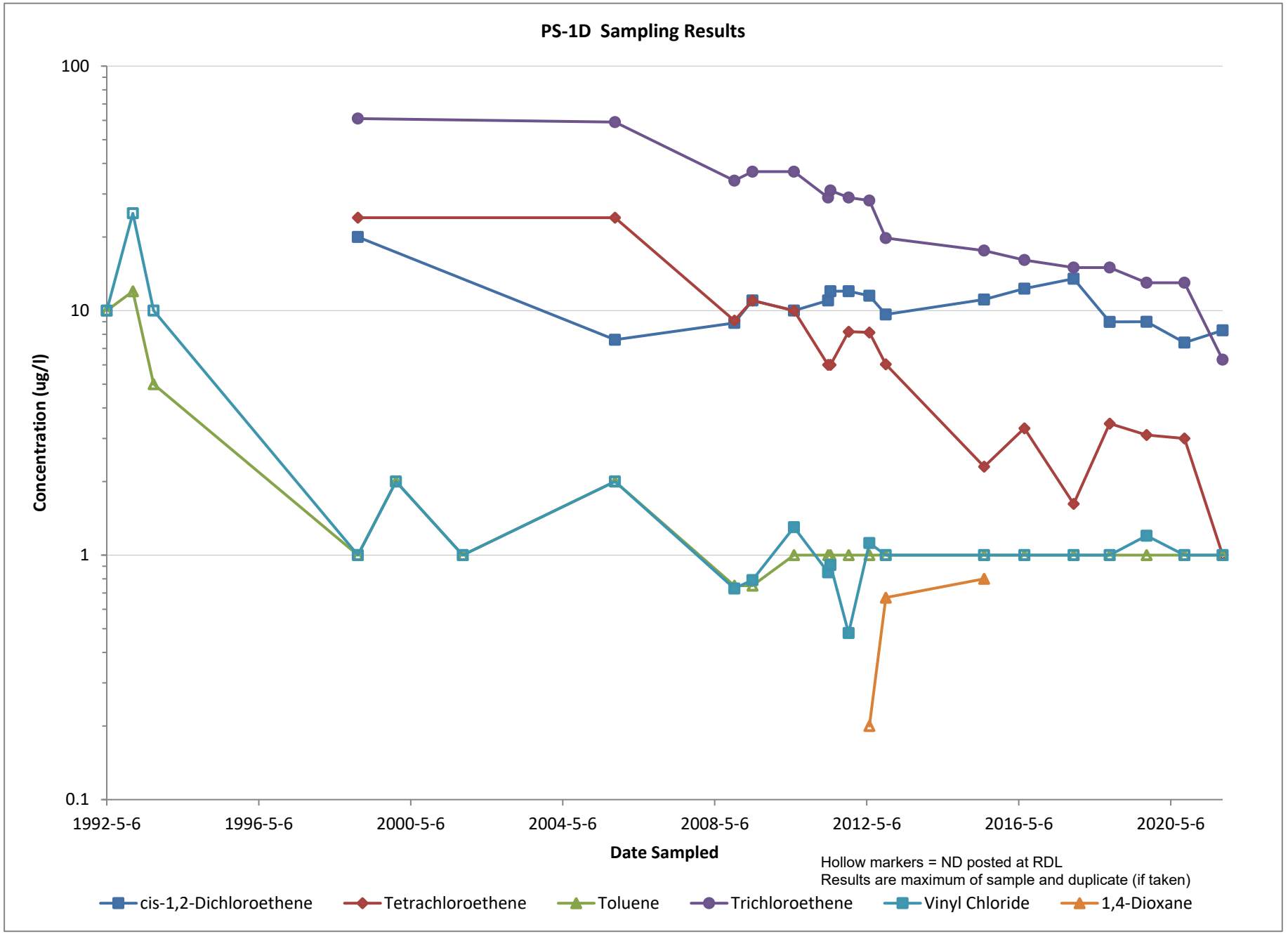

IP-01R2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2005-3-30
2008-3-29
2011-3-30
2014-3-30
2017-3-30
2020-3-29
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

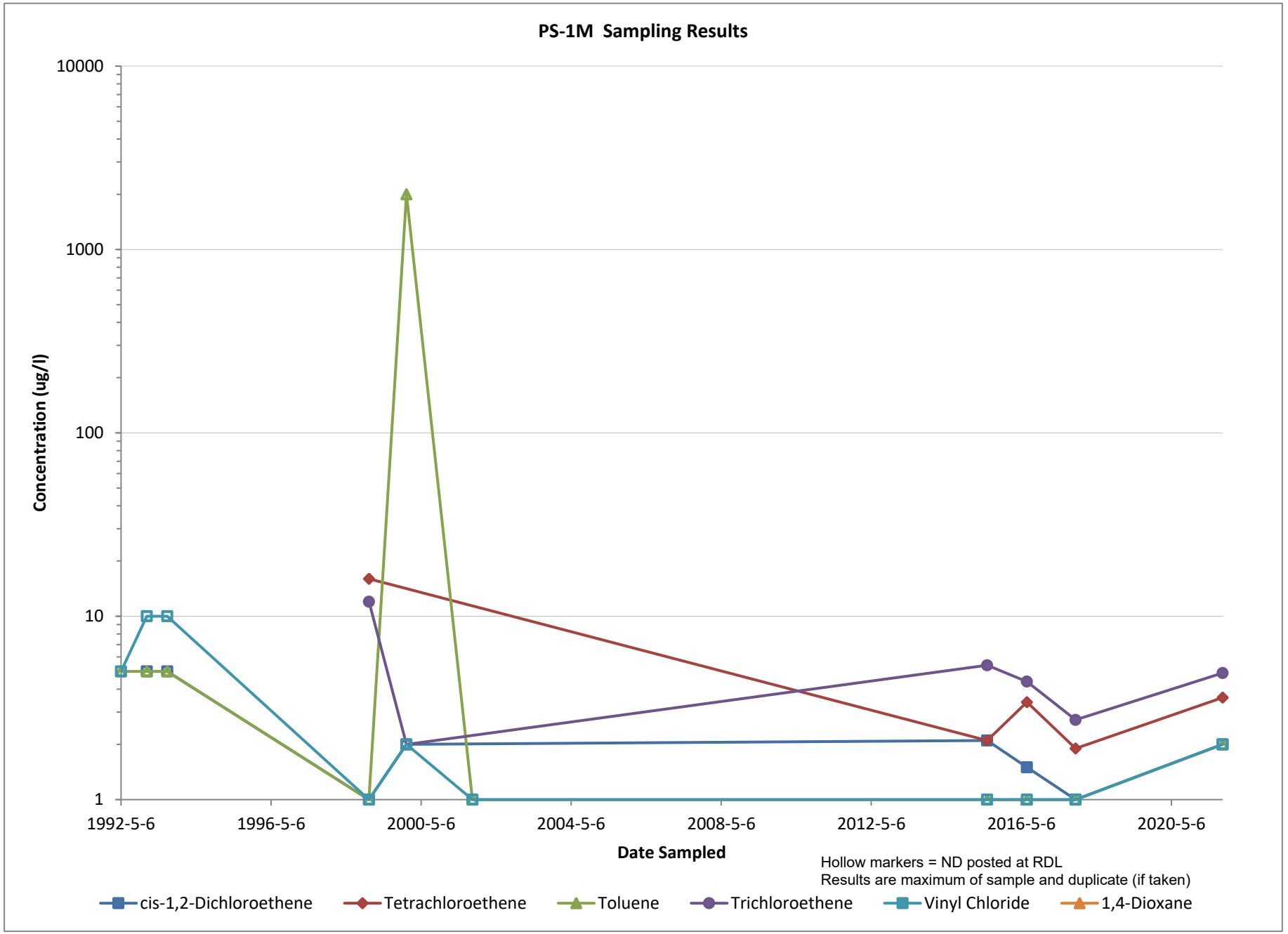

MW-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1986-3-3
1991-3-3
1996-3-2
2001-3-2
2006-3-3
2011-3-3
2016-3-2
2021-3-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

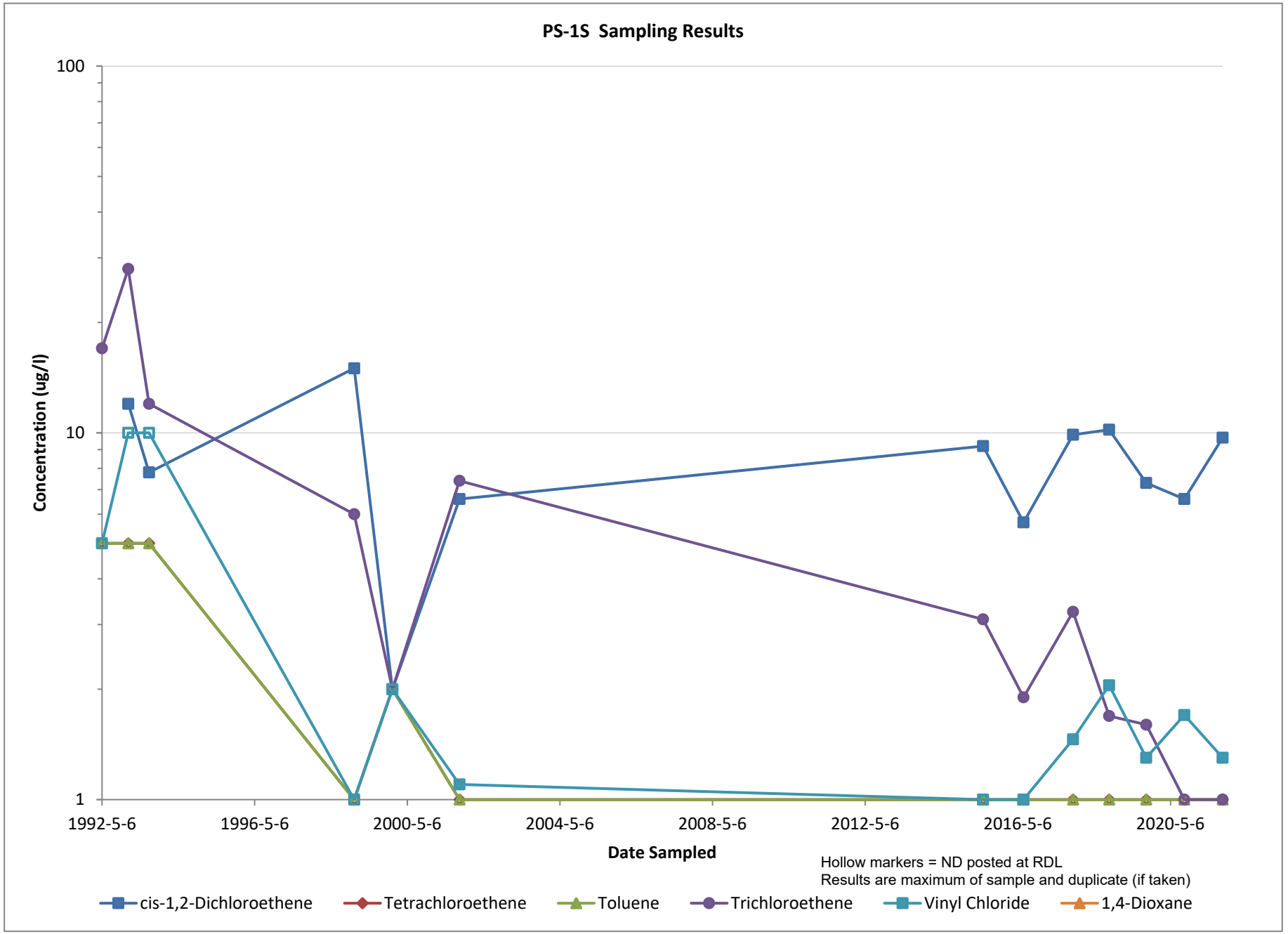

MW-4A Sampling Results
100
10
1
0.1
Concentration (ug/l)
1986-3-3
1991-3-3
1996-3-2
2001-3-2
2006-3-3
2011-3-3
2016-3-2
2021-3-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

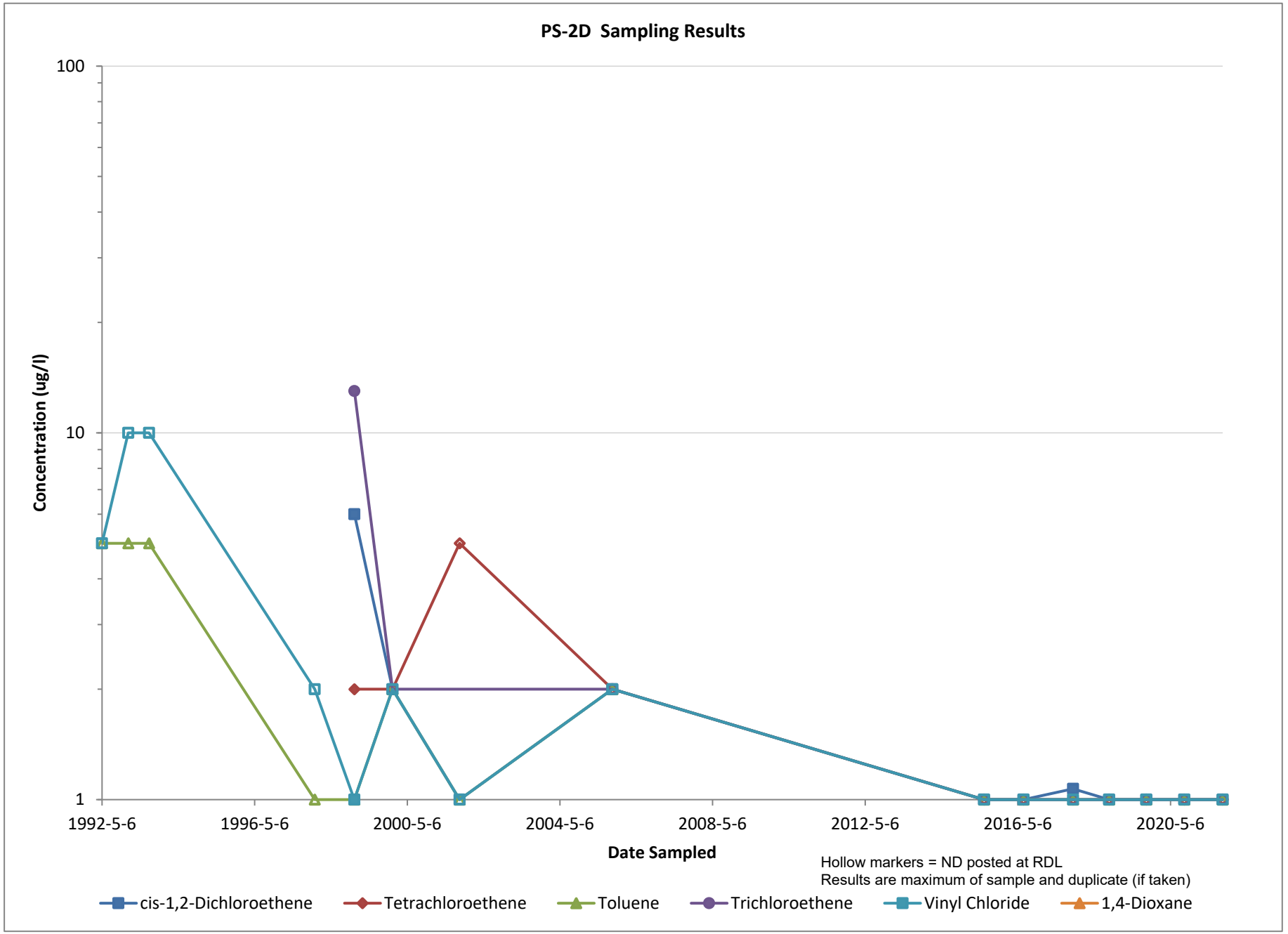

MW-5 Sampling Results
100
10
1
Concentration (ug/l)
1986-3-3
1991-3-3
1996-3-2
2001-3-2
2006-3-3
2011-3-3
2016-3-2
2021-3-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

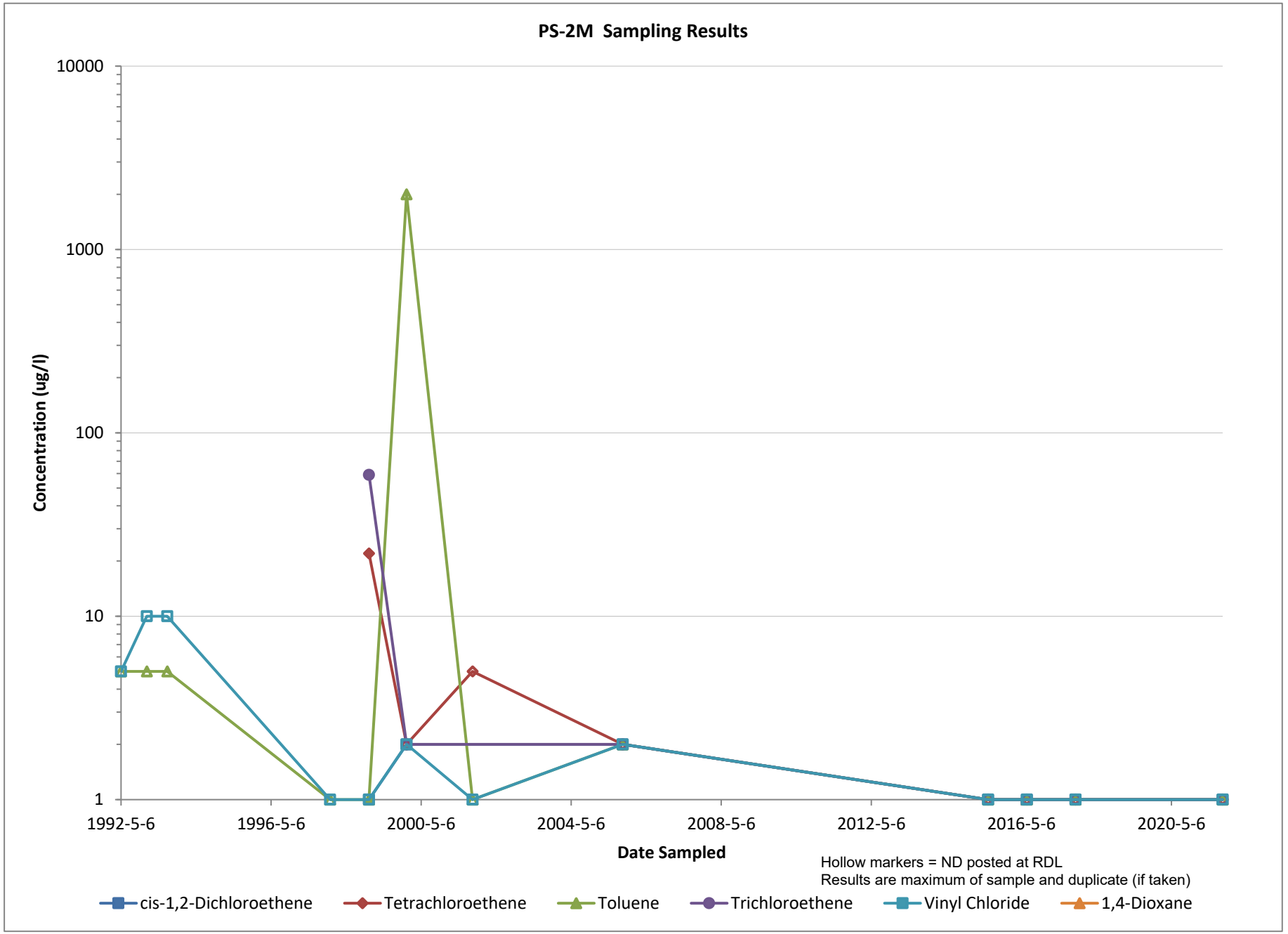

MW-7 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1986-3-5
1991-3-5
1996-3-4
2001-3-4
2006-3-5
2011-3-5
2016-3-4
2021-3-4
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

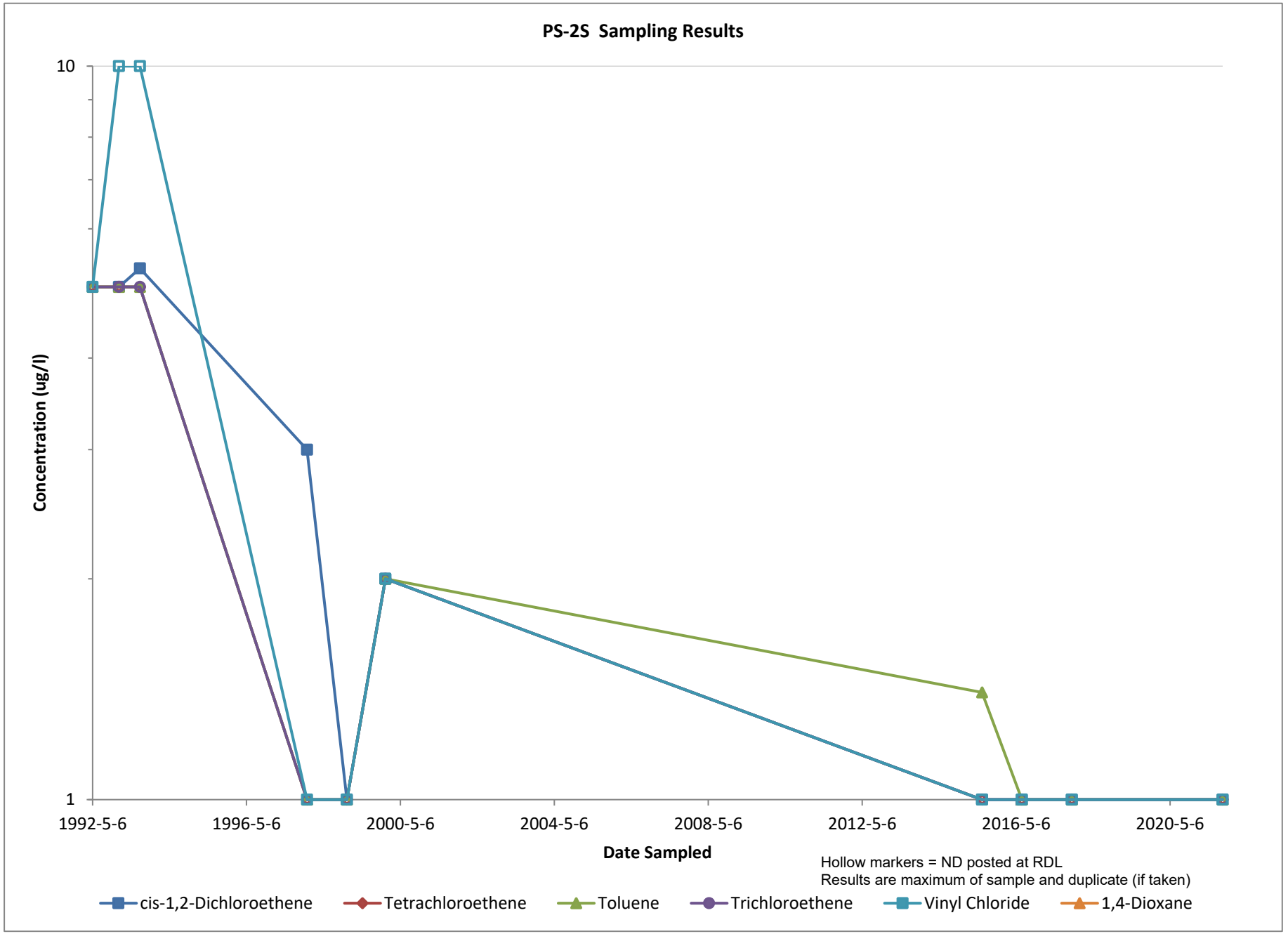

PS-1D Sampling Results
100
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

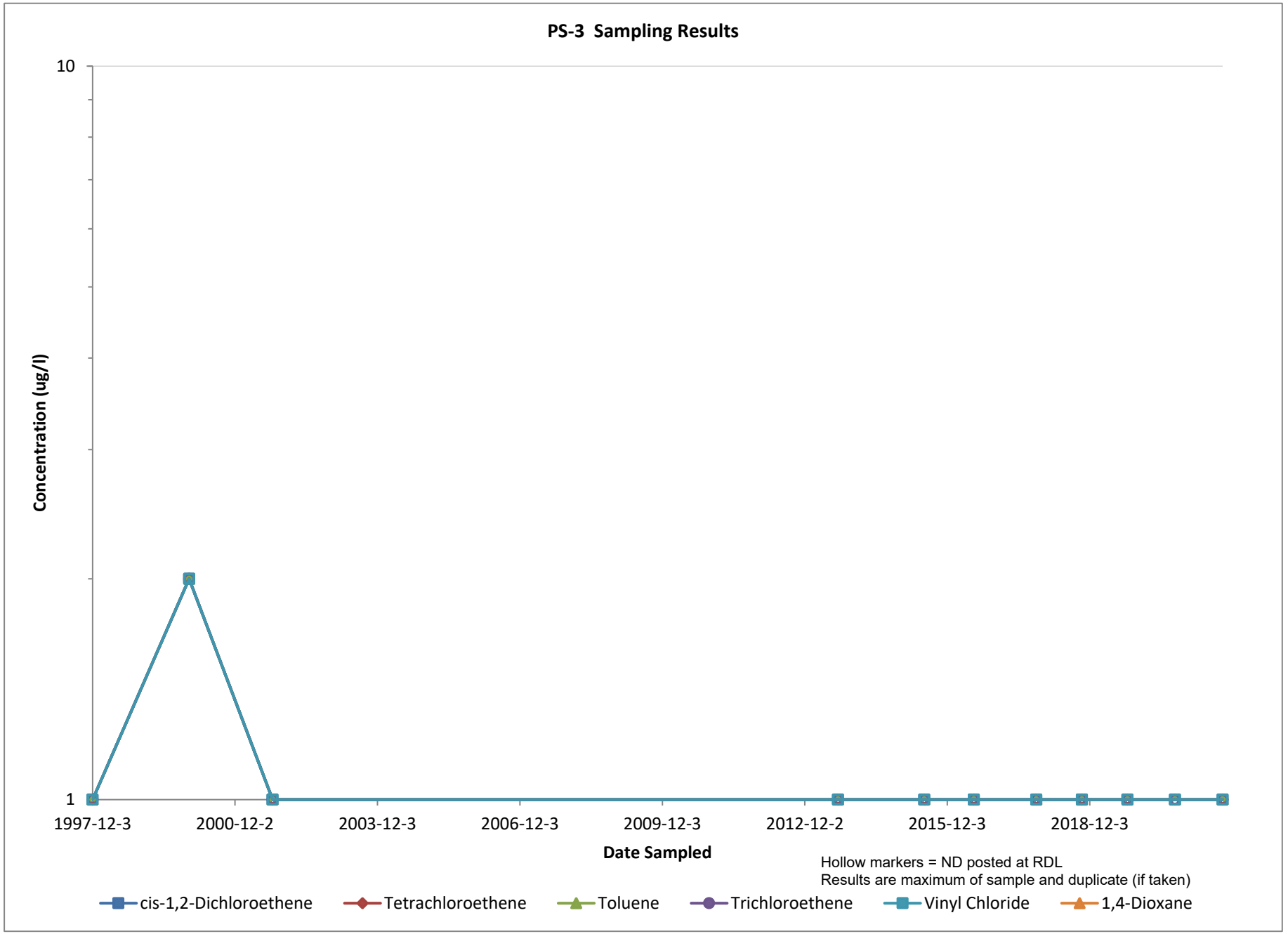

PS-1M Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

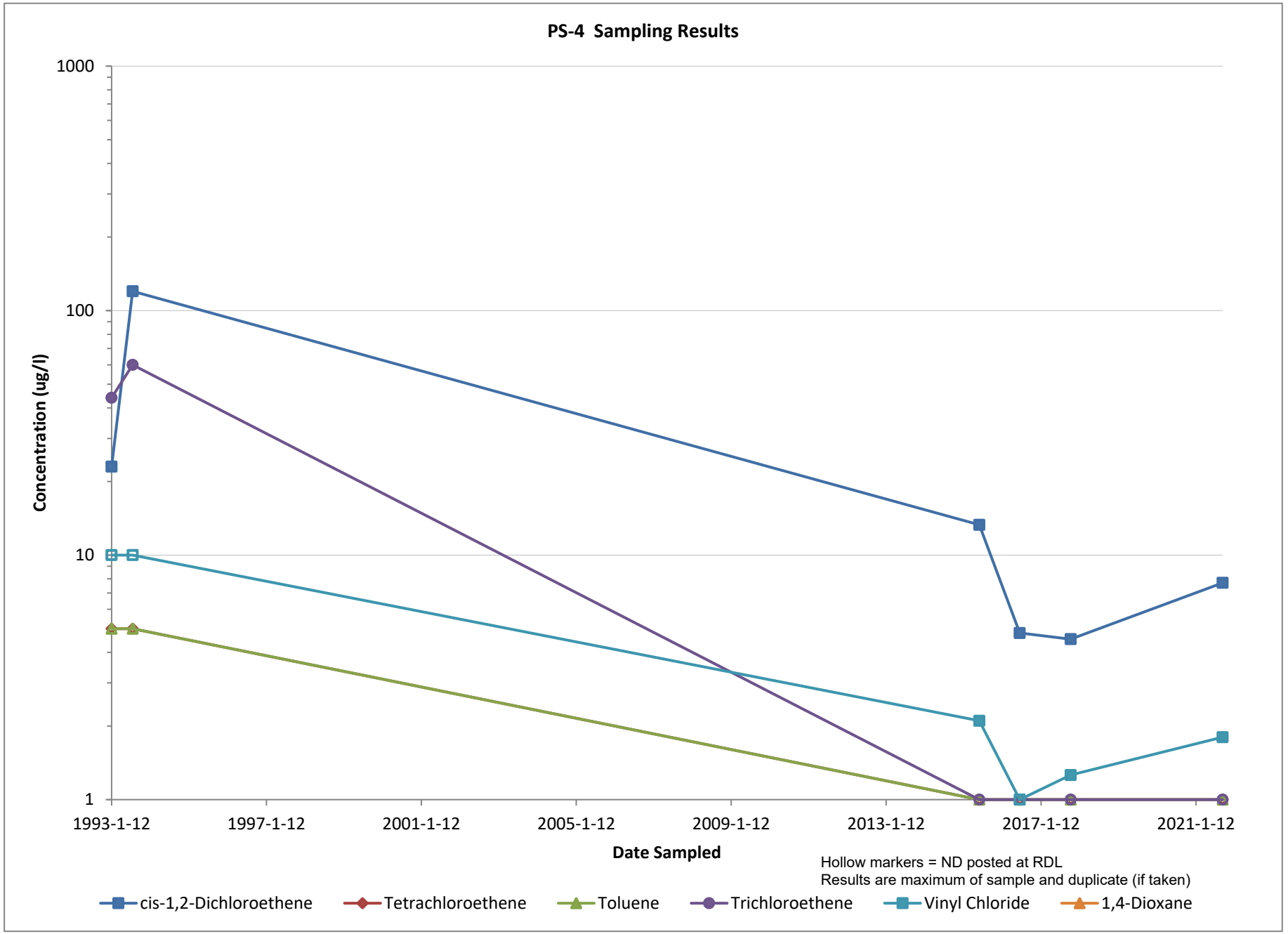

PS-1S Sampling Results
100
10
1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

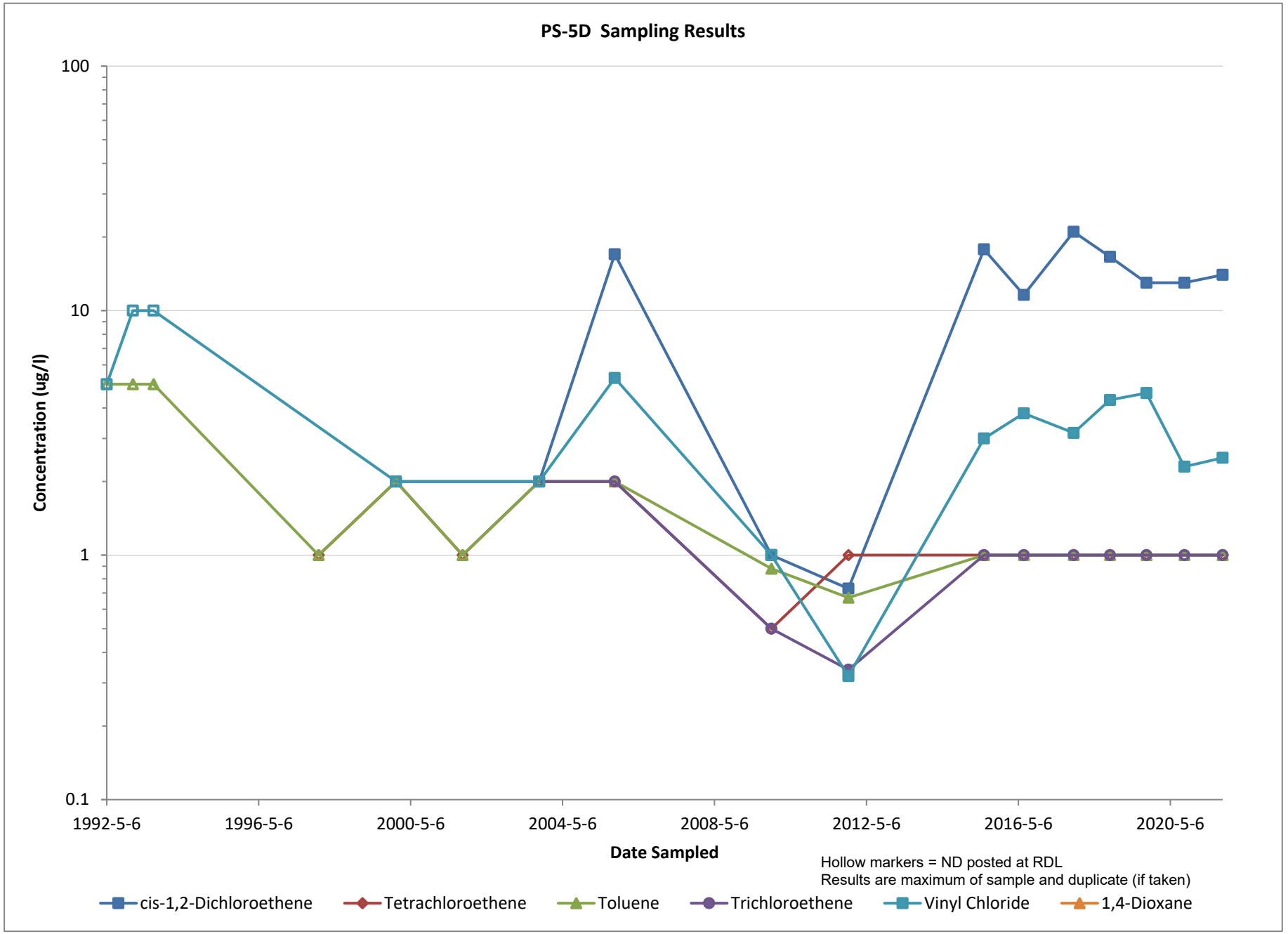

PS-2D Sampling Results
100
10
1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


PS-2M Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


PS-2S Sampling Results
10
1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


PS-3 Sampling Results
10
1
Concentration (ug/l)
1997-12-3
2000-12-2
2003-12-3
2006-12-3
2009-12-3
2012-12-2
2015-12-3
2018-12-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


PS-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
1993-1-12
1997-1-12
2001-1-12
2005-1-12
2009-1-12
2013-1-12
2017-1-12
2021-1-12
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


PS-5D Sampling Results
100
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
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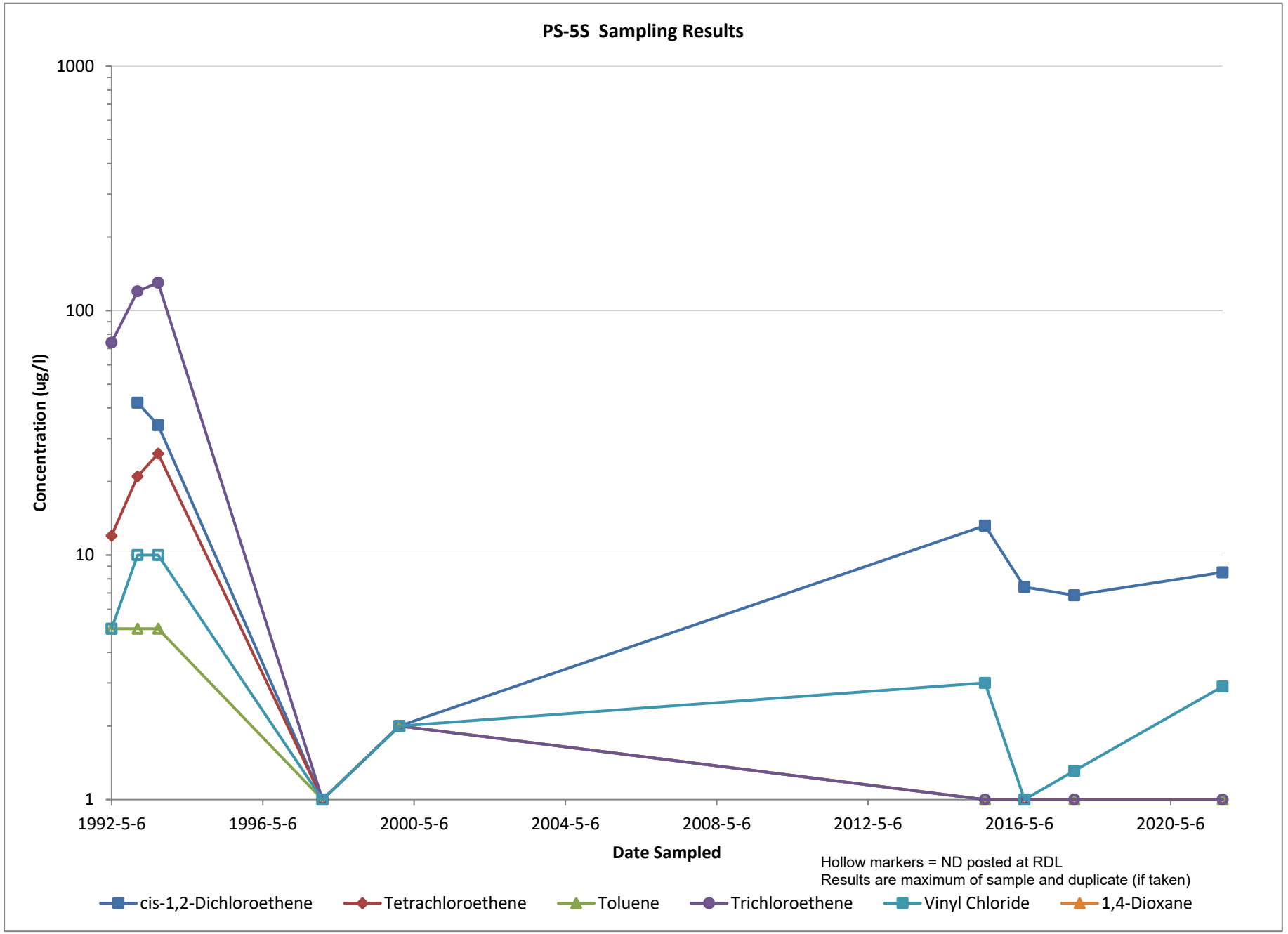
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane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2016-5-6
2020-5-6
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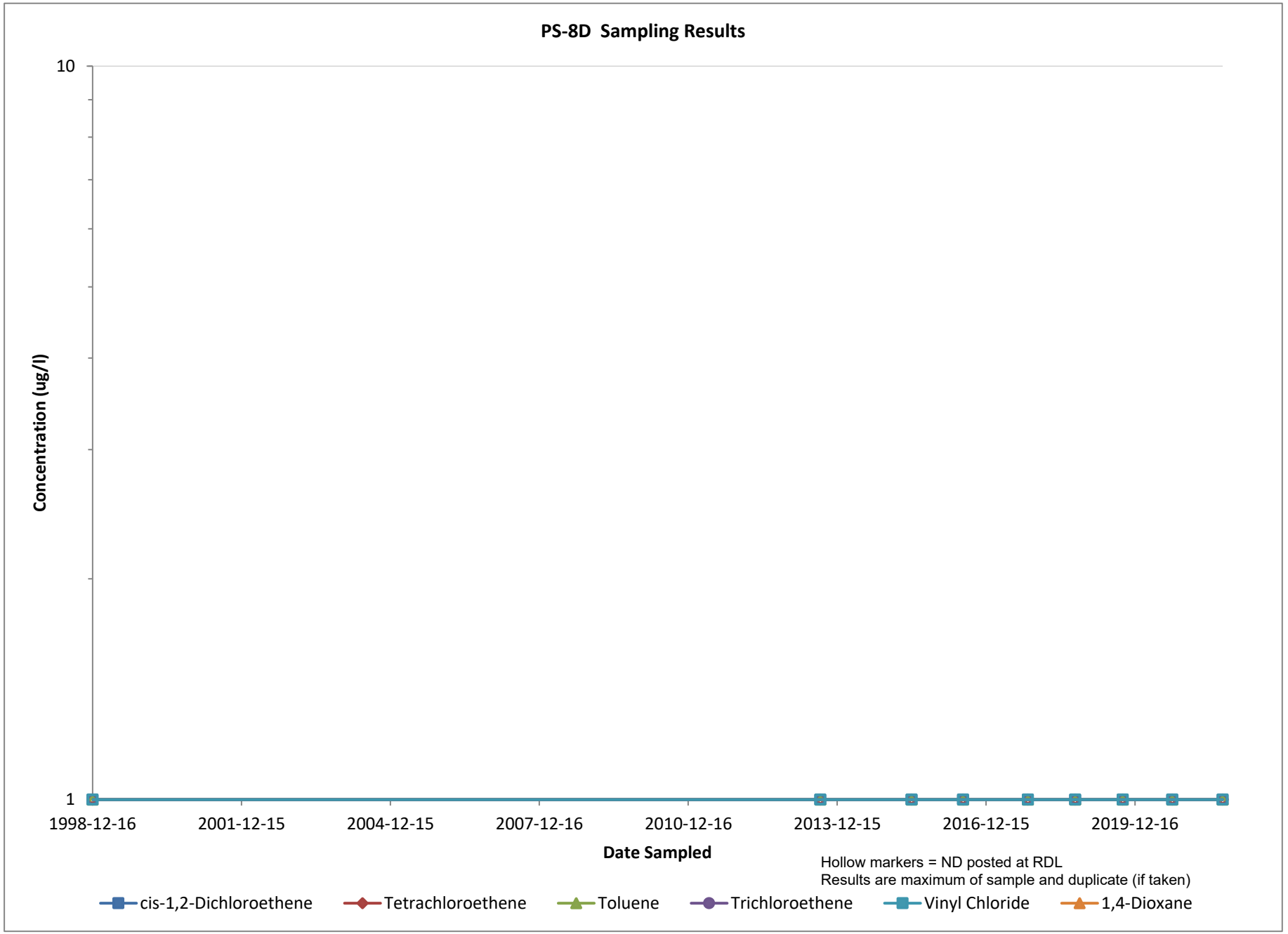
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane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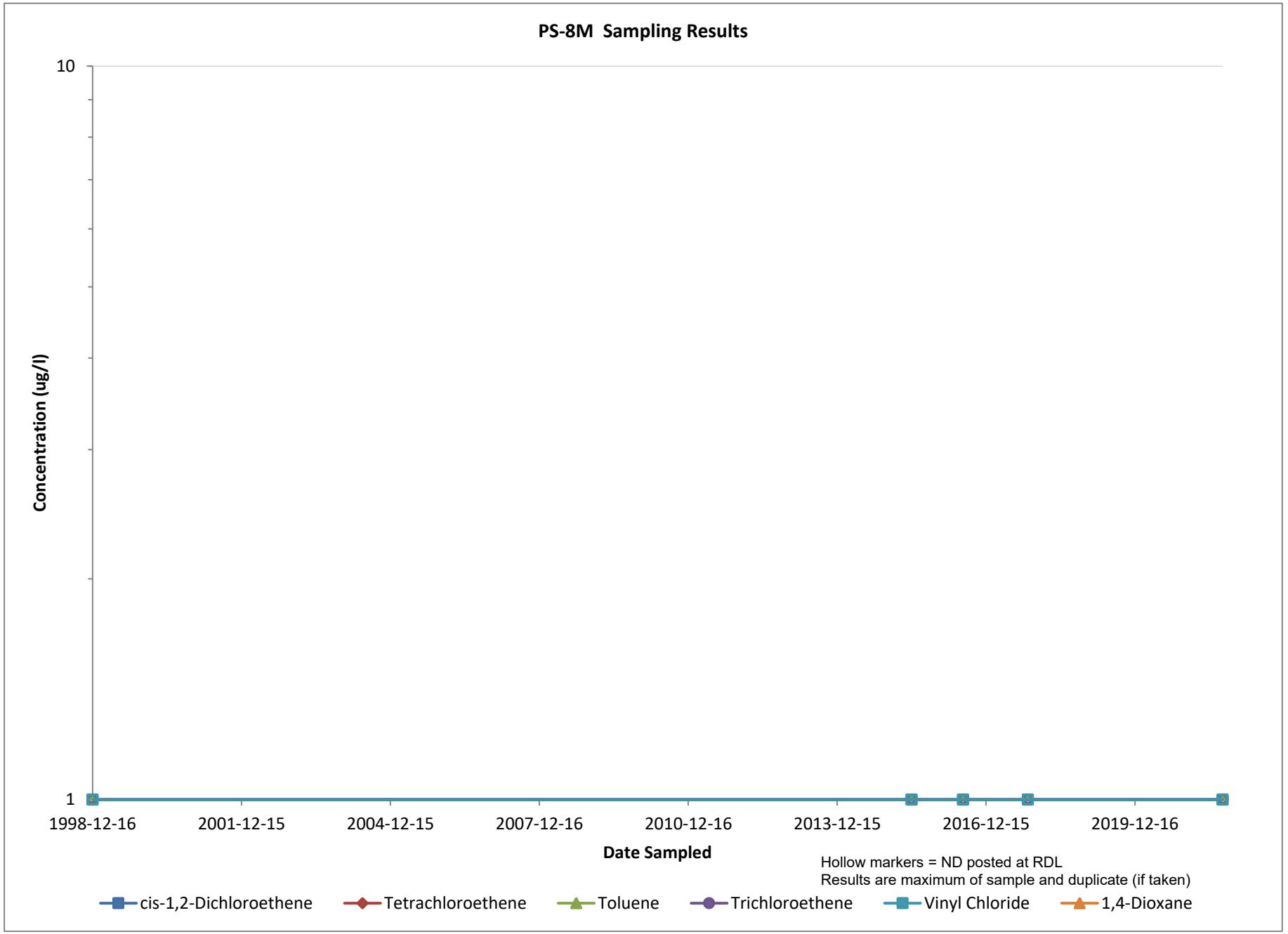
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane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Results are maximum of sample and duplicate (if taken)
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Tetrachloroethene
Toluene
Trichloroethene
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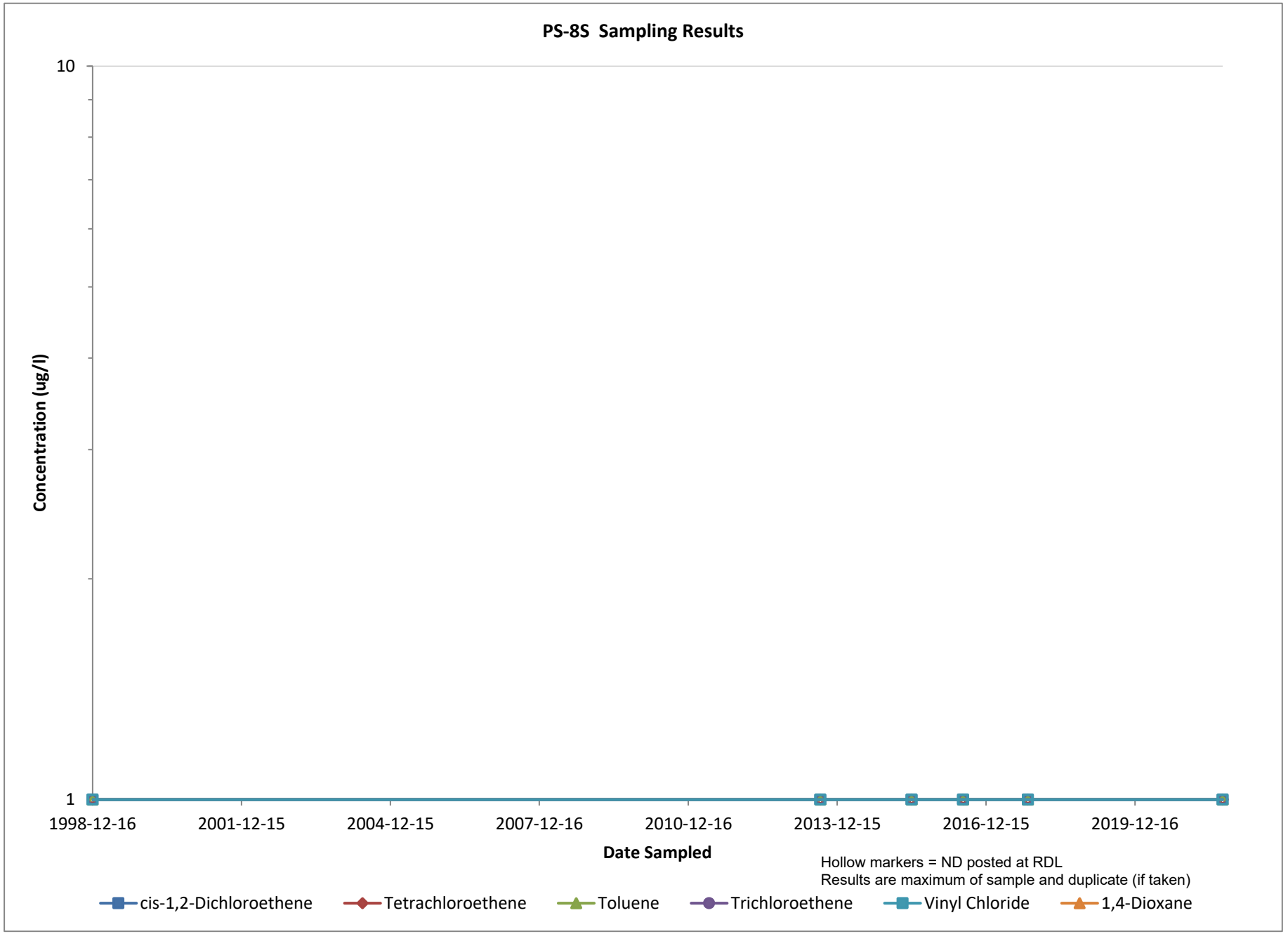
1,4-Dioxane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Results are maximum of sample and duplicate (if taken)
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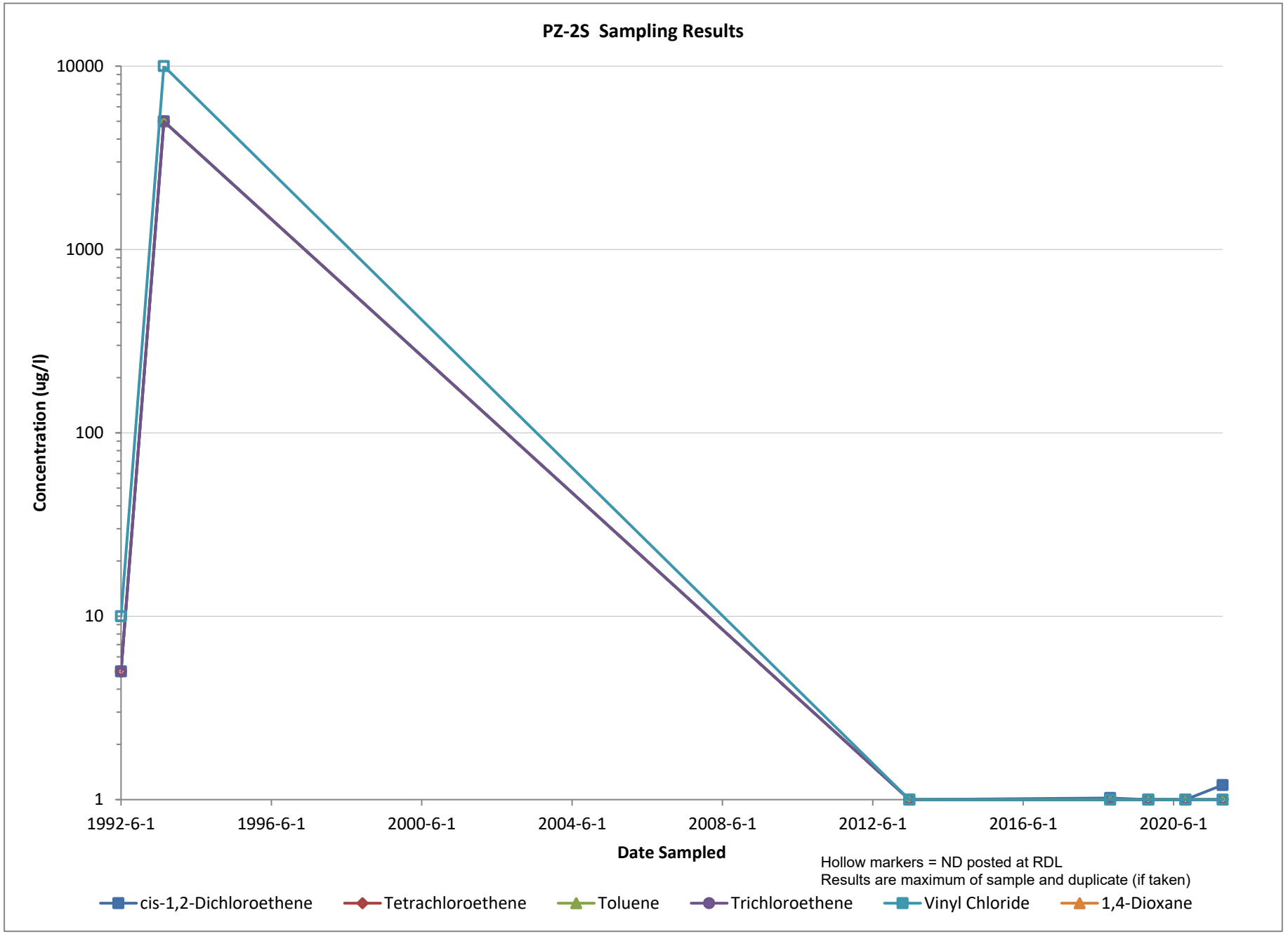
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane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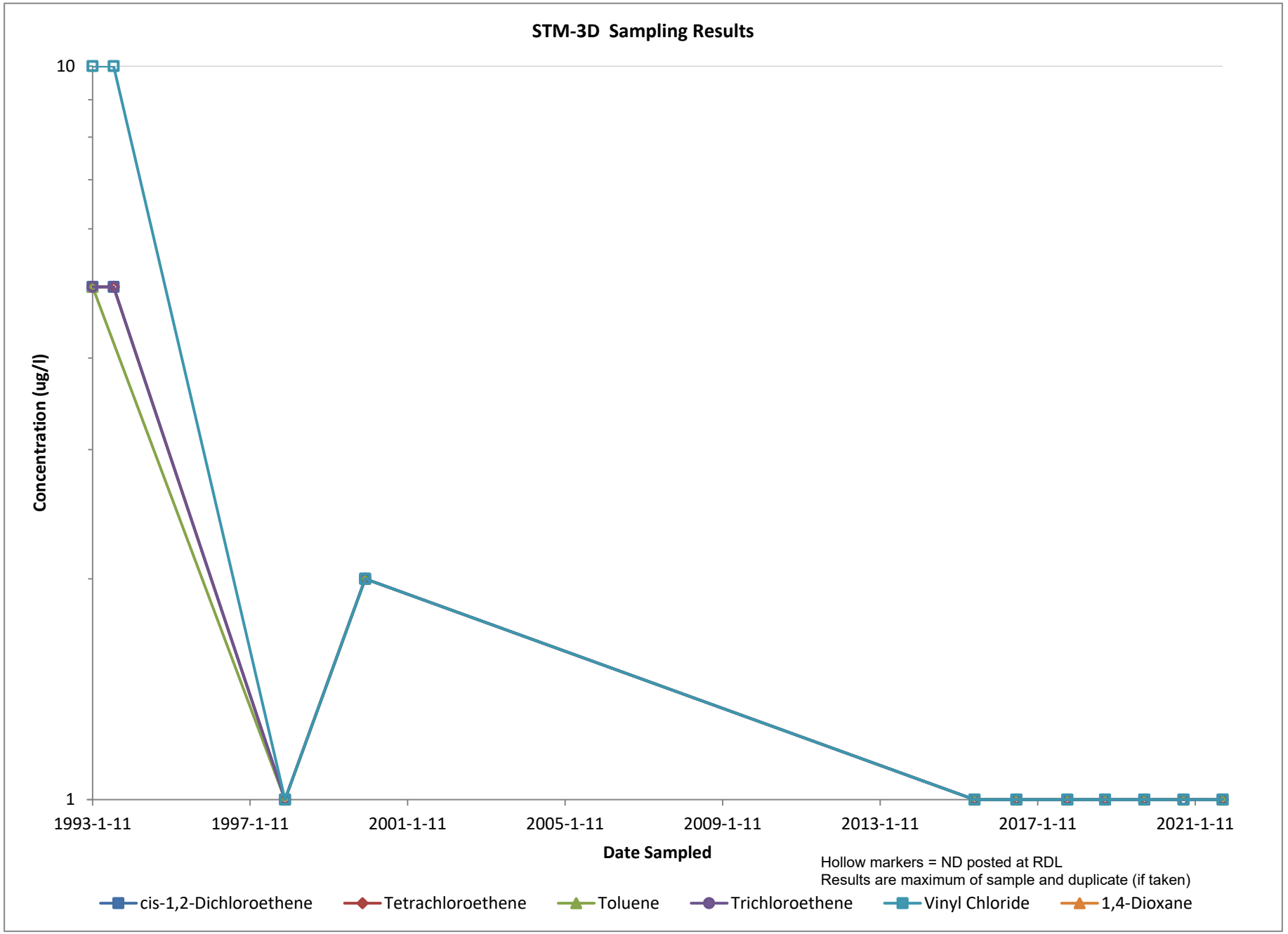
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane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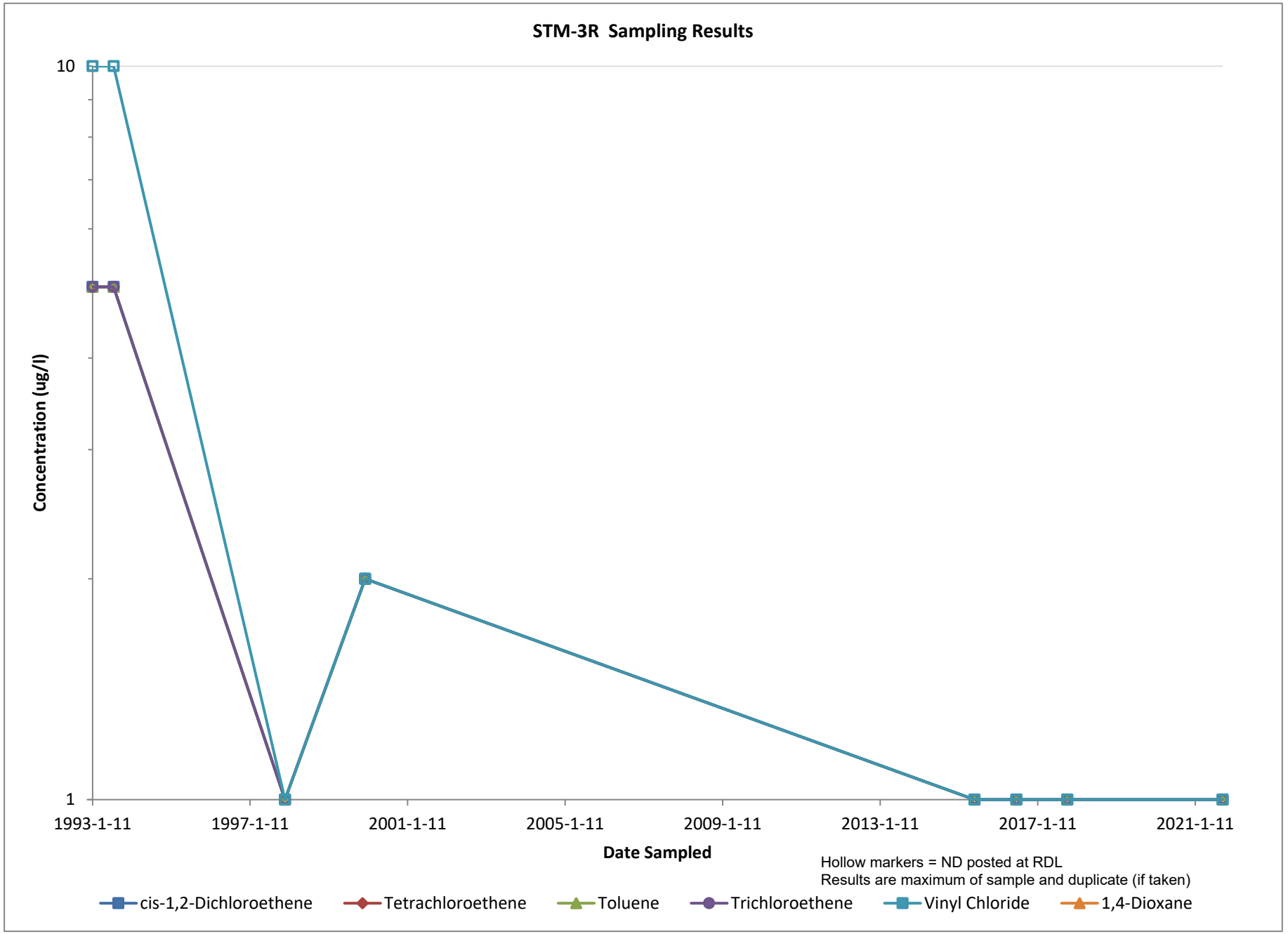
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane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Results are maximum of sample and duplicate (if taken)
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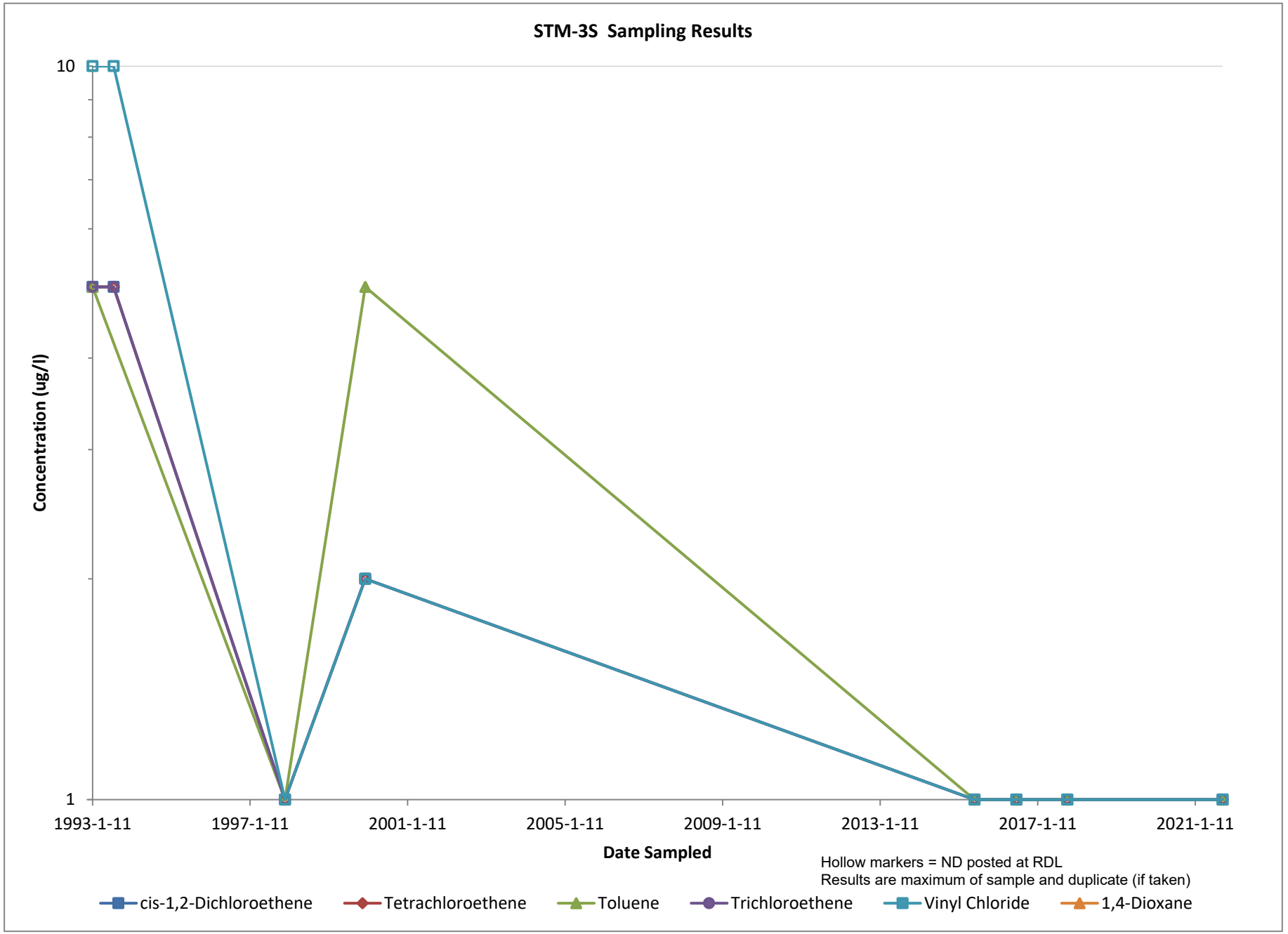
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane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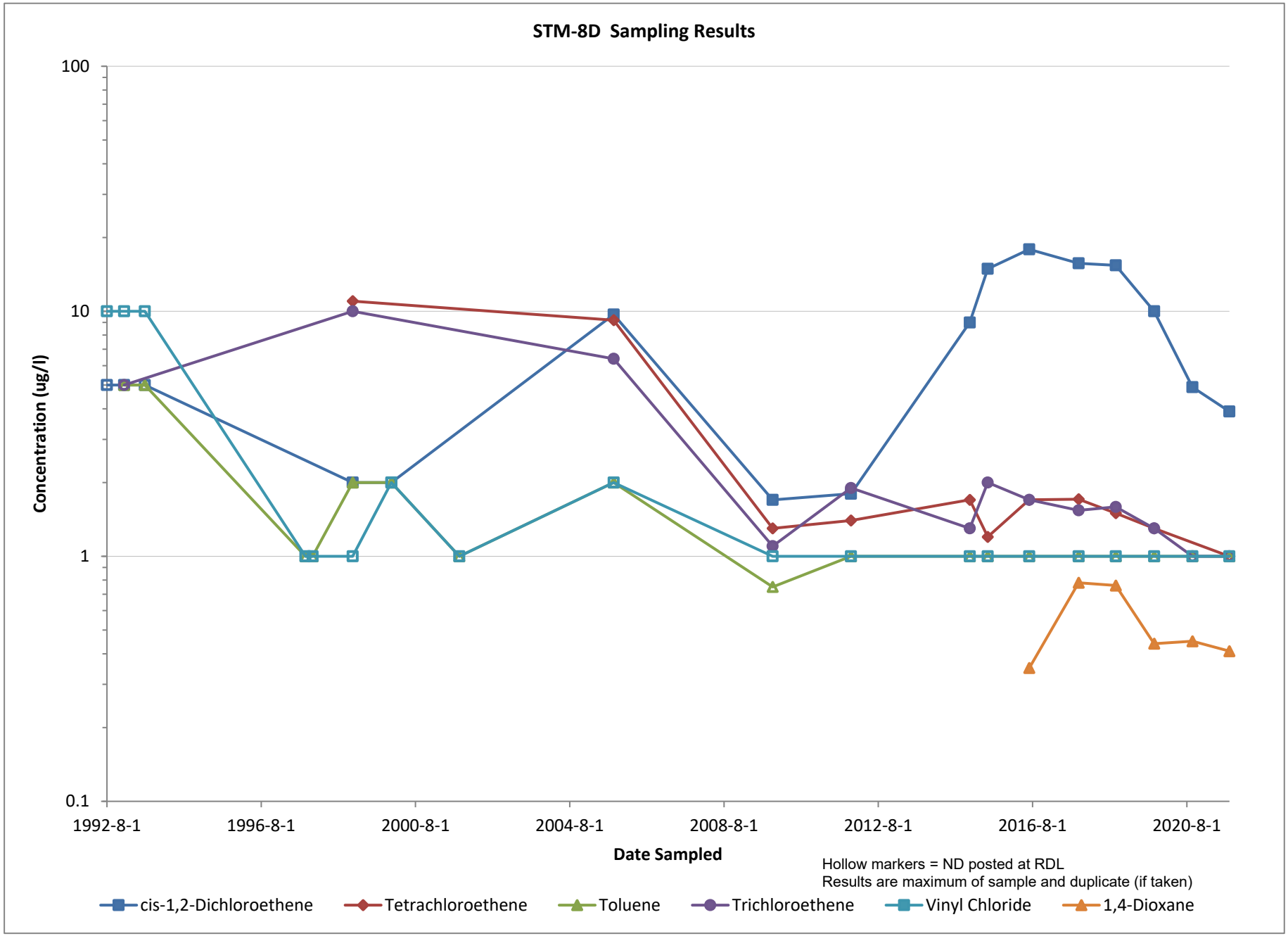
Vinyl Chloride
1,4-Dioxane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Results are maximum of sample and duplicate (if taken)
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Toluene
Trichloroethene
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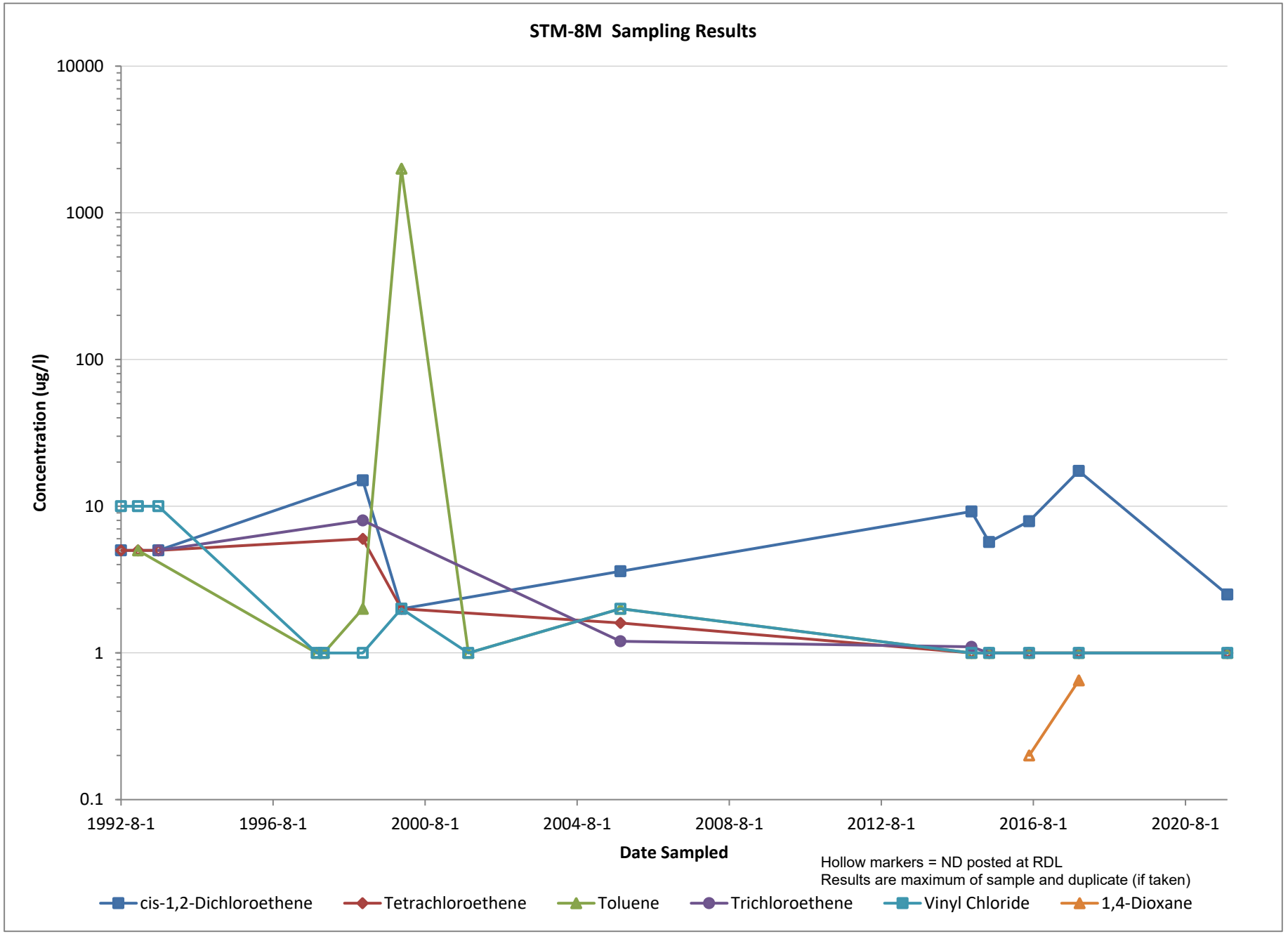
1,4-Dioxane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2016-8-1
2020-8-1
Date Sampled
Hollow markers = ND posted at RDL
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cis-1,2-Dichloroethene
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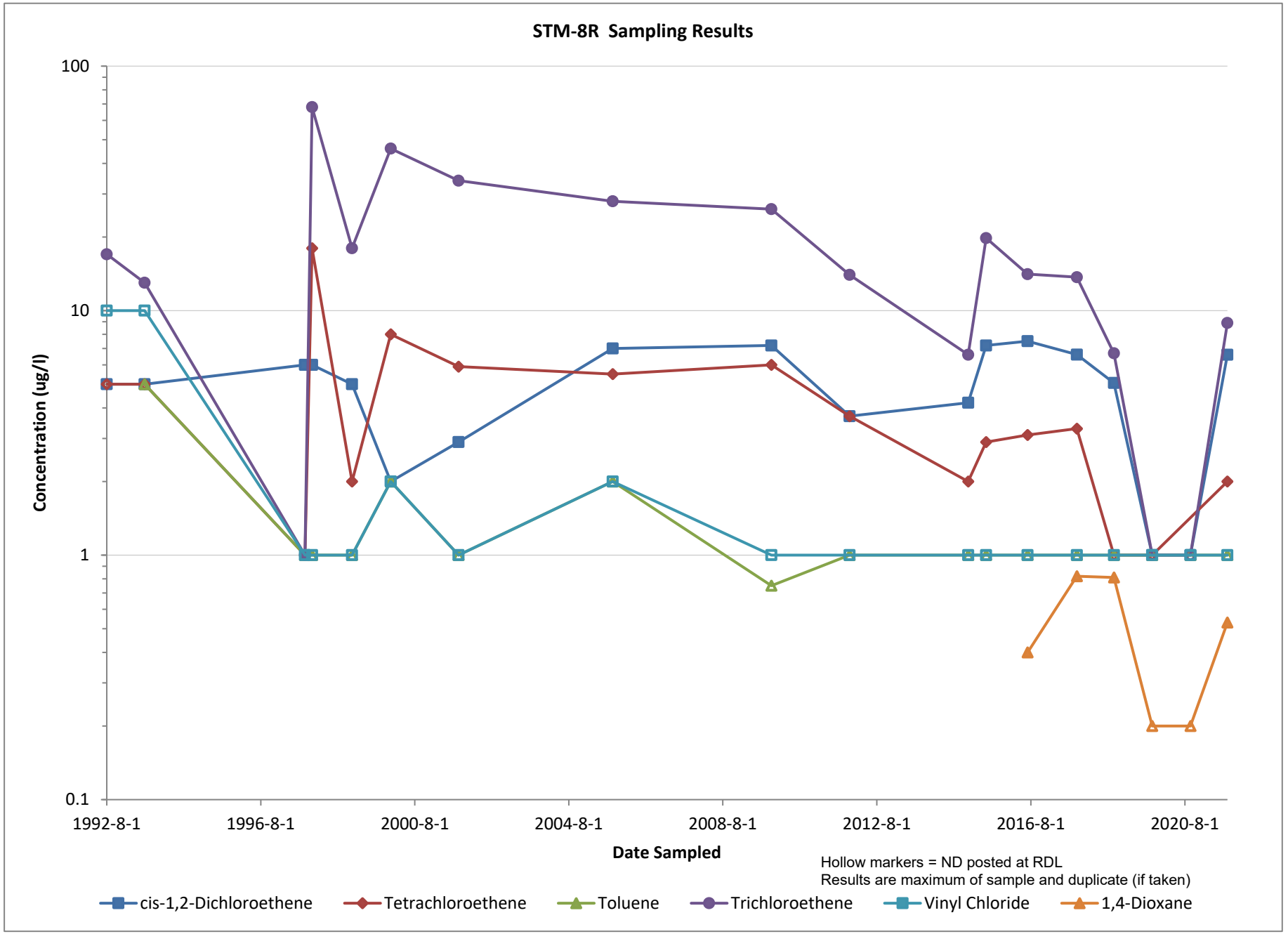
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane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cis-1,2-Dichloroethene
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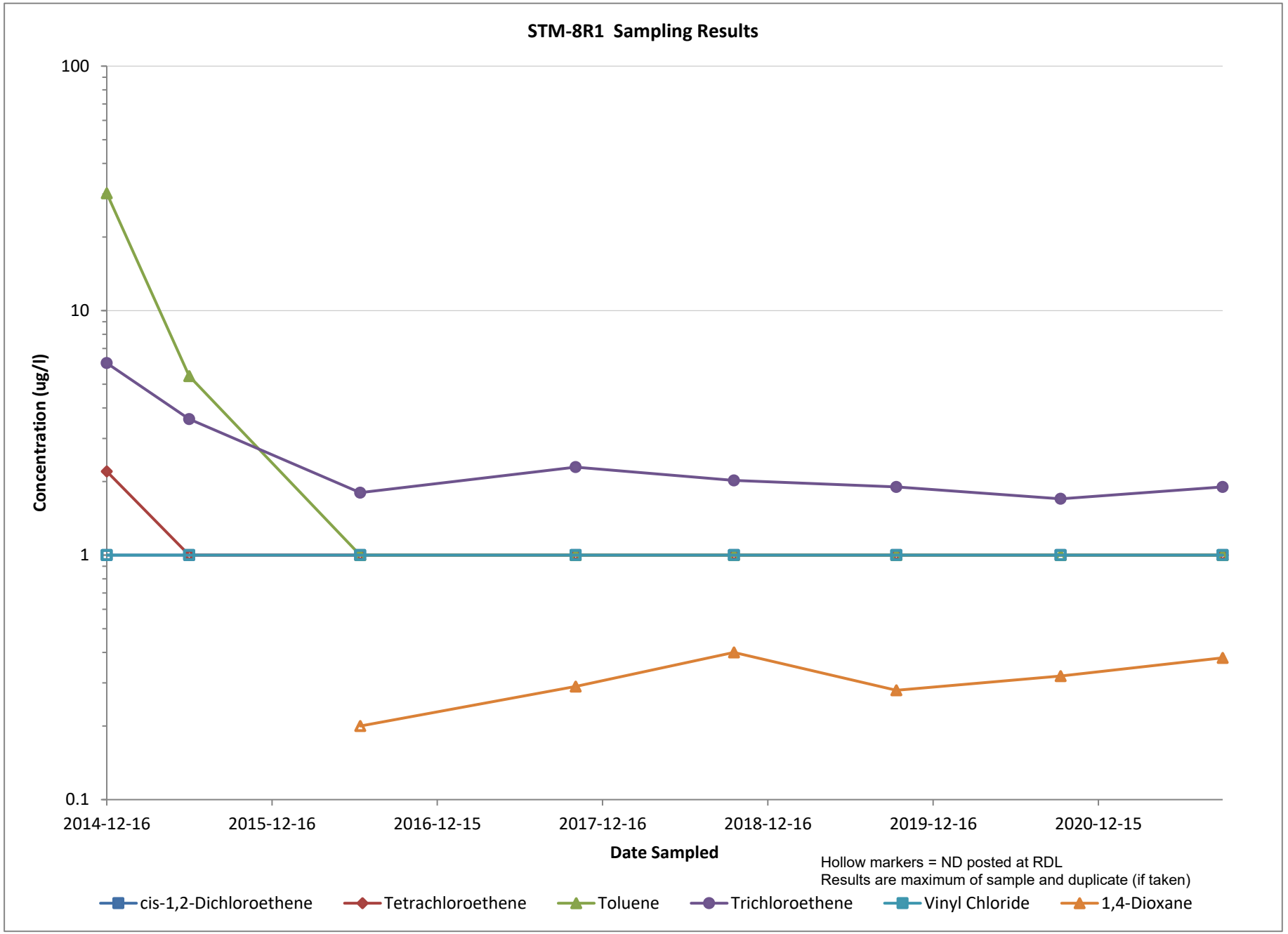
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Tetrachloroethene
Toluene
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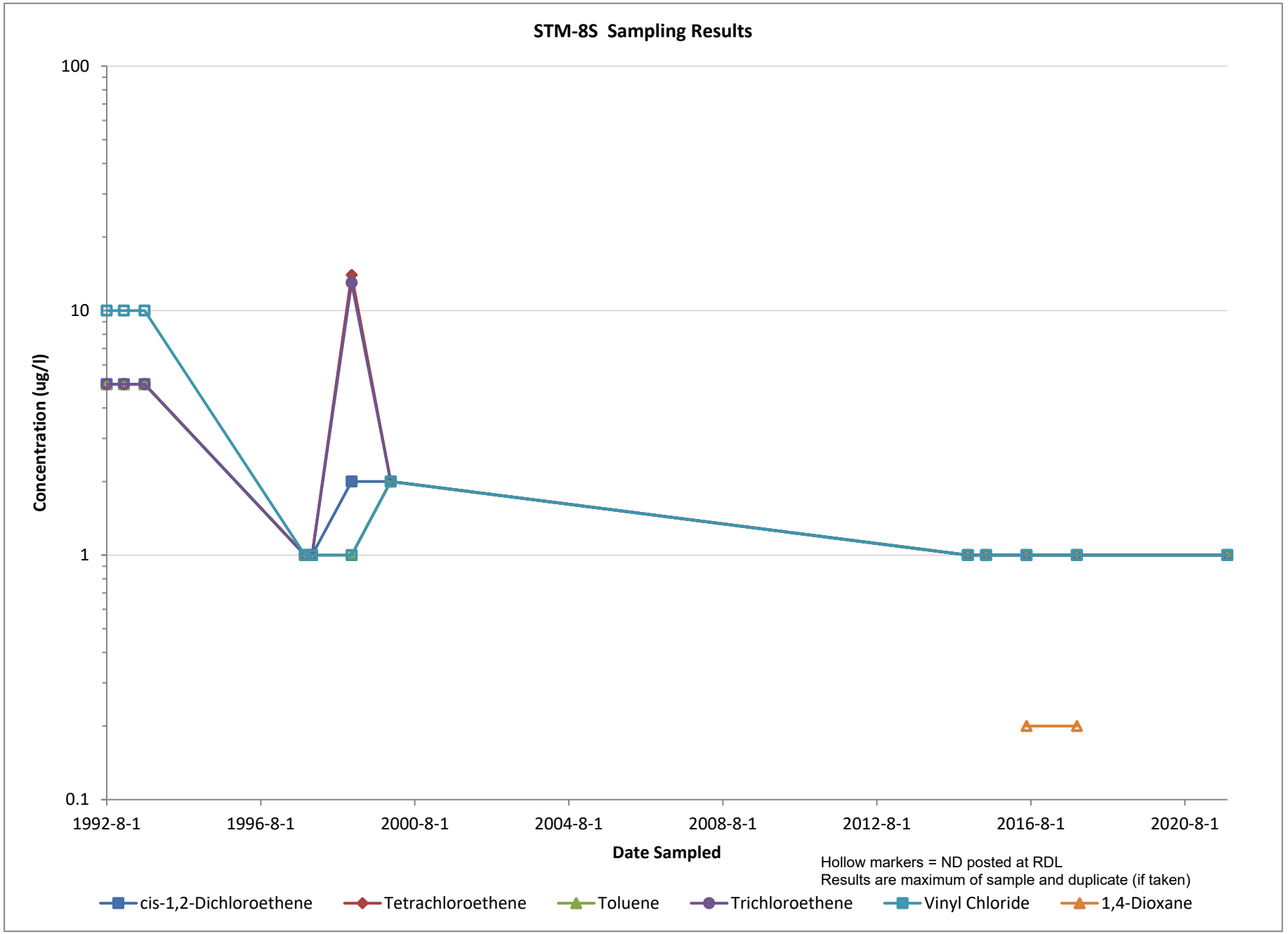
Vinyl Chloride
1,4-Dioxane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Date Sampled
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Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
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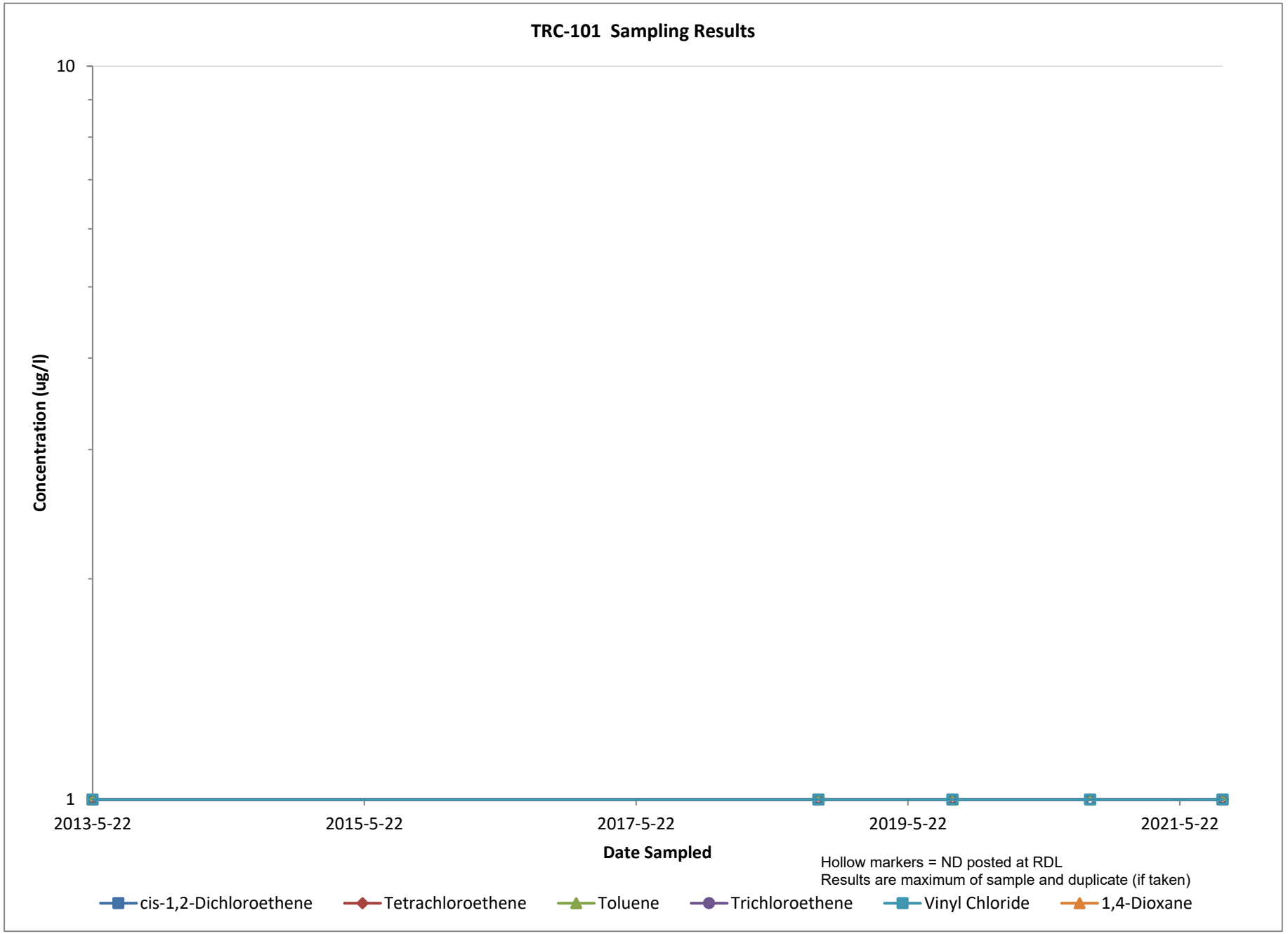
1,4-Dioxane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Tetrachloroethene
Toluene
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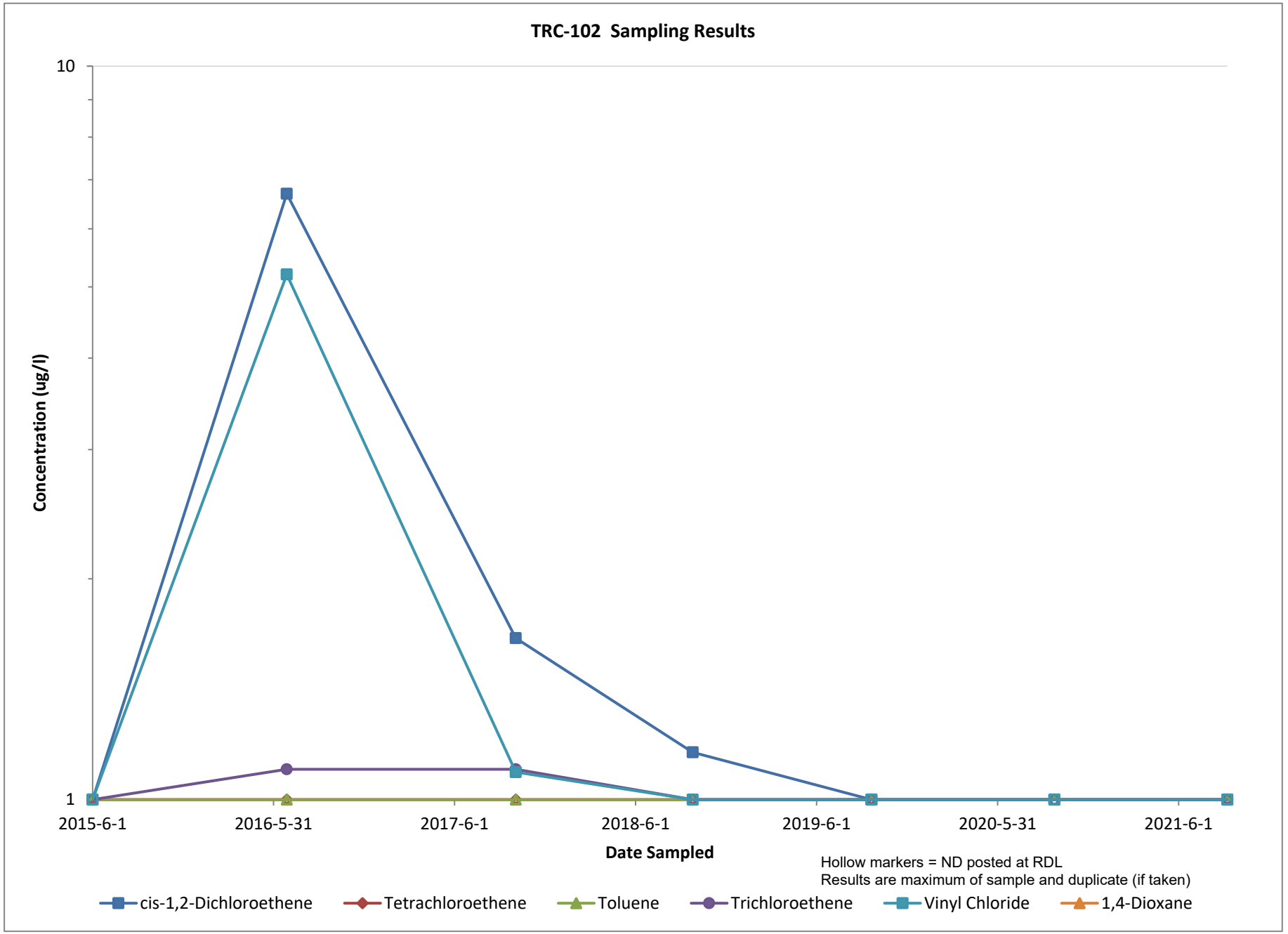
1,4-Dioxane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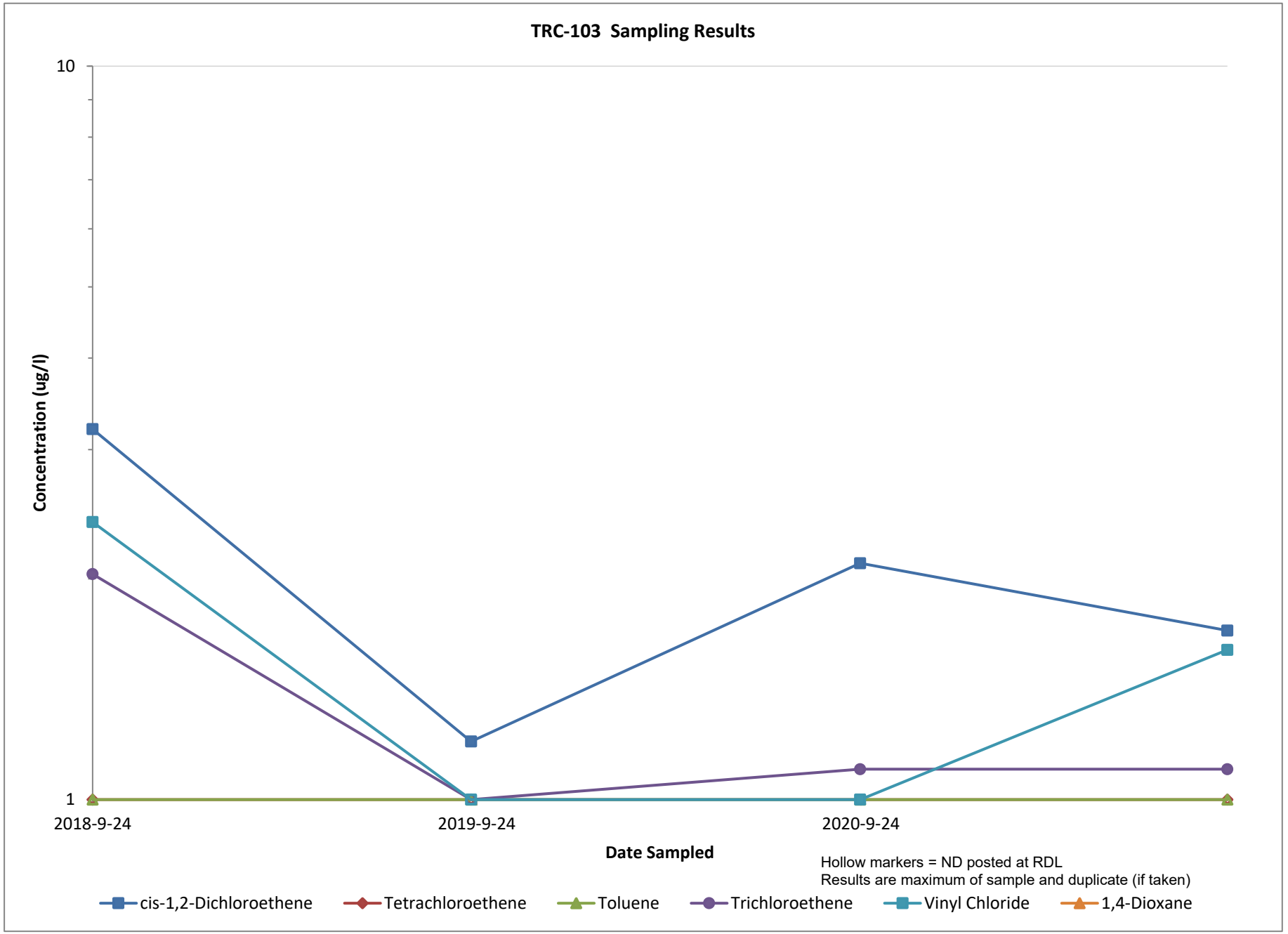
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane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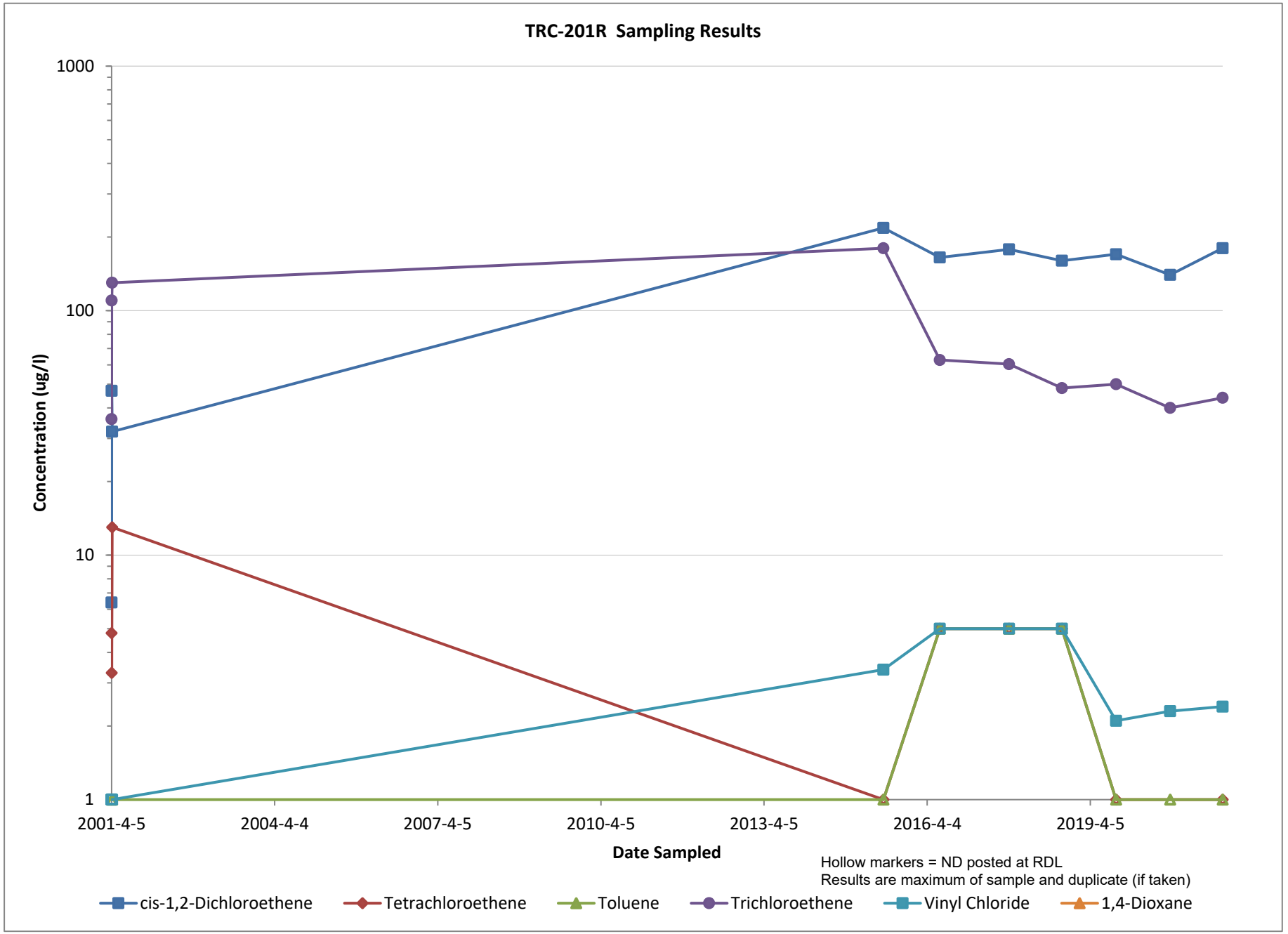
1,4-Dioxane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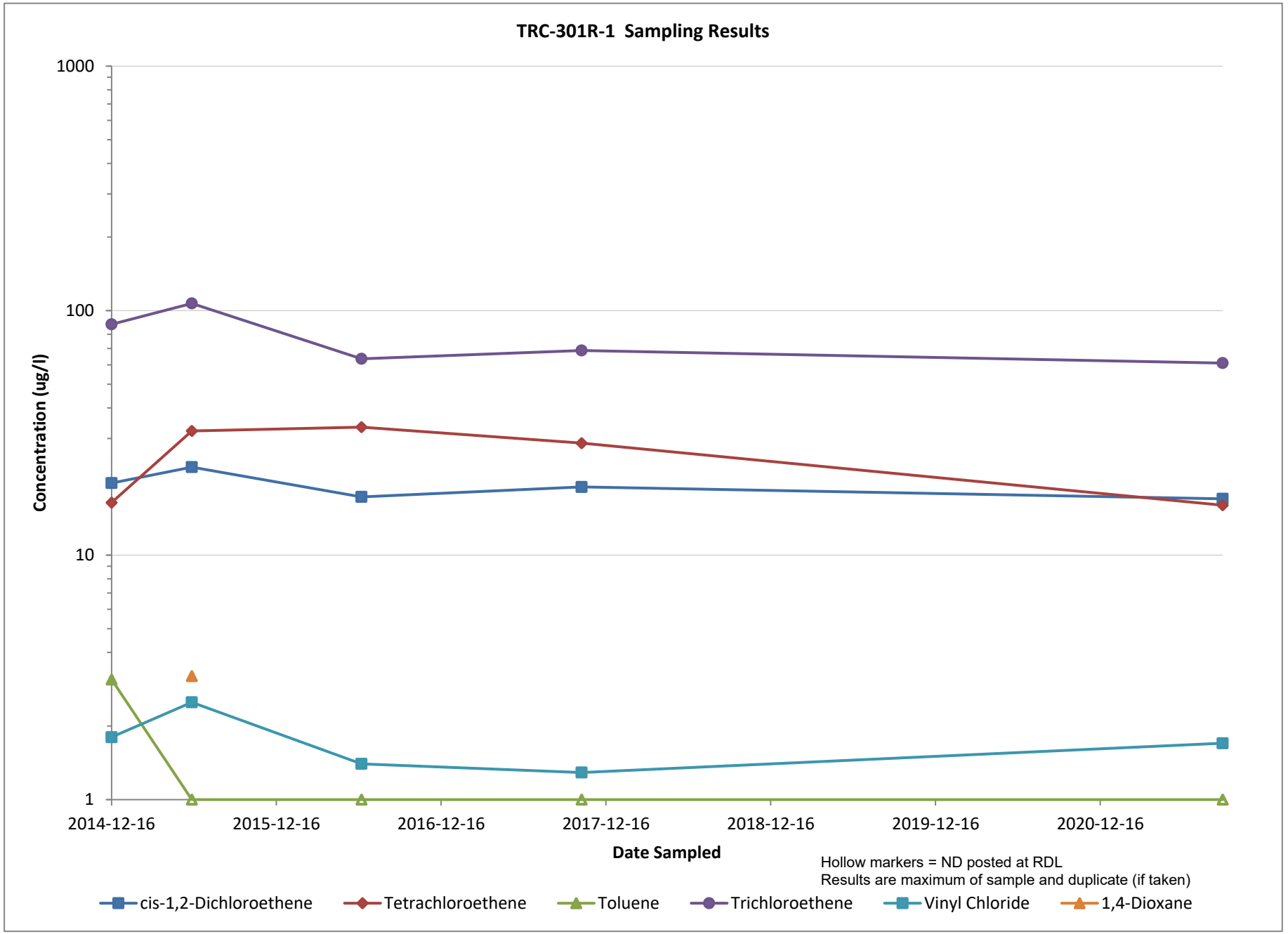
1,4-Dioxane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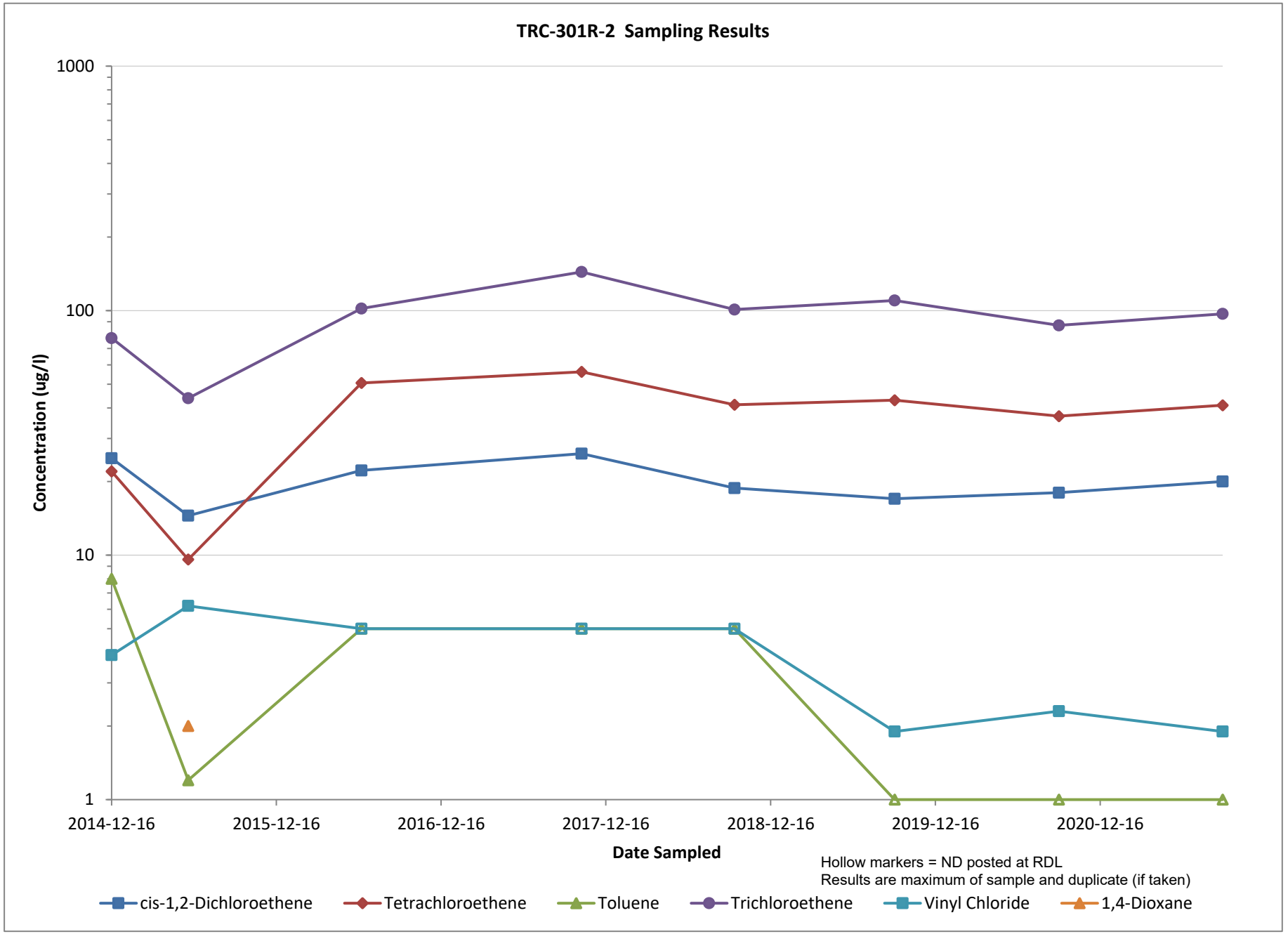
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Trichloroethene
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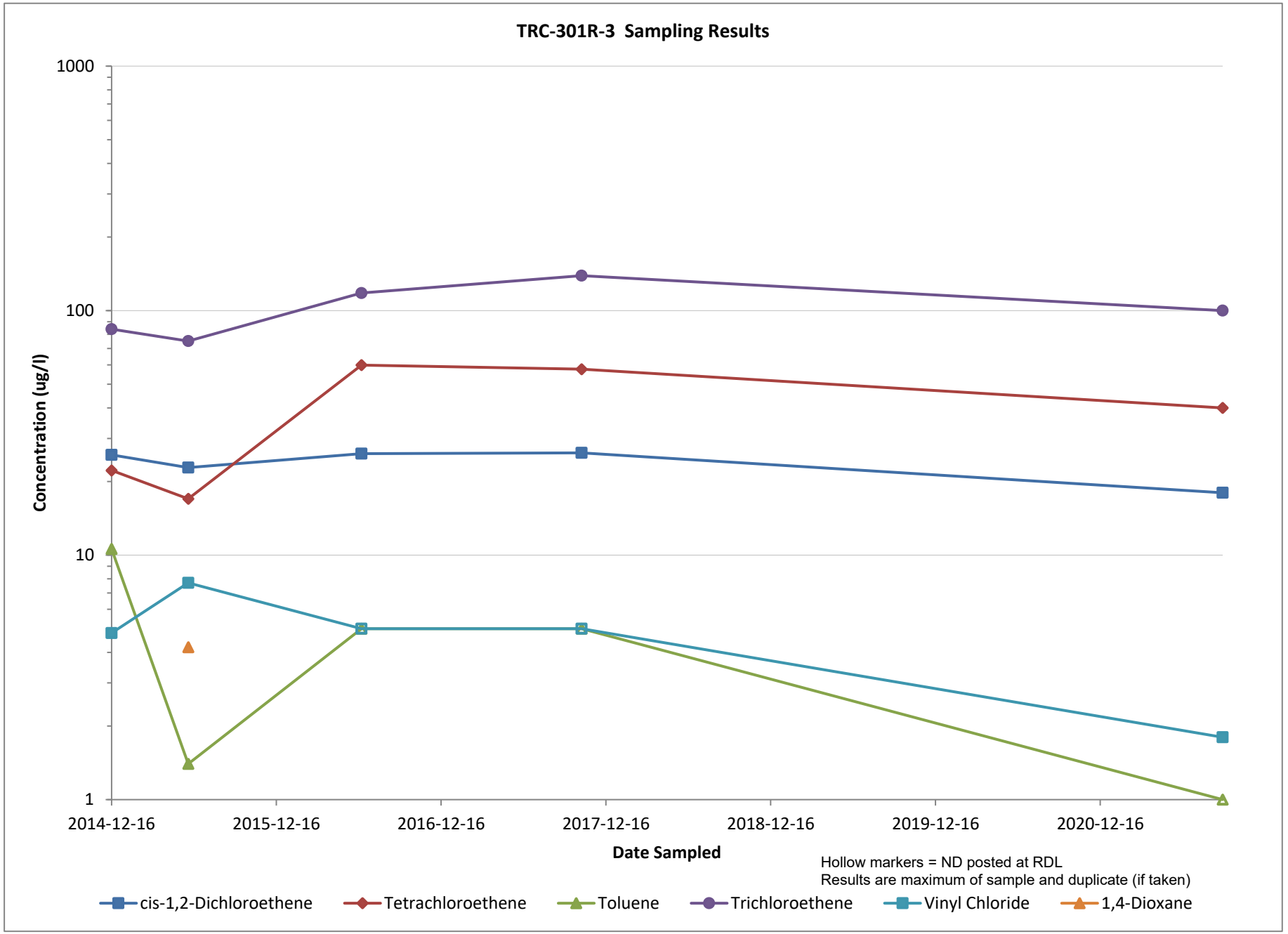
1,4-Dioxane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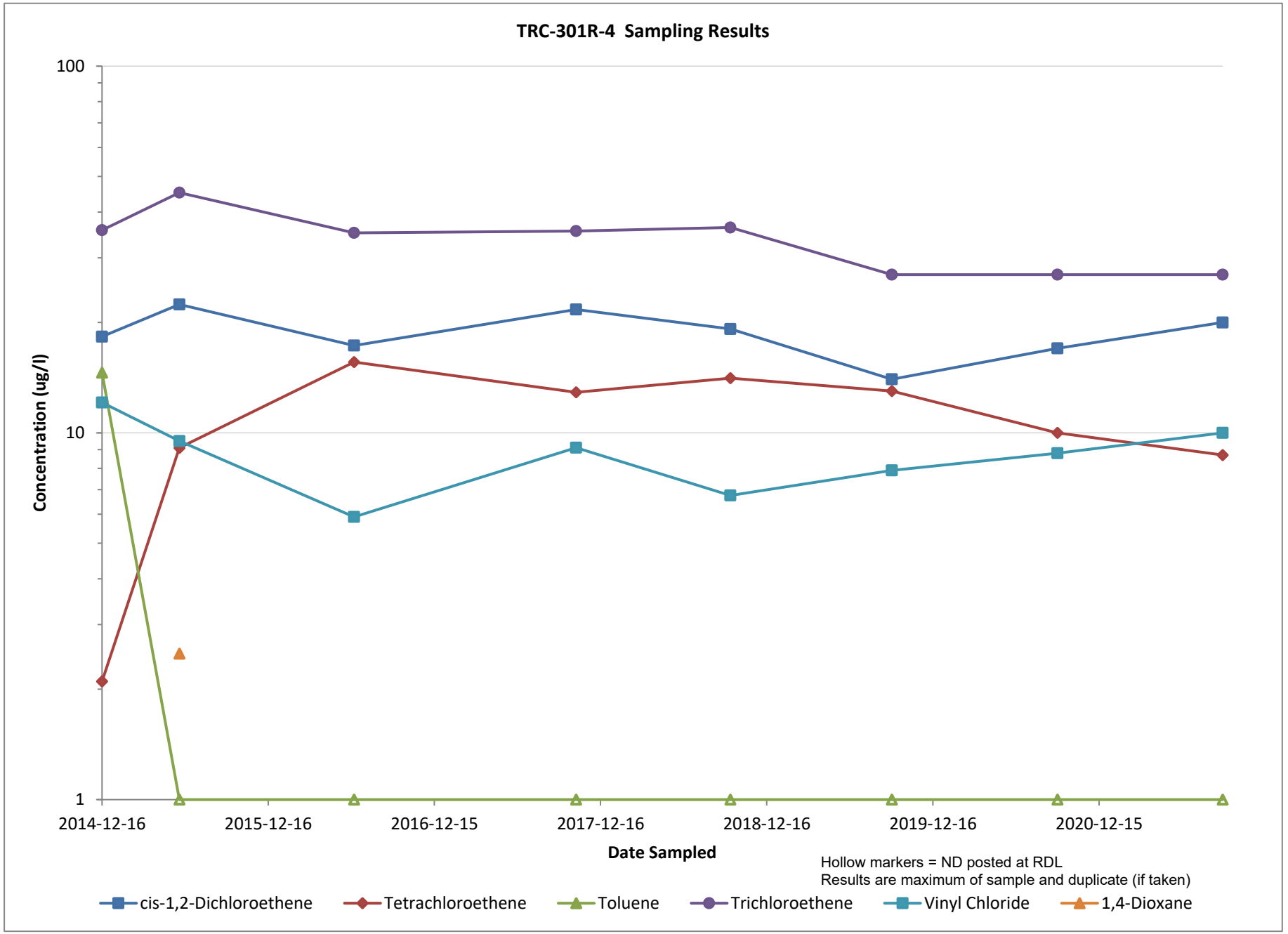
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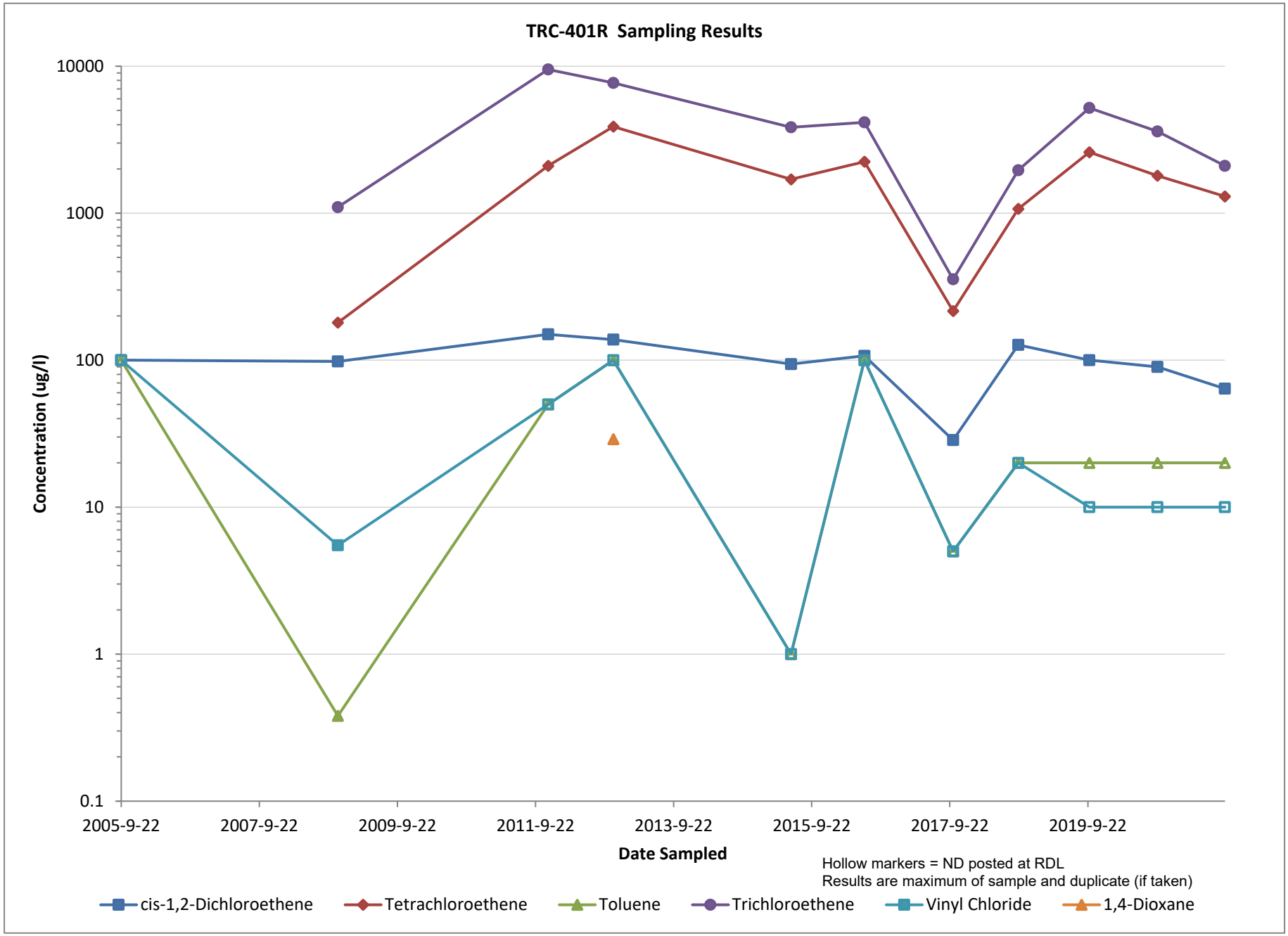
1,4-Dioxane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Results are maximum of sample and duplicate (if taken)
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Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

APPENDIX H
RICKER METHOD PLUME ANALYTICS EVALUATION

GROUNDWATER PLUME ANALYTICS SERVICES®

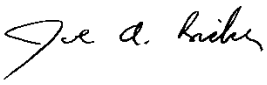
FORMER GENERAL ELELCTRIC FACILITY
50 FORDHAM ROAD, WILMINGTON, MA

Prepared for:

Lockheed Martin Corporation

Prepared by:

WSP USA Inc.



Joe A. Ricker
Principal Engineer, P.E.

March 15, 2022

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Figure 2 Summary of Well Sufficiency Outcome for TCE in Upper Bedrock

Figure 3 Summary of Well Sufficiency Outcome for TCE in Middle Bedrock

Figure 4 Summary of Well Sufficiency Outcome for TCE in Lower Bedrock

ACRONYMS AND ABBREVIATIONS

COM	center of mass
cis-1,2-DCE	cis-1,2-dichloroethene
MCL	maximum contaminant level
µg/L	micrograms per liter
NA	not applicable
ND	non-detect
PCE	tetrachloroethene
S	Mann-Kendall statistic

SCI	Spatial Change Indicator™
TCE	trichloroethene
USEPA	United States Environmental Protection Agency
VOCs	volatile organic compounds

SECTION 1
INTRODUCTION AND PURPOSE

WSP USA Inc. (WSP) prepared this report for Lockheed Martin Corporation (Lockheed Martin) to document the results of a Groundwater Plume Analytics® Services project conducted for the former General Electric Company Facility at 50 Fordham Road in Wilmington, Massachusetts (Site). WSP performed the plume analytics described herein to help provide Lockheed Martin with an understanding of the overall stability of the various constituent plumes at the Site. The Groundwater Plume Analytics® Services results are presented graphically in the interactive PowerPoint presentation entitled *LMC Wilmington Plume Analytics 2021-12-20.pptx*, which is included as **Appendix A**. Reference is made in this document to the interactive PowerPoint presentation in which results and summaries can be accessed through a series of menu screens.

WSP performed this plume analytics evaluation using groundwater analytical and elevation data collected from 1989 to 2021 for the following four aquifer units monitored at the Site:

- Overburden
- Upper Bedrock
- Middle Bedrock
- Lower Bedrock

This evaluation included the following elements:

- Ricker Method® Plume Stability Analysis
- Spatial Change Indicator™ Analysis (US Pat. No. 10,400,583)
- Mass Flux Evaluation
- Ricker Method® Well Sufficiency Analysis™ (US Pat. No. 10,304,223)

The plume analytics analyses were conducted for the following constituents:

- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- cis-1,2-Dichloroethene (cis-1,2-DCE)
- Vinyl chloride (VC)
- 1,4-Dioxane
- Total Chloroethenes (molar basis)

The complete analyses including graphical displays for each the above constituents and groundwater elevation data are provided in **Appendix A**.

SECTION 2
GROUNDWATER PLUME ANALYTICS® METHODOLOGY

This section presents the methodologies of the elements of the Groundwater Plume Analytics® services. Results of the Ricker Method® plume stability analyses are available in **Appendix A**.

2.1 RICKER METHOD® PLUME STABILITY ANALYSIS

WSP performed the Ricker Method® plume stability analysis using procedures described in *A Practical Method to Evaluate Ground Water Contaminant Plume Stability* (Ricker, 2008). The Ricker Method® plume stability analysis compares relative changes in contaminant plume characteristics over time, including area, average concentration, and mass indicator. The term “mass indicator” does not necessarily represent the entire mass in the subsurface but rather an expression of it based on a fixed assumption of aquifer thickness and porosity to serve as a meaningful way of combining plume area and average concentration into one metric. Calculation of the actual constituent subsurface mass is often a very complicated exercise, and typically more data/inputs are needed than are incorporated in this analysis. Because the plume mass value is not necessarily an indication of actual contaminant mass, the term “mass indicator” is used to describe this plume characteristic. Since the main purpose of the plume stability analysis is to observe relative changes in plume characteristics between sampling events, applying constants (i.e., porosity and aquifer thickness) to the mass calculation has no bearing on the usefulness of the output of the analysis (i.e., relative rate of change in plume mass).

To demonstrate that a plume is decreasing or stable, temporal changes in the calculated values of area, average concentration, and mass indicator should result in an overall decreasing or stable trend. An increasing trend in any of these values may indicate that the plume is not stable and/or is possibly expanding. Further details concerning trend analysis and determination of a trend conclusion are provided in ***Section 2.1.3 Statistical Methodology***.

2.1.1 Data Assessment and Input File Development

Data used in the Ricker Method® plume stability analysis for the constituents listed above are tabulated in **Appendix B**. Groundwater analytical data were provided from 1989 through 2021 and groundwater elevation data were provided from 2014 through 2021. Analytical data was consolidated into semi-annual events where the maximum value (or lowest non-detect limit, if all non-detect) during the semi-annual period (per well and constituent), was retained for the analysis. The first semi-annual period consisted of the months January through June and was assigned an analysis month of March. The second semi-annual period consisted of the months July through December and was assigned an analysis month of September. In years where only annual data was available (notably in recent years) the analysis month assigned was September. Not all wells were sampled during each semi-annual or annual period, and data gaps were filled by interpolating between those events with available data. Other scientific and/or statistical assumptions and adjustments to the data, consistent with the Ricker Method®, were necessary to complete the analysis. These adjustments are identified in the Ricker Method® input data set summarized in **Appendix B**. The assumptions and adjustments used in the analysis include the following:

- Monitoring wells, in which 100 percent of the data collected were non-detect for a particular constituent, were assumed always to be non-detect for that constituent for sampling events in which no analytical data were reported.
- Control Points (i.e., non-detect locations) were used in instances where there was insufficient well coverage. Control points were generally used in known non-impacted areas such as side-gradient and up-gradient locations based on professional judgement. Control points are designated on the plume maps in **Appendix A** as blue dots.
- In most cases non-detect concentrations were evaluated with an assigned concentration value of the stated detection limit or, in some cases, a fraction of the detection limit (e.g., wells located far from known impacted areas). Also, in cases where non-detect concentrations with elevated detection limits were encountered, professional judgment was used. A consistent algorithm for evaluating elevated detection limits is provided in **Appendix C**. For every case in which a sample was

collected the assigned value was based on actual results (detectable value or non-detect at a lower detection limit). Assigned values for non-detect concentrations are noted in **Appendix B**.

- For sampling events in which a monitoring well was not sampled, but prior and subsequent analytical data were available, the events were assigned values by interpolating between the closest prior and subsequent sampling event. Instances where these values are assigned are indicated by orange shading in **Appendix B.**

Several monitoring wells in which historical data have been collected have not been sampled in recent years. In this instance, in lieu of extrapolating values forward for these wells, the wells missing recent data are removed from the analysis. When this occurs, we term these wells “hanging wells”, and they are denoted by orange colored well symbols in the plume map videos in **Appendix A.** In the plume videos in **Appendix A**, wells with black symbols signify actual or interpolated data. Once a well becomes “hanging” (i.e., no longer sampled), the well symbol turns orange signaling that data are no longer used for that well location. This allows the viewer to observe where historical data were collected and where potential data gaps may exist. Plotting “hanging” wells on the maps allows the viewer to quickly assess if data gaps can be resolved using the existing well network by sampling a “hanging” well again.

Groundwater elevation input data were compiled with similar methods listed above; however, no extrapolation, interpolation, or assignment of values to non-gauged wells was performed. Therefore, isopleth maps for each respective gauging event are based only on wells that were measured for that event. For the map videos of the piezometric surface, orange wells simply mean that a water level was not collected for that particular event. For these map videos, well symbols change between black and orange coloring depending on whether water elevations were available for a given monitoring event.

2.1.2 Groundwater Plume Map Development

As part of the Ricker Method® plume stability analysis, constituent concentration isopleth maps, or plume maps, were developed using input data from the procedures described above. Plume maps for each constituent were delineated to values at or below their

respective Massachusetts Contingency Plan (MCP) GW-1 standards. The plume base contour values for each of the constituents evaluated are listed below.

Constituent	Base Contour (µg/L)
PCE	5
TCE	5
Cis-1,2-DCE	5
Vinyl Chloride	2
1,4-Dioxane	0.3

Total chloroethenes plume maps were developed by adding together the individual molar concentrations of PCE, TCE, cis-1,2-DCE, and vinyl chloride at or above their respective base contour levels. The constituent-specific plume area for each sampling event was calculated using the mathematical features of the contouring software used to develop the isopleth maps (i.e., Surfer® by Golden Software, Inc.). The kriging gridding method was used with the default linear variogram to develop the isopleth maps. Wells that were always non-detect for a constituent once installed were assumed to be non-detect for that constituent prior to installation. Consistent with generally accepted scientific practices, these wells were used as control points to conceptualize the plume behavior during earlier periods where there was not enough data to delineate the plume. The wells used as control points are denoted by a blue dot on the plume maps (see locations in **Appendix A**). Surfer® was also used for the computation of the average concentration of each plume as described in Ricker (2008). The plume area and average concentrations were then used to calculate the plume mass indicator for each year. To calculate the plume mass indicator, values for aquifer thickness and porosity were used as listed below.

Hydrogeologic Zone	Thickness (ft.)	Porosity
Overburden	40	25%
Upper Bedrock	20	2.35%
Middle Bedrock	60	2.35%
Lower Bedrock	120	2.35%

Concentration isopleth maps for each of the constituents and hydrogeologic zones listed above are included in the PowerPoint presentation in **Appendix A**. Plume stability characteristics were calculated for each of the sampling events included in the analysis.

The plume stability characteristics of area, average concentration, and mass indicator, as well as the location of the center of mass, are also provided on each isopleth map.

2.1.3 Statistical Methodology

To evaluate the stability of each constituent plume, the area, average concentration, and mass indicator for each event were plotted to observe changes in each parameter from event to event. Temporal trends of the characteristics for each plume were also evaluated statistically. The characteristics that were trended are tabulated in **Appendix D**.

The temporal trends in the plume characteristic values were statistically evaluated using both linear regression techniques and the Mann-Kendall Test. Linear regression analyses were conducted using the regression analysis utility in Microsoft Excel. The Mann-Kendall Tests were conducted using procedures described in Gilbert (1987). Linear regression is a parametric statistical procedure that is typically used for analyzing trends in data over time. The Mann-Kendall Test is a non-parametric statistical test; therefore, it is not dependent upon the magnitude of the data, assumptions of distribution, or regularly spaced sampling events.

The Mann-Kendall Test is used to assess whether a data set exhibits an increasing or decreasing trend at a predetermined level of significance (α). The test requires the calculation of a statistic "S" which is the difference between the number of paired differences that are positive, minus the number that are negative. If S is a large positive value, then there is evidence of an increasing trend in the data. If S is a large negative value, then there is evidence of a decreasing trend in the data. The null hypothesis, H_0, for the Mann-Kendall Test is that there is no temporal trend in the data. The alternative hypothesis, H_A, is that of either an upward trend or a downward trend.

If the null hypothesis is not rejected (i.e., no trend could be established statistically), it is expected that the plume is stable. However, a stable plume may not in fact be evident because the statistical test does not consider magnitude or variation in the data. For example, a data set can exhibit a large amount of scatter, yet the test could conclude that the plume is stable. A methodology to counter the problem of scatter in the data involves comparing the calculated S statistic, a calculated confidence factor (1-α), and the

coefficient of variation for the data set. The S statistic indicates the direction of the trend, the confidence factor shows how strong the trend is, and the coefficient of variation indicates the degree of scatter in the data.

When evaluating trends using linear regression, trends may be obscured by scatter in the data. This condition is typically indicated by a low coefficient of determination (R^2) value. Even with low R^2 values (i.e., high degree of scatter) a confidence interval can still be constructed on the slope of the regression line. As described in AFCEE (2006), assuming the sign (i.e., positive or negative) of the estimated log-slope is correct, a level of confidence that the slope is not zero can be easily determined. The overall trend in the data may thus still be determined, where low levels of confidence correspond to stable or indeterminate trends and higher levels of confidence (e.g., > 90%) indicate the stronger likelihood of a trend.

For the plume stability analysis, significant trends are concluded when the calculated confidence factor is greater than 90%. If the confidence factor is less than 90%, the plume is considered stable (i.e., no trend) or indeterminate.

In many cases the statistical results for both linear regression and Mann-Kendall Test agree with each other. In the case where two different results are obtained (e.g., one stable trend and one decreasing trend), visual analysis and professional judgment are used to determine the overall trend result.

2.1.4 Plume Center of Mass Evaluation

In addition to temporal trend analyses of plume characteristics, the center of plume mass (COM) is calculated. Evaluation of COM movement should be considered in conjunction with the other plume characteristics to assess the overall stability of a plume. For example, a stable or decreasing plume may show migration of COM in the downgradient direction in instances when focused remediation occurred in a source area of a site. In this case, this downgradient COM shift is due to the rapid loss of mass in the upgradient portion of the plume, as opposed to a gradual migration resulting from advective transport. Conversely, a COM that shows little or no migration over time may be an indication that the plume is not migrating.

The plume COM is plotted on each plume map in ***Appendix A***. In these figures, the COM data for each constituent are evaluated by plotting the COM for multiple events on a single site map, where each COM (representing a discrete sampling event) is color coded according to event date to allow for visual assessment of movement in COM location through time. The date range chosen for this analysis is the period representing the most recent consistent monitoring network for that constituent. This provides a true depiction of COM behavior unaffected by changes to the monitoring network. Additionally, each pair of events is represented by a vector that indicates the direction and distance of COM movement from one sampling event to the next. The COM vectors are plotted together with each vector tail anchored at a common point to show variability in COM movement (similar to a wind rose diagram). COM vectors that are generally scattered through all four quadrants of the radial chart indicate a stable plume (random movement through time), whereas COM vectors that are generally together in the same quadrant indicate that a plume may be migrating or changes in the COM could be due to mass reduction from remediation or mass additions due to sourcing.

2.2 SPATIAL CHANGE INDICATOR™ METHODOLOGY

The Spatial Change Indicator™ evaluation (US Pat. No. 10,400,583) shows relative changes in the plume over time. For this analysis, each plume map in a particular series is compared to the first plume map in the series by subtracting from the original plume to create a new isopleth map that shows areas of the plume that decreased in concentration (indicated by blue shading) or increased in concentration (indicated by red shading). The visual aspect of this analysis allows the viewer to observe patterns of plume behavior over time.

This analysis also has a quantitative component. Each Spatial Change Indicator™ map includes the percent change (increase or decrease) of the plume between each event and the baseline event in terms of area, average concentration, and mass indicator as calculated using Ricker Method® procedures. Additionally, for areas that increased or decreased in concentration, representative magnitudes of mass increase (red shaded areas) and mass decrease (blue shaded areas) are also included on each map. Spatial

Change Indicator™ analyses for total chloroethenes and 1,4-dioxane for each of the four hydrogeologic units are included in **Appendix A**.

2.3 MASS FLUX METHODOLOGY

Mass flux is an estimate of the mass of a constituent that passes through a defined cross-sectional area of the plume over time. As defined in ITRC (2010), mass flux combines two key features of a contaminant plume: how much contaminant is in the groundwater and how fast the groundwater is moving through a defined cross-sectional area. The units of mass flux are mass per unit time per unit area. However, if the unit area can be defined for a particular site, then the net mass discharge (in units of mass per unit time, e.g. lbs/yr) can be estimated. In this report, we use the term “mass flux” to describe mass discharge through a defined cross-sectional area. The defined area is a cross-section of the plume that has a width based on the plume boundary value and the same thicknesses used for the Ricker Method® plume stability analysis.

For this analysis, two transects were constructed as shown in **Appendix A**. Transect A runs perpendicular to the plume along the western property boundary and Transect B is located approximately 500 feet downgradient from Transect A. The mass flux for each sampling event for both transects was calculated by discretizing the transect line into segments and calculating discrete mass flux values for each segment. The discrete mass flux values were then summed for a net mass flux for each sampling event. Discrete mass flux values were calculated by multiplying the concentration by a groundwater velocity and thickness and segment width at each discrete location along the transect. The width used for each discrete mass flux estimate is based distance between concentration nodes in the constituent concentration contour as described in Section 2.1.2. The sum of the segment widths represents the width of the plume at the transect line.

The groundwater velocity, or Darcy velocity, is determined by multiplying hydraulic conductivity by the hydraulic gradient. For the overburden, a site-specific hydraulic conductivity value of 78 feet per day and gradient of 0.001 ft/ft were used for the mass flux calculations. For the upper, middle, and lower bedrock, a site-specific hydraulic conductivity value of 0.5 feet per day and gradient of 0.001 ft/ft were used for the mass flux calculations.

2.4 RICKER METHOD® WELL SUFFICIENCY ANALYSIS™ METHODOLOGY

The Ricker Method® Well Sufficiency Analysis™ (US Pat. No. 10,304,223) is a statistical method to determine if a monitoring well network can be removed from the monitoring program while maintaining confidence in the ability of the network to monitor plume behavior. The analysis uses the plume stability characteristics of area, average concentration and mass indicator from the entire network as a baseline to compare the respective plume stability characteristics from a reduced, or optimized, network. These comparisons are made for each of the plume stability characteristics using Mann-Kendall trend, linear regression trend, average relative percent difference and correlation coefficient. For a reduced network to be acceptable, the trend conclusions for the reduced network trends should match the conclusion of the original network trends; the average relative percent difference between the reduced network trends and original network trends should be minimized; and the correlation coefficient of the reduced network trend and original network trend should be maximized. The correlation coefficient is a statistical measure of the strength of the relationship between the relative movements of two variables, or in this case, two trends (original vs. optimized). The values range between -1.0 and 1.0, with 1.0 being a perfect positive correlation. In general, a correlation coefficient greater than 0.5 indicates a moderate correlation, and values above 0.8 indicate a strong correlation.

SECTION 3
GROUNDWATER PLUME ANALYTICS® RESULTS

This section of the report provides a summary of the results of the Groundwater Plume Analytics® evaluation. The full graphical display and analysis, including plume map videos, COM evaluation maps, the Spatial Change Indicator™ results, and mass flux analysis results, are included in **Appendix A**. The results are discussed for each of the hydrogeologic units individually below.

3.1 OVERBURDEN

Plume map videos and plume stability analysis results for each of the constituents evaluated in the overburden are included in **Appendix A**. As observed in the trend charts in Appendix A, trend analyses were conducted for the most recent data using a mostly consistent well network. For the chloroethene compounds, plume stability trends were conducted for the period of 2014 to 2021 and plume stability trends for 1,4-dioxane were conducted for the period of 2018 to 2021. The Ricker Method® plume stability analysis trend conclusions for each of the constituents evaluated in the overburden are summarized below.

Overburden Ricker Method® Plume Stability Trends			
Constituent	**Area**	**Average Concentration**	**Mass Indicator**
PCE	No Trend[1]	Decreasing Trend	Decreasing Trend
TCE	No Trend[1]	Decreasing Trend	Decreasing Trend
cis-1,2-DCE	Decreasing Trend	Decreasing Trend	Decreasing Trend
Vinyl Chloride	No Trend[1]	Decreasing Trend	Decreasing Trend
Chloroethenes	Decreasing Trend	Decreasing Trend	Decreasing Trend
1,4-Dioxane	No Trend[1]	Decreasing Trend	Decreasing Trend

[1] Observed decreasing trend, not statistically significant

As observed above, the constituent plumes in the overburden are all decreasing or stable. The Spatial Change Indicator™ evaluation for chloroethenes shows that the plume has attenuated significantly in upgradient source areas, as well as in the non-contiguous downgradient plume area. Increases are observed in the immediate downgradient portions of the plume. Trend charts for selected wells (MW-7, MW-5, EMW-10D, and AE106S) in areas of increase are shown in **Appendix A**. As observed in **Appendix A**, the total chloroethenes plume decreased from approximately 95 mols (22.5 lbs.) in 2014 to approximately 30 mols (7.9 lbs.) in 2021. The 1,4-dioxane plume exhibited a decrease from 0.55 lbs. in 2018 to 0.31 lbs. in 2021.

The mass flux analysis resulted in relatively stable trends for both Transects A and B for the chloroethenes plume and the 1,4-dioxane plume in the overburden. Following is a summary of the 2021 mass flux values and percent reduction from Transect A to Transect B. The average percent reduction from Transect A to Transect B during the period of 2015 to 2021 is also provided for reference.

2021 Overburden Mass Flux		
	Chloroethenes	1,4-Dioxane
Transect A	5.58 mol/yr	0.035 lbs/yr
Transect B	3.88 mol/yr	0.014 lbs/yr
Percent Reduction from A-B	30.6%	58.6%
Average Percent Reduction (2015-2021)	28.5%	14.3%

Overall, Site data support a clear reduction in both total chloroethenes and 1,4-dioxane in the overburden. Based on the observation that the predominant chloroethene plume fraction is cis-1,2-DCE, it is apparent that biodegradation and/or abiotic degradation is occurring in the overburden and likely accounts for some portion of the observed decrease in plume mass.

3.2 BEDROCK

As discussed above, the Ricker Method® plume stability analysis was conducted for the upper, middle, and lower bedrock zones. Analysis results for each of the zones are discussed separately below. Section 3.2.4 includes a discussion of the entire bedrock unit that incorporates each of the three bedrock zones.

3.2.1 Upper Bedrock

Plume map videos and plume stability analysis results for each of the constituents evaluated in the upper bedrock are included in **Appendix A**. As observed in the trend charts in Appendix A, trend analyses were conducted for the most recent data using a mostly consistent well network. For the chloroethene compounds, plume stability trends were conducted for the period of 2014 to 2021 and plume stability trends for 1,4-dioxane were conducted for the period of 2017 to 2021. The Ricker Method® plume stability analysis trend conclusions for each of the constituents evaluated in the upper bedrock are summarized below.

Upper Bedrock Ricker Method® Plume Stability Trends			
Constituent	**Area**	**Average Concentration**	**Mass Indicator**
PCE	Decreasing Trend	Increasing Trend	No Trend[2]
TCE	Decreasing Trend	No Trend[2]	No Trend[1]
cis-1,2-DCE	Increasing Trend	Increasing Trend	Increasing Trend
Vinyl Chloride	Increasing Trend	Increasing Trend	Increasing Trend
Chloroethenes	No Trend[1]	Increasing Trend	No Trend[2]
1,4-Dioxane	No Trend[1]	No Trend[1]	No Trend[1]

[1] Observed decreasing trend, not statistically significant
[2] Observed increasing trend, not statistically significant

As observed above, the chloroethene plumes in the upper bedrock are generally increasing or stable. The total chloroethenes plume mass indicator likewise resulted in an observed increasing trend; however, the overall trend appears to be stable. In fact, the 2021 mass indicator value is lower than both the 2020 and 2019 values. The 1,4-dioxane

plume stability analysis in the upper bedrock resulted in decreasing, but not statistically significant, trends for all three plume metrics.

The Spatial Change Indicator™ evaluation for chloroethenes shows that the upper bedrock plume has attenuated in upgradient source areas, but also shows area of increase in the core of the plume. The total chloroethenes plume area has not increased from 2014 to 2021, in fact it has decreased by approximately 8 percent. Increases in plume mass are observed in the core of the plume and slight increases are observed in the leading edge of the plume. Trend charts for selected wells (AE23R, AE27R, AE100R-3, AE102RR-1, AE104R-1, and AE106R-1) in areas of increase are shown in **Appendix A**. Notably, the furthest downgradient well in the plume, AE106R-1, has only slightly increased in concentration (210 nmol/l in 2014 to 236 nmol/l in 2021), but it exhibits a very reducing signature. That is, the molar fractions of parent compounds PCE and TCE are decreasing as the molar fraction of daughter compound cis-1,2-DCE is increasing. This is evidence that intrinsic biodegradation and/or abiotic degradation is occurring at the Site. As observed in **Appendix A**, the total chloroethenes plume increased from approximately 42 mols (12.2 lbs.) in 2014 to approximately 49 mols (14.3 lbs.) in 2021. The 1,4-dioxane plume in the upper bedrock exhibited a decrease from 0.048 lbs. in 2017 to 0.045 lbs. in 2021.

The total chloroethenes mass flux analysis resulted in an apparent decreasing trend in Transect A and stable trend in Transect B. The 1,4-dioxane mass flux analysis in the upper bedrock resulted in relatively stable trends in both Transects A and B. Following is a summary of the 2021 mass flux values and percent reduction from Transect A to Transect B. The average percent reduction from Transect A to Transect B during the period of 2015 to 2021 is also provided for reference.

2021 Upper Bedrock Mass Flux		
	Chloroethenes	1,4-Dioxane
Transect A	0.286 mol/yr	0.0006 lbs/yr
Transect B	0.002 mol/yr	0 lbs/yr
Percent Reduction from A-B	99.0%	100%
Average Percent Reduction (2015-2021)	99.1%	98.6%

3.2.2 Middle Bedrock

Plume map videos and plume stability analysis results for each of the constituents evaluated in the middle bedrock are included in **Appendix A**. As observed in the trend charts in Appendix A, trend analyses were conducted for the most recent data using a mostly consistent well network. For the chloroethene compounds, plume stability trends were conducted for the period of 2016 to 2021 and plume stability trends for 1,4-dioxane were conducted for the period of 2017 to 2021. The Ricker Method® plume stability analysis trend conclusions for each of the constituents evaluated in the upper bedrock are summarized below.

Middle Bedrock Ricker Method® Plume Stability Trends			
Constituent	**Area**	**Average Concentration**	**Mass Indicator**
PCE	Decreasing Trend	No Trend[1]	No Trend[1]
TCE	Decreasing Trend	No Trend[1]	No Trend[1]
cis-1,2-DCE	Increasing Trend	Increasing Trend	Increasing Trend
Vinyl Chloride	Increasing Trend	Increasing Trend	Increasing Trend
Chloroethenes	Increasing Trend	No Trend[1]	No Trend[1]
1,4-Dioxane	No Trend[1]	No Trend[1]	No Trend[1]

[1] Observed decreasing trend, not statistically significant

As observed above, the parent chloroethene plumes (PCE and TCE) in the middle bedrock are generally decreasing or stable, whereas the daughter chloroethene plumes

are increasing. The total chloroethenes plume mass indicator likewise resulted in an increasing trend; however, the average concentration and mass indicator are observed to be decreasing, but not at a statistical level of significance. It is also observed that the plume-wide molar fractions exhibit a slight decreasing trend in TCE fraction coupled with an increasing trend in cis-1,2-DCE fraction, indicating biodegradation and/or abiotic degradation may be occurring. Similar to the upper bedrock, the 1,4-dioxane plume stability analysis in the middle bedrock resulted in decreasing, but not statistically significant, trends for all three plume metrics.

The Spatial Change Indicator™ evaluation for chloroethenes shows that the middle bedrock plume has attenuated in the core of the plume and in the leading edge of the plume. There are observed areas of increase primarily in the Site source area. The total chloroethenes plume area has increased slightly from 2016 to 2021; however, the plume mass indicator has decreased by approximately 5 percent during the same period. Trend charts for selected wells (AE29R-3, AE29R-5, AE26R-2, AE26R-4, AE28R-2, AE100R-4, AE108R-3, and AE112R-4) in areas of increase are shown in **Appendix A**. Although these wells exhibit increases in concentration since 2016, many of them also exhibit reducing signatures with decreasing trends in parent compound molar fractions coupled with increasing trends in daughter compound molar fractions. This is further evidence that intrinsic biodegradation and/or abiotic degradation is occurring at the Site. As observed in **Appendix A**, the total chloroethenes plume in the middle bedrock decreased from approximately 179 mols (52.1 lbs.) in 2016 to approximately 169 mols (49.4 lbs.) in 2021. The 1,4-dioxane plume in the upper bedrock exhibited a decrease from 0.226 lbs. in 2017 to 0.217 lbs. in 2021.

The total chloroethenes mass flux analysis resulted in an apparent decreasing trend in Transect A and stable trend in Transect B. The 1,4-dioxane mass flux analysis in the middle bedrock resulted in relatively stable trends in both Transects A and B. Following is a summary of the 2021 mass flux values and percent reduction from Transect A to Transect B in the middle bedrock. The average percent reduction from Transect A to Transect B during the period of 2015 to 2021 is also provided for reference.

2021 Middle Bedrock Mass Flux		
	Chloroethenes	1,4-Dioxane
Transect A	2.61 mol/yr	0.0021 lbs/yr
Transect B	0.12 mol/yr	0.0005 lbs/yr
Percent Reduction from A-B	95.4%	77.5%
Average Percent Reduction (2015-2021)	95.4%	75.6%

3.2.3 Lower Bedrock

Plume map videos and plume stability analysis results for each of the constituents evaluated in the lower bedrock are included in **Appendix A**. As observed in the trend charts in Appendix A, trend analyses were conducted for the most recent data using a mostly consistent well network. For the chloroethene compounds, plume stability trends were conducted for the period of 2016 to 2021 and plume stability trends for 1,4-dioxane were conducted for the period of 2017 to 2021. The Ricker Method® plume stability analysis trend conclusions for each of the constituents evaluated in the upper bedrock are summarized below.

Lower Bedrock Ricker Method® Plume Stability Trends			
Constituent	**Area**	**Average Concentration**	**Mass Indicator**
PCE	Decreasing Trend	Decreasing Trend	Decreasing Trend
TCE	No Trend[1]	Decreasing Trend	Decreasing Trend
cis-1,2-DCE	Increasing Trend	No Trend[2]	No Trend[2]
Vinyl Chloride	Increasing Trend	Increasing Trend	Increasing Trend
Chloroethenes	No Trend[1]	Decreasing Trend	Decreasing Trend
1,4-Dioxane	No Trend[1]	Decreasing Trend	Decreasing Trend

[1] Observed decreasing trend, not statistically significant

[2] Observed increasing trend, not statistically significant

As observed above, the parent chloroethene plumes (PCE and TCE) in the lower bedrock are decreasing, whereas the daughter chloroethene plumes are stable to increasing. The total chloroethenes plume, however, exhibits a strong decreasing trend. The 1,4-dioxane

plume stability analysis in the lower bedrock likewise resulted in stable or decreasing trends for all three plume metrics.

The Spatial Change Indicator™ evaluation for chloroethenes shows that the lower bedrock plume has attenuated in the core of the plume. There are observed areas of increase primarily in the Site source area and portions of the downgradient plume. The total chloroethenes plume area has increased slightly from 2016 to 2021; however, the plume mass indicator has decreased by approximately 15 percent during the same period. Trend charts for selected wells (AE28R-4, AE101R-5, AE105R-5, AE108R-5, and AE112R-6) in areas of increase are shown in **Appendix A**. Although these wells exhibit increases in concentration since 2016, many of them also exhibit reducing signatures with decreasing trends in parent compound molar fractions coupled with increasing trends in daughter compound molar fractions. This is further evidence that intrinsic biodegradation and/or abiotic degradation is occurring at the Site. As observed in **Appendix A**, the total chloroethenes plume in the lower bedrock decreased from approximately 380 mols (112 lbs.) in 2016 to approximately 322 mols (94.9 lbs.) in 2021. The 1,4-dioxane plume in the lower bedrock exhibited a decrease from 0.63 lbs. in 2017 to 0.56 lbs. in 2021.

The total chloroethenes mass flux analysis in the lower bedrock resulted in an apparent decreasing trend in Transect A and stable trend in Transect B. The 1,4-dioxane mass flux analysis in the middle bedrock resulted in relatively stable trends in both Transects A and B. Following is a summary of the 2021 mass flux values and percent reduction from Transect A to Transect B in the lower bedrock. The average percent reduction from Transect A to Transect B during the period of 2015 to 2021 is also provided for reference.

2021 Middle Bedrock Mass Flux		
	Chloroethenes	1,4-Dioxane
Transect A	9.47 mol/yr	0.0036 lbs/yr
Transect B	0.28 mol/yr	0.0004 lbs/yr
Percent Reduction from A-B	97.0%	88.7%
Average Percent Reduction (2015-2021)	97.5%	91.2%

3.2.4 Bedrock Discussion

Although some increasing tends in individual constituents are observed in the bedrock plumes, the overall trend over the three bedrock zones is decreasing. Following is a summary of the total chloroethenes plume mass in the bedrock in 2016 compared to 2021 and the 1,4-dioxane plume mass in the bedrock in 2017 compared to 2021.

Total Chloroethene Plume in Bedrock			
Bedrock Zone	**2016**	**2021**	**% Reduction**
Upper	14.4 lbs	14.3 lbs	
Middle	52.1 lbs	49.4 lbs	
Lower	112 lbs	94.9 lbs	
Total Bedrock	179 lbs	159 lbs	11.2%

1,4-Dioxane Plume in Bedrock			
Bedrock Zone	**2017**	**2021**	**% Reduction**
Upper	0.048 lbs	0.045 lbs	
Middle	0.226 lbs	0.217 lbs	
Lower	0.631 lbs	0.559 lbs	
Total Bedrock	0.905 lbs	0.821 lbs	9.3%

In addition to observed overall decreases in the bedrock, many of the monitoring wells exhibit reducing signatures characterized by decreasing trends in parent compound molar fractions coupled with increasing trends in daughter compound molar fractions, and some wells exhibit predominantly cis-1,2-DCE. Overall, there appears to be some level of biodegradation and/or abiotic degradation occurring in the bedrock hydrogeologic zone.

SECTION 4
WELL SUFFICIENCY ANALYSIS™

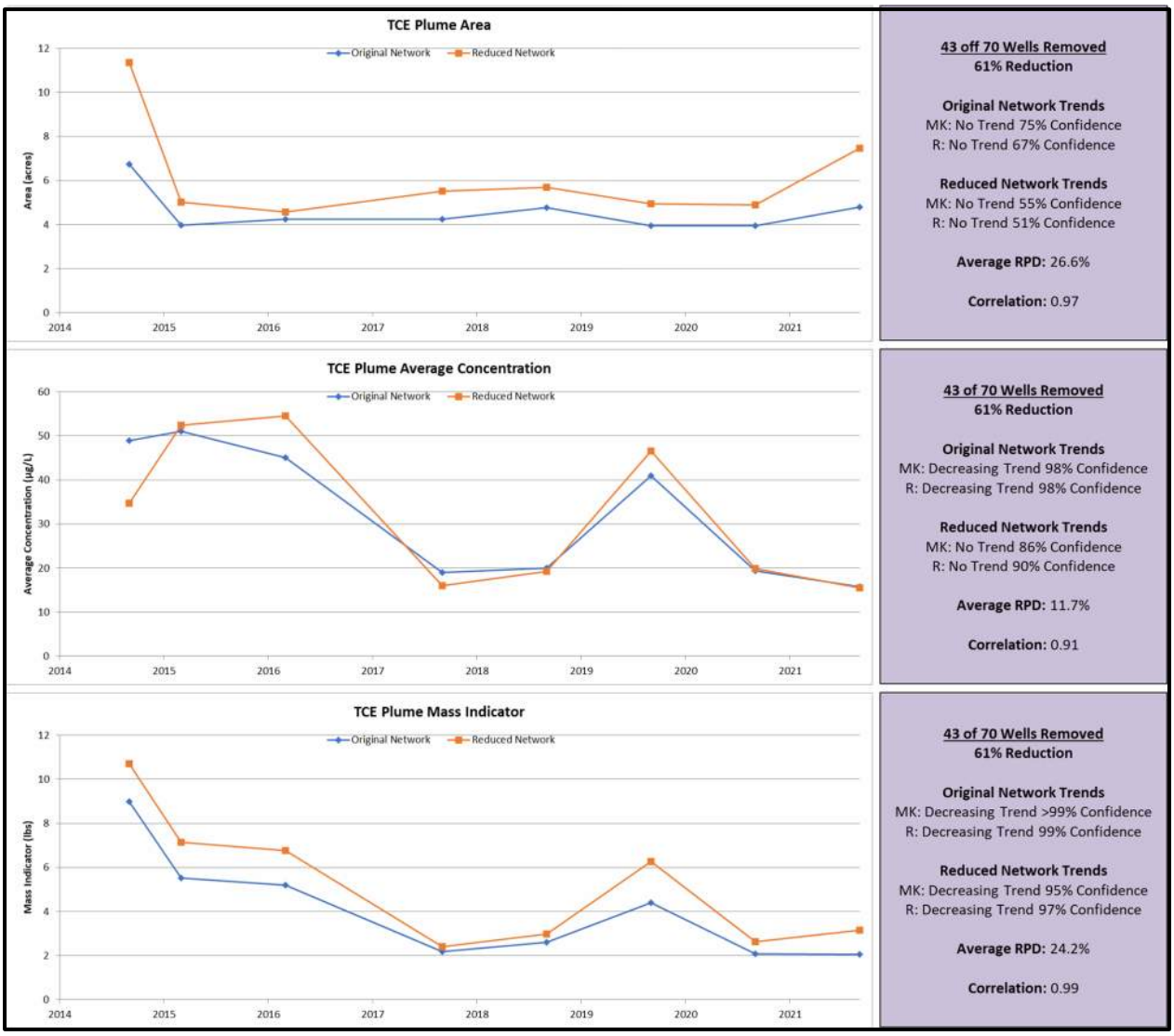
A Ricker Method® Well Sufficiency Analysis™ was conducted as part of the groundwater optimization program for the Site. The Well Sufficiency Analysis™ was conducted as described in Section 2.4 for each of the chloroethene constituents in all four hydrogeologic zones evaluated above. The analysis was conducted with input from the Lockheed Martin project team. Final recommended monitoring well networks for each monitoring zone are summarized below.

Overburden

For the overburden, the Ricker Method® plume stability analysis was conducted with a total of 126 discrete sampling screens for the period of 1989 to 2021 (see input data in **Appendix B**). There have been many wells added and removed from the program over the years, and the current monitoring network for the past several years consisted of 70 discrete sampling locations. The results of the Well Sufficiency Analysis™ are summarized in the interactive PowerPoint file entitled *LMC Wilmington Well Sufficiency Analysis.pptx*, which is included as **Appendix D**.

As part of the analysis, through trial and error and professional judgement, 43 wells were removed from the network of 70 wells. **Figure 1** is a summary of the TCE trend comparisons for the original network of 70 wells compared to the reduced network of 27 wells in the overburden. Similar evaluations for the other chloroethene constituents are included in **Appendix D**. As observed in **Figure 1** below, the trends resulting from the reduced network provide a comparable understanding of plume behavior and is adequate for the next five-year monitoring period.

Figure 1. Summary of Well Sufficiency Outcome for TCE in Overburden



Below is a summary of the Well Sufficiency Analysis™ for each chloroethene compound in the overburden.

Overburden Well Sufficiency Summary (43 Wells Removed)									
	RPD			Correlation			Trend Conclusion		
Constituent	Area	Conc	Mass	Area	Conc	Mass	Area	Conc	Mass
PCE	27.5%	11.6%	24.8%	0.96	0.92	0.99	Same	Decreasing Trend - No Trend	Same
TCE	26.6%	11.7%	24.2%	0.97	0.91	0.99	Same	Decreasing Trend - No Trend	Same
cis-1,2-DCE	29.3%	9.0%	33.2%	0.9	0.92	0.96	Same	Same	Same
Vinyl Chloride	27.0%	15.6%	28.7%	0.03	0.61	0.32	Same	Same	Decreasing Trend - No Trend

For reference, the mass flux trends were also recalculated based on the reduced network, and the comparisons are provided in the PowerPoint File in **Appendix D**. The final recommended monitoring network for the overburden is summarized below.

Overburden Recommended Well Network

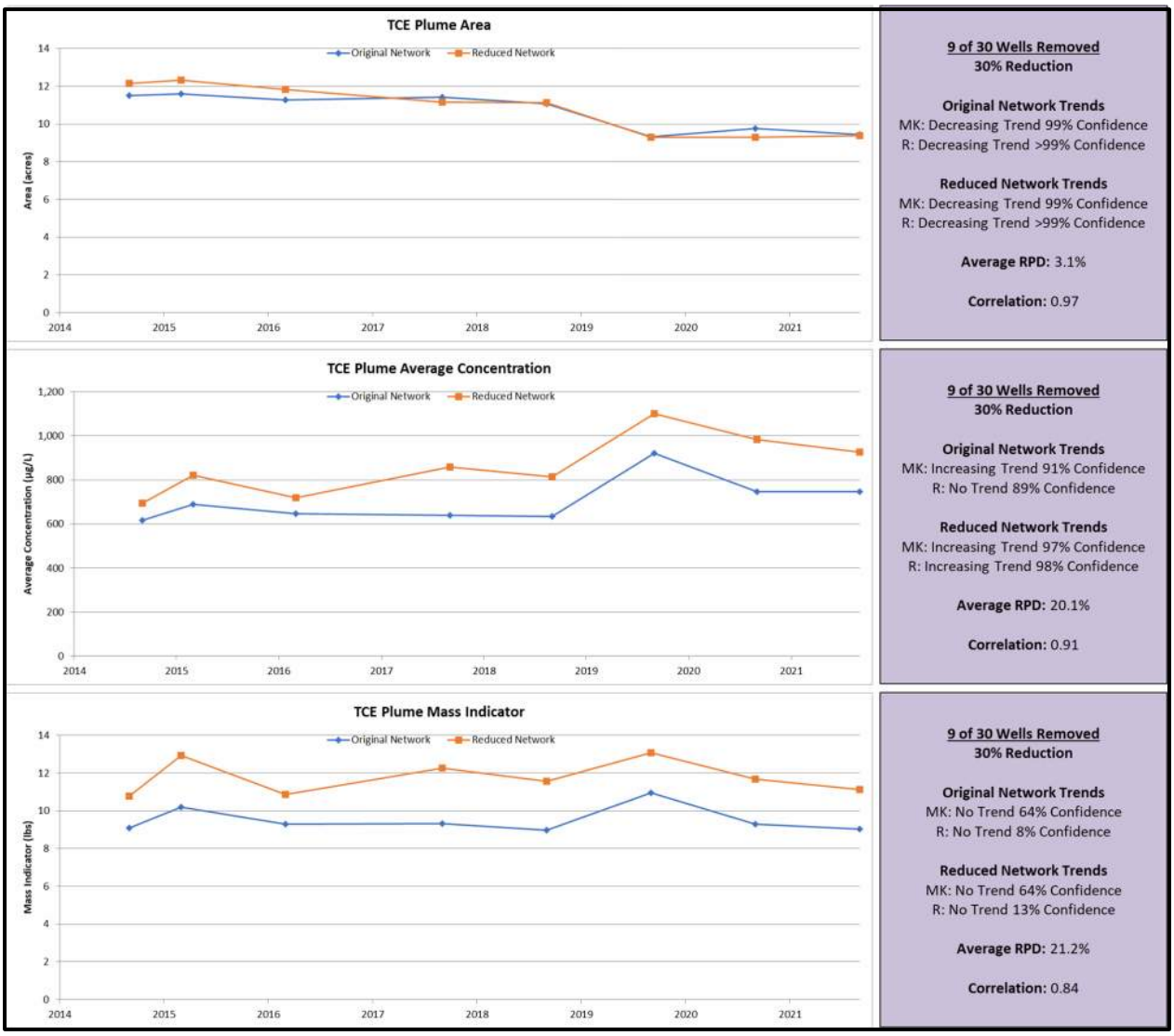
AE101D	AE24	MW-5
AE102M	AE26S	MW-7
AE103D	EMW-10D	PS-1D
AE104D	GZA-10	PS-1M
AE105D	GZA-102S	PS-3
AE106M	GZA-105D	PS-5D
AE109D	GZA-105S	PS-8D
AE112D	GZA-12	STM-8D
AE23S	MW-4A	TRC-102

Upper Bedrock

For the upper bedrock, the Ricker Method® plume stability analysis was conducted with a total of 59 discrete sampling screens for the period of 1989 to 2021 (see input data in **Appendix B**). The current monitoring network in the upper bedrock for the past several years consisted of 30 discrete sampling locations. The results of the Well Sufficiency Analysis™ are summarized in the interactive PowerPoint file entitled *LMC Wilmington Well Sufficiency Analysis.pptx*, which is included as **Appendix D**.

As part of the analysis, through trial and error and professional judgement, 9 wells were removed from the network of 30 wells. **Figure 2** is a summary of the TCE trend comparisons for the original network of 30 wells compared to the reduced network of 21 wells in the upper bedrock. Similar evaluations for the other chloroethene constituents are included in **Appendix D**. As observed in **Figure 2** below, the trends resulting from the reduced network provide a comparable understanding of plume behavior and is adequate for the next five-year monitoring period.

Figure 2. Summary of Well Sufficiency Outcome for TCE in Upper Bedrock



Below is a summary of the Well Sufficiency Analysis™ for each chloroethene compound in the upper bedrock.

Upper Bedrock Well Sufficiency Summary (9 Wells Removed)									
	RPD			Correlation			Trend Conclusion		
Constituent	Area	Conc	Mass	Area	Conc	Mass	Area	Conc	Mass
PCE	6.2%	21.9%	18.7%	0.81	0.94	0.97	Same	Same	Same
TCE	3.1%	20.1%	21.2%	0.97	0.91	0.84	Same	No Trend/Increasing Trend - Increasing Trend	Same
cis-1,2-DCE	6.9%	10.4%	16.5%	0.97	0.9	0.96	Same	Same	Same
Vinyl Chloride	16.9%	6.5%	20.9%	0.95	0.99	0.99	Same	Same	Same

For reference, the mass flux trends were also recalculated based on the reduced network, and the comparisons are provided in the PowerPoint File in **Appendix D**. The final recommended monitoring network for the upper bedrock is summarized below.

Upper Bedrock Recommended Well Network

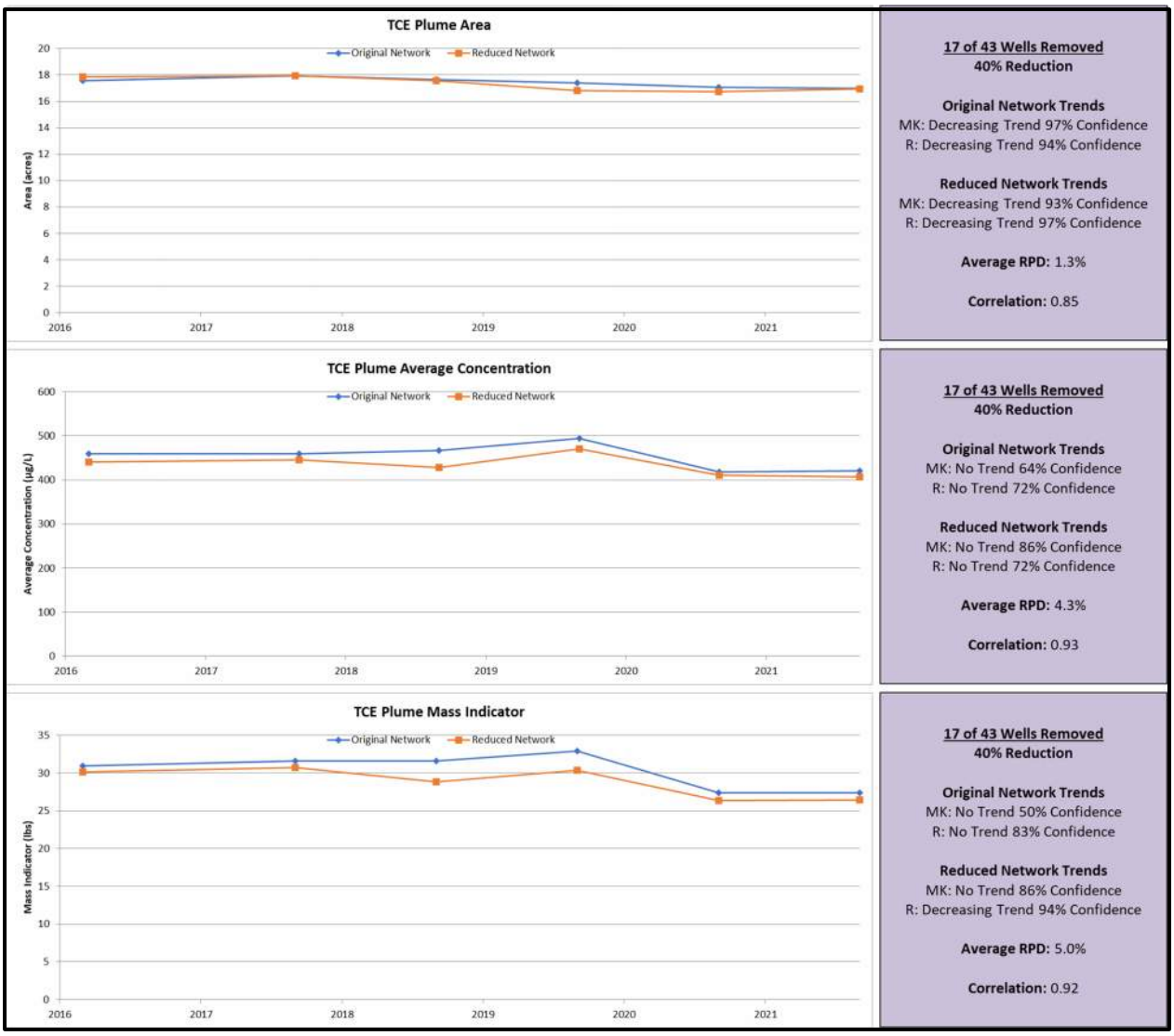
AE100R-2	AE109R-1	AE28R-1
AE100R-3	AE110R-1	AE29R-1
AE101R-2	AE111R-1	AE2R
AE102RR-1	AE112R-1	GZA-101R
AE104R-1	AE23R	GZA-105R
AE106R-1	AE26R-1	STM-8R
AE108R-1	AE27R	TRC-201R

Middle Bedrock

For the middle bedrock, the Ricker Method® plume stability analysis was conducted with a total of 49 discrete sampling screens for the period of 1992 to 2021 (see input data in **Appendix B**). The current monitoring network in the upper bedrock for the past several years consisted of 43 discrete sampling locations. The results of the Well Sufficiency Analysis™ are summarized in the interactive PowerPoint file entitled *LMC Wilmington Well Sufficiency Analysis.pptx*, which is included as **Appendix D**.

As part of the analysis, through trial and error and professional judgement, 17 wells were removed from the network of 43 wells. **Figure 3** is a summary of the TCE trend comparisons for the original network of 43 wells compared to the reduced network of 26 wells in the middle bedrock. Similar evaluations for the other chloroethene constituents are included in **Appendix D**. As observed in **Figure 3** below, the trends resulting from the reduced network provide a comparable understanding of plume behavior and is adequate for the next five-year monitoring period.

Figure 3. Summary of Well Sufficiency Outcome for TCE in Middle Bedrock



Below is a summary of the Well Sufficiency Analysis™ for each chloroethene compound in the middle bedrock.

Middle Bedrock Well Sufficiency Summary (17 Wells Removed)									
	RPD			Correlation			Trend Conclusion		
Constituent	Area	Conc	Mass	Area	Conc	Mass	Area	Conc	Mass
PCE	1.2%	2.3%	2.8%	0.97	0.99	0.97	Same	Same	Same
TCE	1.3%	4.3%	5.0%	0.85	0.93	0.92	Same	Same	No Trend - No Trend/Decreasing Trend
cis-1,2-DCE	4.6%	12.2%	15.6%	0.9	0.81	0.93	Same	Same	Same
Vinyl Chloride	8.8%	13.2%	21.9%	0.95	0.94	0.96	Same	Same	Same

For reference, the mass flux trends were also recalculated based on the reduced network, and the comparisons are provided in the PowerPoint File in **Appendix D**. The final recommended monitoring network for the middle bedrock is summarized below.

Middle Bedrock Recommended Well Network

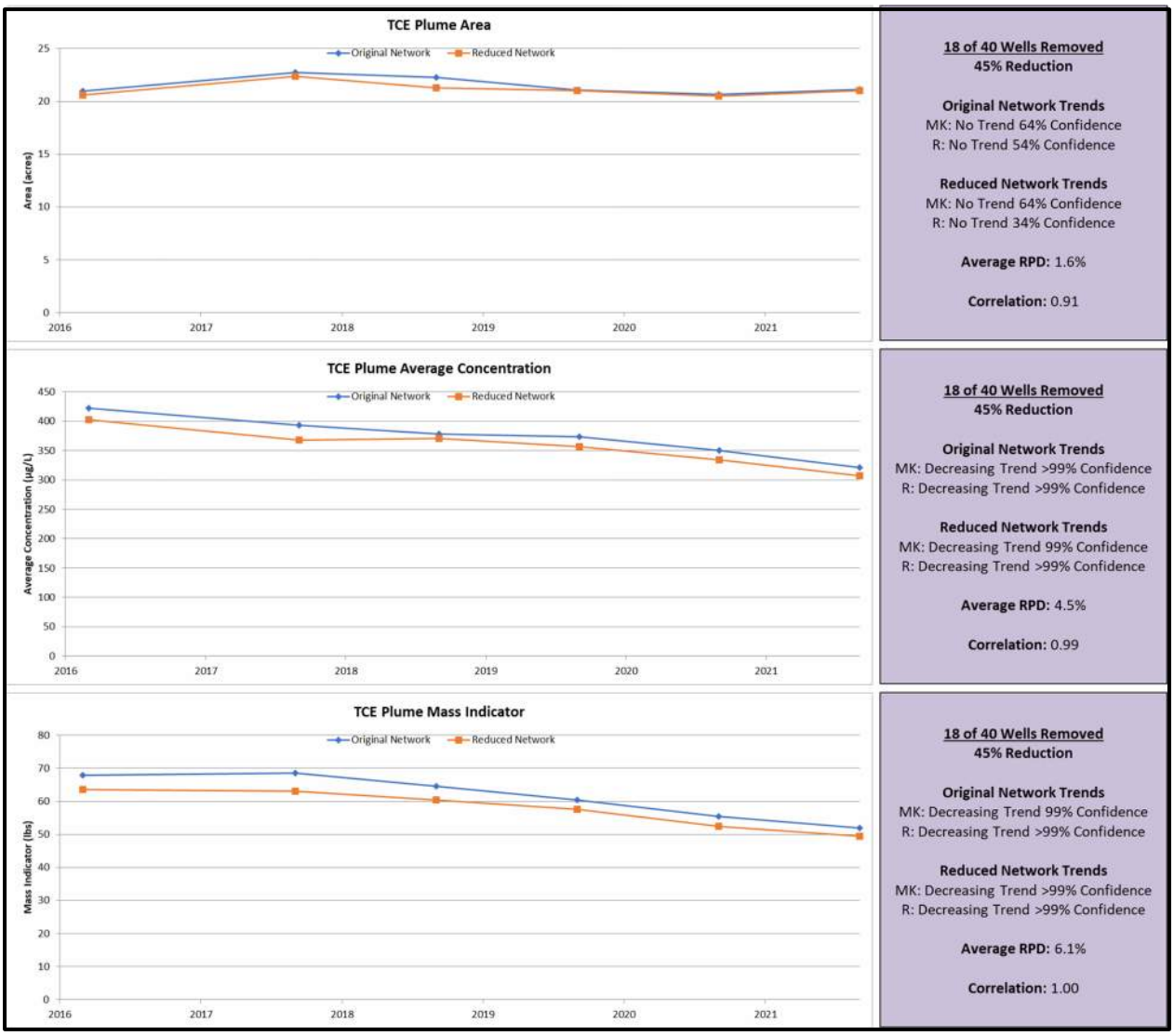
AE100R-4	AE106R-3	AE29R-3
AE100R-5	AE108R-3	AE29R-5
AE102RR-2	AE109R-2	IP-01R2
AE103R-2	AE110R-2	STM-8R1
AE103R-3	AE111R-2	TRC-301R-1
AE103R-4	AE112R-2	TRC-301R-2
AE104R-3	AE26R-4	TRC-301R-3
AE105R-2	AE28R-2	TRC-301R-4
AE10R5-3	AE28R-3	

Lower Bedrock

For the lower bedrock, the Ricker Method® plume stability analysis was conducted with a total of 41 discrete sampling screens for the period of 1998 to 2021 (see input data in **Appendix B**). The current monitoring network in the upper bedrock for the past several years consisted of 40 discrete sampling locations. The results of the Well Sufficiency Analysis™ are summarized in the interactive PowerPoint file entitled *LMC Wilmington Well Sufficiency Analysis.pptx*, which is included as **Appendix D**.

As part of the analysis, through trial and error and professional judgement, 18 wells were removed from the network of 40 wells. **Figure 3** is a summary of the TCE trend comparisons for the original network of 40 wells compared to the reduced network of 22 wells in the lower bedrock. Similar evaluations for the other chloroethene constituents are included in **Appendix D**. As observed in **Figure 4** below, the trends resulting from the reduced network provide a comparable understanding of plume behavior and is adequate for the next five-year monitoring period.

Figure 4. Summary of Well Sufficiency Outcome for TCE in Lower Bedrock



Below is a summary of the Well Sufficiency Analysis™ for each chloroethene compound in the lower bedrock.

Lower Bedrock Well Sufficiency Summary (18 Wells Removed)									
	RPD			Correlation			Trend Conclusion		
Constituent	Area	Conc	Mass	Area	Conc	Mass	Area	Conc	Mass
PCE	3.5%	8.6%	12.0%	1	0.95	0.99	Same	Same	Same
TCE	1.6%	4.5%	6.1%	0.91	0.99	1	Same	Same	Same
cis-1,2-DCE	2.5%	6.2%	8.7%	0.98	0.98	0.99	Same	Same	Same
Vinyl Chloride	2.9%	7.6%	9.2%	1	0.97	0.99	Same	Same	Same

For reference, the mass flux trends were also recalculated based on the reduced network, and the comparisons are provided in the PowerPoint File in **Appendix D**. The final recommended monitoring network for the lower bedrock is summarized below.

Lower Bedrock Recommended Well Network

AE101R-4	AE105R-4	AE110R-5
AE101R-6	AE105R-5	AE110R-7
AE102RR-4	AE106R-5	AE111R-6
AE102RR-5	AE106R-5	AE112R-5
AE102RR-6	AE109R-4	AE26R-5
AE103R-5	AE109R-6	AE28R-4
AE103R-7	AE109R-8	AE29R-6
AE104R-5		

SECTION 5
LIMITATIONS

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SECTION 6
REFERENCES

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Appendix A:

LMC Wilmington Plume Analytics 2021-12-20.pptx

SharePoint Link to Presentation

Appendix B:

Ricker Method® Input Data.pdf

PCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-04	NA	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS	NS
GZA-05	NA	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS	NS
GZA-06	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	<43 (1.0)	NA	NA	NA	NA	NA	NA	NA
GZA-10	NA	NA	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
GZA-102S	33	NS (23)	21	<25 (16)	<25 (10)	4.7	4.6	9	<5.0	7	6
GZA-103S	90	NS (55)	46	100	43	7	NS (17)	28	49	<25	29
GZA-104D	NA	NA	NA	2.7	NA	NA	NA	NA	NA	NA	NA
GZA-104S	<5.0	NS (21)	NS (25)	29	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NA	NA	NA	<540 (6.6)	6.6	6.6	6.6	<25	NS (73)	NS (122)	170
GZA-105S	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<25 (1.0)	<25 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	45	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	28	NA	NA	NA	NA	NA	NA	NA
GZA-106S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
GZA-107D	NA	NA	NA	15	<5.0	NS (4.9)	NS (4.8)	NS (4.8)	NS (4.7)	NS (4.6)	NS (4.5)
GZA-107M	NA	NA	NA	2	<5.0 (2.0)	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.9)
GZA-107S	NA	NA	NA	6.1	<5.0	NA	NA	NA	NA	NA	NA
GZA-108D	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	<5.0	NS (5.0)	NS (5.0)	5	<5.0 (4.9)	<5.0 (4.8)	NS (4.7)	NS (4.6)	NS (4.5)	NS (4.4)	NS (4.3)
GZA-13	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-14	6.6	NS (12)	NS (13)	14	NS (14)	NS (13)	NS (13)	NS (12)	NS (12)	NS (12)	NS (11)
GZA-14A	5.5	NS (5.5)	NS (5.5)	5.5	NS (5.6)	NS (5.8)	NS (5.9)	NS (6.1)	NS (6.2)	NS (6.4)	NS (6.5)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1S	NA	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2S	NA	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-4	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-5D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-5S	NA	NA	12	NS (17)	21	26	NS (23)	NS (20)	NS (17)	NS (14)	NS (10)
PS-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
PZ-1S	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
PZ-2S	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5,000 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-3	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	74	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
PZ-7S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<100 (1.0)	<2,500 (1.0)	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	2.7	<5.0 (2.7)	<5.0 (2.7)	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	1.2	<5.0 (1.2)	<5.0 (1.2)	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-9D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-9S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS	NS	NS	NS	NS
STM-10S	NA	NA	NA	6.6	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-3D	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-3S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8M	NA	NA	NA	<5.0	<5.0	<5.0	NS (5.1)	NS (5.2)	NS (5.3)	NS (5.4)	NS (5.5)
STM-8S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
WE-02	NA	<1,250 (1.0)	NS (1.0)	<600 (1.0)	<1,000 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	<12 (1.0)	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA
WE-03	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
WE-04D	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	<500 (1.0)	<500 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	150	NS (101)	NS (51)	<2.0	NS (4.6)	NS (7.1)	NS (9.7)	NS (12)
EMW-10S	NA	NA	NA	<1.0	NS (1.3)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)
EMW-11D	NA	NA	NA	8	NS (7.8)	NS (7.6)	NS (7.5)	NS (7.3)	NS (7.1)	NS (6.9)	NS (6.7)
EMW-11S	NA	NA	NA	<1.0	NS (1.3)	NS (1.7)	<2.0	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002
GZA-102S	19	NS (24)	26	18	5.2	NS (4.6)	4	NS (3.9)	NS (3.8)	NS (3.7)	NS (3.5)
GZA-103S	65	NS (39)	26	13	<5.0	NS (5.5)	6	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	2,000	NS (1,599)	1,400	650	NS (670)	NS (690)	NS (710)	NS (730)	NS (750)	NS (770)	NS (790)
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (4.5)	NS (4.3)	NS (4.2)	NS (4.2)	NS (4.1)	NS (4.0)	NS (3.9)	NS (3.9)	NS (3.8)	NS (3.7)	NS (3.6)
GZA-107M	NS (1.8)	NS (1.8)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.6)	NS (1.6)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (4.2)	NS (4.0)	NS (3.9)	NS (3.8)	NS (3.7)	NS (3.6)	NS (3.5)	NS (3.4)	NS (3.3)	NS (3.2)	NS (3.1)
GZA-13	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (11)	10	NS (8.5)	NS (7.0)	NS (5.5)	4	NS (3.8)	NS (3.7)	NS (3.5)	NS (3.3)	NS (3.2)
GZA-14A	NS (6.7)	7	NS (6.3)	NS (5.5)	NS (4.8)	4	NS (3.8)	NS (3.7)	NS (3.5)	NS (3.3)	NS (3.2)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NA	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NA	NA	NA	NA	NA	<2.0	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)
MW-4A	NA	NA	NA	NA	NA	<2.0	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NA	NA	NA	24	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)
PS-1M	NA	NA	NA	16	NS (16)	NS (15)	NS (15)	NS (14)	NS (14)	NS (13)	NS (13)
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.5)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.0)
PS-2D	NA	NA	NA	2	NS (2.0)	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	<5.0 (2.0)	NS (2.0)
PS-2M	NA	NA	NA	22	NS (12)	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	<5.0 (2.0)	NS (2.0)
PS-2S	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.5)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
PS-3	NA	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.0)
PS-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-5D	NA	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.2)
PS-5S	NS (7.2)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
PS-8D	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
STM-3S	NS (1.0)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NA	NA	NA	11	NS (11)	NS (11)	NS (11)	NS (10)	NS (10)	NS (10)	NS (10)
STM-8M	NS (5.6)	NS (5.8)	NS (5.9)	6	NS (4.0)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
STM-8S	NS (1.0)	<1.0	NS (7.4)	14	NS (8.0)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	<1.0	NS (1.5)	<2.0	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<2.0
W-02	NA	NA	NA	<1.0	NS (1.5)	<2.0	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<2.0
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NS (1.0)	NS (1.0)	<50 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	<1.0	NS (1.0)	<1.0	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	77
EMW-10D	NS (15)	20	22	14	7.1	6.3	23	18	9.4	17	15
EMW-10S	NS (1.8)	NS (1.8)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
EMW-11D	NS (6.6)	6.2	2.6	1.1	4.4	NS (4.2)	4	4.8	4.4	19	5.1
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
GZA-102S	NS (3.4)	NS (3.2)	NS (2.7)	NS (2.0)	NS (1.9)	NS (1.8)	NS (1.7)	NS (1.5)	NS (1.3)	NS (1.2)	NS (1.1)
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (810)	850	33	27	180	NS (110)	42	1,100	1,300	885	76
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (3.5)	NS (3.4)	NS (3.1)	NS (2.6)	NS (2.6)	NS (2.5)	NS (2.4)	NS (2.3)	NS (2.2)	NS (2.1)	NS (2.0)
GZA-107M	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (3.0)	NS (2.8)	NS (2.4)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.5)	NS (1.3)	NS (1.2)	NS (1.1)	<1.0
GZA-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (3.0)	NS (2.7)	<2.0	NS (0.77)	NS (0.57)	0.36	NS (0.52)	NS (0.84)	<1.0	NS (1.0)	NS (1.0)
GZA-14A	NS (3.0)	NS (2.7)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (1.7)	NS (1.5)	1.3	NS (0.70)	NS (0.60)	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)
MW-4A	NS (1.7)	NS (1.5)	NS (1.3)	NS (0.97)	NS (0.92)	0.86	NS (1.2)	NS (1.9)	2.2	NS (2.0)	NS (1.9)
MW-5	NA	NA	<2.0	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.1)
MW-7	NA	NA	<2.0	NS (0.87)	NS (0.69)	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)
PS-1D	NS (24)	NS (24)	24	9.1	11	NS (10)	10	6.2	8.2	8.1	6
PS-1M	NS (13)	NS (12)	NS (10)	NS (7.6)	NS (7.2)	NS (6.7)	NS (6.3)	NS (5.5)	NS (5.0)	NS (4.6)	NS (4.2)
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	NS (2.0)	NS (2.0)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
PS-2M	NS (2.0)	NS (2.0)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
PS-2S	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
PS-3	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-5D	NS (1.5)	<2.0	<2.0	NS (0.87)	NS (0.69)	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)
PS-5S	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
PS-8D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
STM-3S	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (10.0)	NS (9.7)	9.2	NS (3.3)	NS (2.3)	1.3	NS (1.3)	NS (1.4)	1.4	NS (1.4)	NS (1.5)
STM-8M	NS (1.8)	NS (1.7)	1.6	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)
STM-8S	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)
TRC-403	NA	NA	NA	NA	NA	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)
W-01	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NA	NA	NA	NA	NA	NA
W-02	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Non-Sampled Well

PCE Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE03	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE04	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE101D	NA	NA	NA	1,410	1.8	1.4	<1.0	21	<1.0	2.3	2.5
AE101S	NA	NA	NA	<1.0	2.3	<1.0	1.9	1.1	<1.0	4.4	2.7
AE102D	NA	NA	NA	50	32	20	1.1	<1.0	<1.0	7	4.4
AE102M	NA	NA	NA	29	22	5.1	27	13	10	6.8	10
AE102S	NA	NA	NA	9.7	35	NS (29)	NS (22)	NS (16)	NS (11)	NS (6.2)	<1.0
AE103D	NA	NA	NA	61	52	5.7	78	49	28	42	47
AE103M	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE103S	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE104D	NA	NA	NA	38	16	18	13	3.3	<1.0	<1.0	1.7
AE104M	NA	NA	NA	16	17	NS (14)	NS (11)	NS (8.2)	NS (5.8)	NS (3.4)	<1.0
AE104S	NA	NA	NA	10	5.8	3.8	1.2	<1.0	<1.0	<1.0	<1.0
AE105D	NA	NA	NA	9.3	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE105M	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE105S	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE106D	NA	NA	NA	16	13	11	6	4.3	3.6	2.3	2.7
AE106M	NA	NA	NA	12	12	NS (14)	NS (17)	NS (19)	NS (22)	NS (24)	26
AE106S	NA	NA	NA	14	8.9	6.2	3.5	12	12	4.9	24
AE109D	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112D	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	1.5	1
AE1I	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE1S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE23S	NA	15	245	NS (128)	13	11	10	NS (73)	NS (135)	NS (198)	260
AE24	NA	263	956	NS (4,346)	7,680	7,660	164	733	5,500	680	350
AE25D	NA	NA	<1.0	NS (2.2)	3.4	NS (3.0)	NS (2.5)	NS (2.1)	NS (1.7)	NS (1.4)	1
AE25S	NA	NA	2.4	NS (6.2)	10	NS (8.9)	NS (7.2)	NS (6.1)	NS (5.0)	NS (3.9)	2.8
AE26D	NA	NA	<1.0	NS (3.6)	6.1	1.2	1.8	NS (2.0)	NS (2.2)	NS (2.4)	2.6
AE26S	NA	NA	28	NS (40)	52	57	42	31	29	24	22
AE2I	NS (80)	NS (84)	87	NS (81)	NS (76)	NS (65)	NS (48)	NS (37)	NS (27)	NS (15)	4.5
EMW-10D	NS (13)	NS (11)	NS (9.4)	NS (7.6)	5.9	9.5	71	76	99	110	130
EMW-10S	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
EMW-11D	NS (5.4)	NS (5.7)	NS (5.9)	NS (6.2)	6.5	7.5	1.3	1.9	<1.0	<1.0	1.8
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

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Non-Sampled Well

PCE Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
GZA-102S	<1.0	NS (1.1)	NS (1.2)	NS (1.3)	NS (1.5)	NS (1.7)	NS (2.0)	2.3	2	1.3	<1.0
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (89)	NS (102)	NS (116)	NS (129)	142	134	382	116	24	5.9	19
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0 (1.0)	<1.0 (1.0)	<1.0 (1.0)	<1.0 (1.0)	<1.0 (1.0)	<1.0 (1.0)	<1.0 (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.5)	1.3	NA	NA	NA	NA
GZA-107M	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.1)	<1.0	NA	NA	NA	NA
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<1.0	<1.0	<1.0	<7.0 (1.0)	<1.0	<1.0	<1.0
GZA-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	1.1	NS (1.1)	NS (1.0)	NS (1.0)	<1.0
GZA-14A	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
HOW-2	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
HOW-3	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-4A	NS (1.7)	NS (1.5)	NS (1.3)	NS (1.2)	1	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.1)	1.1
MW-5	NS (1.1)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	10
PS-1D	NS (5.3)	NS (4.5)	NS (3.8)	NS (3.0)	2.3	3.3	1.6	3.5	3.1	3	<1.0
PS-1M	NS (3.8)	NS (3.4)	NS (2.9)	NS (2.5)	2.1	3.4	1.9	NS (2.3)	NS (2.7)	NS (3.2)	3.6
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-2D	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-2M	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-2S	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-3	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-5D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-5S	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-8D	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-8S	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
PZ-2S	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-3S	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (1.5)	NS (1.6)	NS (1.6)	1.7	1.2	1.7	1.7	1.5	1.3	<1.0	<1.0
STM-8M	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8S	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
TRC-101	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0
TRC-102	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRC-103	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0
TRC-402	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
TRC-403	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-04	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NA	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	<43 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NA	NA	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	33	NS (23)	21	<25 (16)	<25 (10)	4.7	4.6	9	<5.0	7	6	19	NS (24)	26
GZA-103S	90	NS (55)	46	100	43	7	NS (17)	28	49	<25	29	65	NS (39)	26
GZA-104D	NA	NA	NA	2.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	<5.0	NS (21)	NS (25)	29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998
GZA-105D	NA	NA	NA	<540 (6.6)	NS (6.6)	NS (6.6)	6.6	<25	NS (73)	NS (122)	170	2,000	NS (1,599)	1,400
GZA-105S	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<25 (1.0)	<25 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	45	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NA	NA	NA	15	<5.0	NS (4.9)	NS (4.8)	NS (4.8)	NS (4.7)	NS (4.6)	NS (4.5)	NS (4.5)	NS (4.3)	NS (4.2)
GZA-107M	NA	NA	NA	2	<5.0 (2.0)	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.8)
GZA-107S	NA	NA	NA	6.1	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	<5.0	NS (5.0)	NS (5.0)	5	<5.0 (4.9)	<5.0 (4.8)	NS (4.7)	NS (4.6)	NS (4.5)	NS (4.4)	NS (4.3)	NS (4.2)	NS (4.0)	NS (3.9)
GZA-13	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-14	6.6	NS (12)	NS (13)	14	NS (14)	NS (13)	NS (13)	NS (12)	NS (12)	NS (12)	NS (11)	NS (11)	10	NS (8.5)
GZA-14A	5.5	NS (5.5)	NS (5.5)	5.5	NS (5.6)	NS (5.8)	NS (5.9)	NS (6.1)	NS (6.2)	NS (6.4)	NS (6.5)	NS (6.7)	7	NS (6.3)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS
MW-2	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4A	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1S	NA	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2S	NA	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)
PS-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS (1.2)
PS-4	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-5D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS (1.2)
PS-5S	NA	NA	12	NS (17)	21	26	NS (23)	NS (20)	NS (17)	NS (14)	NS (10)	NS (7.2)	<1.0	NS (1.2)
PS-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5,000 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998
PZ-3	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<100 (1.0)	<2,500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	2.7	<5.0 (2.7)	<5.0 (2.7)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	1.2	<5.0 (1.2)	<5.0 (1.2)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-9S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NA	NA	NA	6.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.2)
STM-3S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.2)
STM-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8M	NA	NA	NA	<5.0	<5.0	<5.0	NS (5.1)	NS (5.2)	NS (5.3)	NS (5.4)	NS (5.5)	NS (5.6)	NS (5.8)	NS (5.9)
STM-8S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (7.4)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	<1,250 (1.0)	NS (1.0)	<600 (1.0)	<1,000 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	<12 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	<500 (1.0)	<500 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<50 (1.0)
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS (1.0)	<1.0

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	150	NS (101)	NS (51)	<2.0	NS (4.6)	NS (7.1)	NS (9.7)	NS (12)	NS (15)	20	22	14	7.1	6.3	23	18
EMW-10S	<1.0	NS (1.3)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
EMW-11D	8	NS (7.8)	NS (7.6)	NS (7.5)	NS (7.3)	NS (7.1)	NS (6.9)	NS (6.7)	NS (6.6)	6.2	2.6	1.1	4.4	NS (4.2)	4	4.8
EMW-11S	<1.0	NS (1.3)	NS (1.7)	<2.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	18	5.2	NS (4.6)	4	NS (3.9)	NS (3.8)	NS (3.7)	NS (3.5)	NS (3.4)	NS (3.2)	NS (2.7)	NS (2.0)	NS (1.9)	NS (1.8)	NS (1.7)	NS (1.5)
GZA-103S	13	<5.0	NS (5.5)	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011
GZA-105D	650	NS (670)	NS (690)	NS (710)	NS (730)	NS (750)	NS (770)	NS (790)	NS (810)	850	33	27	180	NS (110)	42	1,100
GZA-105S	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (4.2)	NS (4.1)	NS (4.0)	NS (3.9)	NS (3.9)	NS (3.8)	NS (3.7)	NS (3.6)	NS (3.5)	NS (3.4)	NS (3.1)	NS (2.6)	NS (2.6)	NS (2.5)	NS (2.4)	NS (2.3)
GZA-107M	NS (1.8)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.3)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (3.8)	NS (3.7)	NS (3.6)	NS (3.5)	NS (3.4)	NS (3.3)	NS (3.2)	NS (3.1)	NS (3.0)	NS (2.8)	NS (2.4)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.5)	NS (1.3)
GZA-13	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (7.0)	NS (5.5)	4	NS (3.8)	NS (3.7)	NS (3.5)	NS (3.3)	NS (3.2)	NS (3.0)	NS (2.7)	<2.0	NS (0.77)	NS (0.57)	0.36	NS (0.52)	NS (0.84)
GZA-14A	NS (5.5)	NS (4.8)	4	NS (3.8)	NS (3.7)	NS (3.5)	NS (3.3)	NS (3.2)	NS (3.0)	NS (2.7)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NA	NA	<2.0	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.7)	NS (1.5)	1.3	NS (0.70)	NS (0.60)	<0.50	NS (0.62)	NS (0.87)
MW-4A	NS (2.0)	NS (2.0)	<2.0	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.7)	NS (1.5)	NS (1.3)	NS (0.97)	NS (0.92)	0.86	NS (1.2)	NS (1.9)
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.3)
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	NS (0.87)	NS (0.69)	<0.50	NS (0.62)	NS (0.87)
PS-1D	24	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	24	9.1	11	NS (10)	10	6.2
PS-1M	16	NS (16)	NS (15)	NS (15)	NS (14)	NS (14)	NS (13)	NS (13)	NS (13)	NS (12)	NS (10)	NS (7.6)	NS (7.2)	NS (6.7)	NS (6.3)	NS (5.5)
PS-1S	<1.0	NS (1.5)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	2	NS (2.0)	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	<5.0 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)
PS-2M	22	NS (12)	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	<5.0 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)
PS-2S	<1.0	NS (1.5)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
PS-3	NS (1.5)	NS (1.7)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-5D	NS (1.5)	NS (1.7)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.2)	NS (1.5)	<2.0	<2.0	NS (0.87)	NS (0.69)	<0.50	NS (0.62)	NS (0.87)
PS-5S	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
PS-8D	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

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Non-Sampled Well

TCE Overburden Input Data

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PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
STM-3S	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	11	NS (11)	NS (11)	NS (11)	NS (10)	NS (10)	NS (10)	NS (10)	NS (10.0)	NS (9.7)	9.2	NS (3.3)	NS (2.3)	1.3	NS (1.3)	NS (1.4)
STM-8M	6	NS (4.0)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	1.6	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)
STM-8S	14	NS (8.0)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.50	NS (0.62)	NS (0.87)
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.50	NS (0.62)	NS (0.87)
W-01	<1.0	NS (1.5)	<2.0	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<2.0	<2.0	NA	NA	NA	NA	NA	NA	NA
W-02	<1.0	NS (1.5)	<2.0	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<2.0	<2.0	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 2011	Mar. 2012	Sep. 2012	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE03	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE04	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE101D	NA	NA	NA	NA	NA	NA	1,410	1.8	1.4	<1.0	21	<1.0	2.3	2.5
AE101S	NA	NA	NA	NA	NA	NA	<1.0	2.3	<1.0	1.9	1.1	<1.0	4.4	2.7
AE102D	NA	NA	NA	NA	NA	NA	50	32	20	1.1	<1.0	<1.0	7	4.4
AE102M	NA	NA	NA	NA	NA	NA	29	22	5.1	27	13	10	6.8	10
AE102S	NA	NA	NA	NA	NA	NA	9.7	35	NS (29)	NS (22)	NS (16)	NS (11)	NS (6.2)	<1.0
AE103D	NA	NA	NA	NA	NA	NA	61	52	5.7	78	49	28	42	47
AE103M	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE103S	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE104D	NA	NA	NA	NA	NA	NA	38	16	18	13	3.3	<1.0	<1.0	1.7
AE104M	NA	NA	NA	NA	NA	NA	16	17	NS (14)	NS (11)	NS (8.2)	NS (5.8)	NS (3.4)	<1.0
AE104S	NA	NA	NA	NA	NA	NA	10	5.8	3.8	1.2	<1.0	<1.0	<1.0	<1.0
AE105D	NA	NA	NA	NA	NA	NA	9.3	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE105M	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE105S	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE106D	NA	NA	NA	NA	NA	NA	16	13	11	6	4.3	3.6	2.3	2.7
AE106M	NA	NA	NA	NA	NA	NA	12	12	NS (14)	NS (17)	NS (19)	NS (22)	NS (24)	26
AE106S	NA	NA	NA	NA	NA	NA	14	8.9	6.2	3.5	12	12	4.9	24
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	1.5	1
AE1I	NA	NA	14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE1S	NA	NA	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE23S	NA	NA	NA	NA	15	245	NS (128)	13	11	10	NS (73)	NS (135)	NS (198)	260
AE24	NA	NA	NA	NA	263	956	NS (4,346)	7,680	7,660	164	733	5,500	680	350
AE25D	NA	NA	NA	NA	NA	<1.0	NS (2.2)	3.4	NS (3.0)	NS (2.5)	NS (2.1)	NS (1.7)	NS (1.4)	1
AE25S	NA	NA	NA	NA	NA	2.4	NS (6.2)	10	NS (8.9)	NS (7.2)	NS (6.1)	NS (5.0)	NS (3.9)	2.8
AE26D	NA	NA	NA	NA	NA	<1.0	NS (3.6)	6.1	1.2	1.8	NS (2.0)	NS (2.2)	NS (2.4)	2.6
AE26S	NA	NA	NA	NA	NA	28	NS (40)	52	57	42	31	29	24	22
AE2I	NA	NA	77	NS (80)	NS (84)	87	NS (81)	NS (76)	NS (65)	NS (48)	NS (37)	NS (27)	NS (15)	4.5
EMW-10D	9.4	17	15	NS (13)	NS (11)	NS (9.4)	NS (7.6)	5.9	9.5	71	76	99	110	130
EMW-10S	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
EMW-11D	4.4	19	5.1	NS (5.4)	NS (5.7)	NS (5.9)	NS (6.2)	6.5	7.5	1.3	1.9	<1.0	<1.0	1.8
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
GZA-102S	NS (1.3)	NS (1.2)	NS (1.1)	<1.0	NS (1.1)	NS (1.2)	NS (1.3)	NS (1.5)	NS (1.7)	NS (2.0)	2.3	2	1.3	<1.0
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 2011	Mar. 2012	Sep. 2012	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
GZA-105D	1,300	885	76	NS (89)	NS (102)	NS (116)	NS (129)	142	134	382	116	24	5.9	19
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (2.2)	NS (2.1)	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.5)	1.3	NA	NA	NA	NA
GZA-107M	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.1)	<1.0	NA	NA	NA	NA
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.2)	NS (1.1)	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<1.0	<1.0	<1.0	<7.0 (1.0)	<1.0	<1.0	<1.0
GZA-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	1.1	NS (1.1)	NS (1.0)	NS (1.0)	<1.0
GZA-14A	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-4A	2.2	NS (2.0)	NS (1.9)	NS (1.7)	NS (1.5)	NS (1.3)	NS (1.2)	1	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.1)	1.1
MW-5	NS (1.3)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	10
PS-1D	8.2	8.1	6	NS (5.3)	NS (4.5)	NS (3.8)	NS (3.0)	2.3	3.3	1.6	3.5	3.1	3	<1.0
PS-1M	NS (5.0)	NS (4.6)	NS (4.2)	NS (3.8)	NS (3.4)	NS (2.9)	NS (2.5)	2.1	3.4	1.9	NS (2.3)	NS (2.7)	NS (3.2)	3.6
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-2D	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-2M	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-2S	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-3	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-5D	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-5S	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-8D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-8S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0

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PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-3S	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	1.4	NS (1.4)	NS (1.5)	NS (1.5)	NS (1.6)	NS (1.6)	1.7	1.2	1.7	1.7	1.5	1.3	<1.0	<1.0
STM-8M	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8S	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
TRC-101	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0
TRC-102	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0
TRC-402	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
TRC-403	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10S	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11D	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-04	NA	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS
GZA-05	NA	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS
GZA-06	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS
GZA-09	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
GZA-10	NA	NA	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	<5.0	NS (5.0)	<5.0	<25 (8.4)	<25 (12)	15	NS (13)	NS (12)	NS (10)
GZA-103S	<5.0	NS (11)	<12	<100	230	<120	NS (97)	NS (74)	NS (51)
GZA-104D	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
GZA-104S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
GZA-105D	<5.0	NS (5.0)	NS (5.0)	<5.0	NS (58)	NS (112)	NS (165)	NS (219)	NS (273)

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995
GZA-105S	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<25 (1.0)	<25 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
GZA-106M	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
GZA-106S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
GZA-107D	<5.0 (2.1)	NS (2.1)	NS (2.1)	<5.0 (2.1)	<5.0 (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)
GZA-107M	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
GZA-108D	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-13	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-14	<5.0 (3.0)	NS (3.0)	NS (3.0)	<5.0 (3.0)	NS (3.0)	NS (3.0)	NS (3.0)	NS (3.0)	NS (3.0)
GZA-14A	<5.0 (3.0)	NS (3.0)	NS (3.0)	<5.0 (3.0)	NS (3.0)	NS (3.0)	NS (3.0)	NS (3.0)	NS (3.0)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4A	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1M	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-1S	NA	NA	NA	NA	12	7.8	NS (8.5)	NS (9.2)	NS (10.0)
PS-2D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2S	NA	NA	NA	NA	<5.0	5.3	NS (5.0)	NS (4.7)	NS (4.4)
PS-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-4	NA	NA	NA	NA	23	120	NS (118)	NS (115)	NS (113)
PS-5D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-5S	NA	NA	NA	NA	42	34	NS (30)	NS (26)	NS (22)
PS-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
PZ-1M	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-1S	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-2S	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5,000 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995
PZ-3	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
PZ-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
PZ-7D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
PZ-7S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<100 (1.0)	<2,500 (1.0)	NA	NA	NA	NA
PZ-8D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
PZ-8M	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
PZ-8S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
PZ-9D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-9S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS	NS	NS
STM-10S	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-3D	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-3S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
STM-5S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-8D	NA	NA	NA	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
STM-8M	NA	NA	NA	<5.0	NS (5.0)	<5.0	NS (6.0)	NS (7.0)	NS (8.0)
STM-8S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
WE-02	NA	<500 (1.0)	NS (1.0)	<1,250 (1.0)	<1,000 (1.0)	<500 (1.0)	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	<12 (1.0)	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA
WE-03	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
WE-04D	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
WE-04S	NA	NA	NA	<500 (1.0)	<500 (1.0)	<500 (1.0)	NA	NA	NA
WE-06	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	NA	NA	40	NS (27)	NS (15)	<2.0
EMW-10S	NA	NA	NA	NA	NA	<1.0	NS (1.3)	NS (1.7)	<2.0
EMW-11D	NA	NA	NA	NA	NA	63	NS (61)	NS (59)	NS (58)
EMW-11S	NA	NA	NA	NA	NA	<1.0	NS (1.3)	NS (1.7)	<2.0
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	NS (8.6)	7	17	NS (8.3)	4	8	7.5	NS (5.7)	4
GZA-103S	NS (28)	<5.0	40	NS (14)	<1.0	3	10	NS (5.5)	1
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (327)	380	79	NS (962)	1,400	2,000	NS (2,040)	NS (2,080)	NS (2,120)

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-13	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS
GZA-14	NS (3.0)	NS (3.0)	NS (3.0)	3	NS (2.8)	NS (2.5)	NS (2.3)	<2.0	NS (2.1)
GZA-14A	NS (3.0)	NS (3.0)	NS (3.0)	3	NS (2.8)	NS (2.5)	NS (2.3)	2	NS (2.0)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	<1.0	NA	NA	NA	NA	NA
MW-4	NA	NA	NA	NA	NA	NA	NA	<2.0	NS (4.5)
MW-4A	NA	NA	NA	NA	NA	NA	NA	<2.0	NS (1.8)
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NA	NA	NA	NA	NA	20	NS (19)	NS (18)	NS (17)
PS-1M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.5)	<2.0	NS (2.0)
PS-1S	NS (11)	NS (11)	NS (12)	NS (14)	NS (14)	15	NS (8.6)	<2.0	NS (3.1)
PS-2D	NA	NA	NA	NA	NA	6	NS (4.0)	<2.0	NS (1.8)
PS-2M	NA	NA	NA	NA	NA	<1.0	NS (1.5)	<2.0	NS (2.0)
PS-2S	NS (4.2)	NS (3.9)	NS (3.6)	3	NS (2.0)	<1.0	NS (1.5)	<2.0	NS (2.0)
PS-3	NA	NA	NA	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (1.8)
PS-4	NS (110)	NS (108)	NS (105)	NS (100)	NS (98)	NS (95)	NS (93)	NS (90)	NS (88)
PS-5D	NA	NA	NA	NA	NA	NA	NA	<2.0	NS (2.0)
PS-5S	NS (18)	NS (13)	NS (9.2)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.4)
PS-8D	NA	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NA	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	NA	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.0)
STM-3S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.0)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	2	NS (2.0)	<2.0	NS (2.6)
STM-8M	NS (9.0)	NS (10.0)	NS (11)	NS (13)	NS (14)	15	NS (8.6)	<2.0	NS (2.1)
STM-8S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.5)	2	NS (2.0)	<2.0	NS (2.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	NA	NA	10	NS (6.0)	<2.0	NS (5.2)
W-02	NA	NA	NA	NA	NA	8	NS (5.0)	<2.0	NS (5.6)
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<50 (1.0)	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	<1.0	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NS (4.6)	NS (7.1)	NS (9.7)	NS (12)	NS (15)	20	13	22	23
EMW-10S	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.6)	NS (1.4)	NS (1.4)
EMW-11D	NS (56)	NS (54)	NS (52)	NS (50)	NS (49)	45	10	2.3	13
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	NS (4.2)	NS (4.4)	NS (4.6)	NS (4.8)	NS (5.1)	NS (5.5)	NS (6.3)	NS (7.6)	NS (7.8)
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (2,160)	NS (2,200)	NS (2,240)	NS (2,280)	NS (2,320)	2,400	170	590	790

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-13	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-14	NS (2.1)	NS (2.2)	NS (2.3)	NS (2.3)	NS (2.4)	NS (2.5)	NS (2.8)	NS (3.2)	NS (3.2)
GZA-14A	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (7.0)	NS (9.5)	NS (12)	NS (14)	NS (17)	NS (22)	32	NS (56)	NS (60)
MW-4A	NS (1.5)	NS (1.3)	<1.0	NS (5.1)	NS (9.2)	NS (17)	NS (34)	NS (59)	NS (63)
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NS (16)	NS (16)	NS (15)	NS (14)	NS (13)	NS (11)	7.6	8.9	11
PS-1M	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.1)	NS (2.1)
PS-1S	NS (4.3)	NS (5.4)	6.6	NS (6.7)	NS (6.8)	NS (7.0)	NS (7.4)	NS (7.9)	NS (8.0)
PS-2D	NS (1.5)	NS (1.3)	<1.0	NS (1.1)	NS (1.2)	NS (1.5)	<2.0	NS (1.7)	NS (1.6)
PS-2M	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	<2.0	NS (1.7)	NS (1.6)
PS-2S	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)
PS-3	NS (1.5)	NS (1.3)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-4	NS (85)	NS (83)	NS (80)	NS (78)	NS (75)	NS (70)	NS (60)	NS (46)	NS (43)
PS-5D	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	<2.0	17	NS (5.0)	NS (3.0)
PS-5S	NS (2.7)	NS (3.1)	NS (3.4)	NS (3.8)	NS (4.2)	NS (4.9)	NS (6.3)	NS (8.5)	NS (8.9)
PS-8D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

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<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)
STM-3S	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (3.3)	NS (3.9)	NS (4.6)	NS (5.2)	NS (5.9)	NS (7.1)	9.7	NS (3.7)	NS (2.7)
STM-8M	NS (2.3)	NS (2.4)	NS (2.5)	NS (2.7)	NS (2.8)	NS (3.1)	3.6	NS (5.5)	NS (5.8)
STM-8S	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NS (8.4)	NS (12)	NS (15)	18	18	NA	NA	NA	NA
W-02	NS (9.2)	NS (13)	NS (16)	20	20	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012	Mar. 2013	Sep. 2013	Mar. 2014
AE03	NA	NA	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)
AE04	NA	NA	NA	NA	NA	4.4	1.2	NS (1.2)	NS (1.1)
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	<1.0	NS	NS	NS
AE1S	NA	NA	NA	NA	NA	<1.0	NS	NS	NS
AE23S	NA	NA	NA	NA	NA	NA	NA	58	7.6
AE24	NA	NA	NA	NA	NA	NA	NA	<10	<20 (17)
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	43
AE2I	NA	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	<5.0 (1.0)
EMW-10D	25	19	17	11	8.1	5.9	NS (6.1)	NS (6.4)	NS (6.7)
EMW-10S	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)
EMW-11D	NS (14)	14	16	10	36	12	NS (18)	NS (24)	NS (30)
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	NS (8.0)	NS (8.2)	NS (8.6)	NS (8.8)	NS (9.0)	NS (9.3)	9.5	NS (10.0)	NS (10)
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (543)	300	1,200	1,300	846	285	NS (297)	NS (308)	NS (320)

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012	Mar. 2013	Sep. 2013	Mar. 2014
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0
GZA-13	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-14	3.3	NS (3.2)	NS (3.0)	2.9	NS (2.8)	NS (2.7)	NS (2.6)	NS (2.5)	NS (2.4)
GZA-14A	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	64	NS (61)	NS (54)	51	NS (55)	NS (60)	NS (64)	NS (69)	NS (73)
MW-4A	67	NS (62)	NS (52)	47	NS (48)	NS (49)	NS (50)	NS (50)	NS (51)
MW-5	NA	NA	NA	NA	NA	NA	NA	2.3	NS (3.8)
MW-7	33	NS (28)	NS (17)	12	NS (12)	NS (11)	NS (11)	NS (11)	NS (10)
PS-1D	NS (11)	11	12	12	12	9.6	NS (9.9)	NS (10)	NS (11)
PS-1M	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)
PS-1S	NS (8.1)	NS (8.2)	NS (8.4)	NS (8.5)	NS (8.6)	NS (8.7)	NS (8.8)	NS (8.9)	NS (9.0)
PS-2D	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.1)
PS-2M	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.1)
PS-2S	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)
PS-3	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)
PS-4	NS (41)	NS (38)	NS (33)	NS (31)	NS (28)	NS (26)	NS (23)	NS (21)	NS (18)
PS-5D	1	NS (0.93)	NS (0.80)	0.73	NS (3.2)	NS (5.6)	NS (8.0)	NS (11)	NS (13)
PS-5S	NS (9.2)	NS (9.6)	NS (10)	NS (11)	NS (11)	NS (11)	NS (12)	NS (12)	NS (12)
PS-8D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012	Mar. 2013	Sep. 2013	Mar. 2014
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)
STM-3S	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	1.7	NS (1.7)	NS (1.8)	1.8	NS (3.0)	NS (4.2)	NS (5.4)	NS (6.6)	NS (7.8)
STM-8M	NS (6.1)	NS (6.4)	NS (7.0)	NS (7.3)	NS (7.6)	NS (8.0)	NS (8.3)	NS (8.6)	NS (8.9)
STM-8S	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	1	NS (0.98)	NS (0.94)	0.92	NS (0.93)	NS (0.94)	NS (0.95)	NS (0.97)	NS (0.98)
TRC-403	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE03	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE04	NS (1.1)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE101D	98	15	20	52	24	32	64	32
AE101S	9.1	12	19	41	18	19	39	19
AE102D	27	40	37	12	60	4.6	30	77
AE102M	37	30	51	50	23	45	39	49
AE102S	11	20	NS (17)	NS (14)	NS (12)	NS (9.3)	NS (7.1)	4.8
AE103D	14	14	3.9	5	5.7	3.2	3.2	3.5
AE103M	7.9	12	NS (10)	NS (7.6)	NS (5.9)	NS (4.3)	NS (2.6)	<1.0
AE103S	4.4	8.6	3	8.1	<1.0	<1.0	<1.0	<1.0
AE104D	3.4	1.1	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
AE104M	5.5	14	NS (12)	NS (9.1)	NS (7.0)	NS (5.0)	NS (3.0)	<1.0
AE104S	8.3	12	6.4	1.9	<1.0	<1.0	<1.0	<1.0
AE105D	19	47	50	32	41	29	18	16
AE105M	19	19	NS (17)	NS (14)	NS (11)	NS (9.4)	NS (7.3)	5.2
AE105S	17	21	18	11	10	13	8.7	7.8
AE106D	4.4	3.6	3.1	1.8	1.6	<1.0	<1.0	<1.0
AE106M	5.2	7.4	NS (7.7)	NS (8.1)	NS (8.4)	NS (8.6)	NS (8.9)	9.2
AE106S	7.8	8.5	14	13	6.2	8.5	25	11
AE109D	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112D	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE1I	NS	NS	NS	NS	NS	NS	NS	NS
AE1S	NS	NS	NS	NS	NS	NS	NS	NS
AE23S	NS (19)	31	30	22	NS (17)	NS (12)	NS (7.0)	2.1
AE24	NS (25)	32	<200 (28)	<5.0	<10 (4.3)	<50 (3.5)	<5.0 (2.7)	<2.0
AE25D	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE25S	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26D	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26S	NS (107)	169	117	111	63	57	34	17
AE2I	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
EMW-10D	NS (6.9)	7.2	9.8	19	15	16	21	19
EMW-10S	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
EMW-11D	NS (36)	42	75	22	13	4.6	5.3	5.2
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
GZA-102S	NS (11)	NS (11)	NS (12)	NS (14)	15	2.7	2.5	<1.0
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (331)	343	419	823	244	130	54	35

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Non-Sampled Well

cis-1,2-DCE Overburden Input Data

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GZA-105S	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (2.1)	NS (2.1)	NS (2.1)	2.1	NA	NA	NA	NA
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	<1.0	<1.0	<1.0	<7.0 (1.0)	<1.0	<1.0	<1.0
GZA-13	NS	NS	NS	NS	NS	NS	NS	NS
GZA-14	NS (2.3)	2.2	2.2	<1.0	NS (1.1)	NS (1.1)	NS (1.2)	1.3
GZA-14A	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
HOW-2	NA	NA	<1.0	NS	NS	NS	NS	NS
HOW-3	NA	NA	<1.0	NS	NS	NS	NS	NS
MW-1	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (77)	82	34	45	40	20	27	20
MW-4A	NS (52)	53	40	25	NS (21)	NS (17)	NS (12)	8.3
MW-5	NS (5.4)	7	6.4	14	13	11	10	12
MW-7	NS (10)	9.7	10	24	16	29	35	27
PS-1D	NS (11)	11	12	14	9	9	7.4	8.3
PS-1M	NS (2.1)	2.1	1.5	<1.0	NS (1.2)	NS (1.5)	NS (1.8)	<2.0
PS-1S	NS (9.1)	9.2	5.7	9.9	10	7.3	6.6	9.7
PS-2D	NS (1.1)	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	<1.0
PS-2M	NS (1.1)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-2S	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-3	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-4	NS (16)	13	4.8	4.5	NS (5.3)	NS (6.1)	NS (6.9)	7.7
PS-5D	NS (15)	18	12	21	17	13	13	14
PS-5S	NS (13)	13	7.4	6.9	NS (7.3)	NS (7.7)	NS (8.1)	8.5
PS-8D	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-8M	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-8S	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	1	<1.0	<1.0	1.2

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Non-Sampled Well

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	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-3S	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	9	15	18	16	15	10	4.9	3.9
STM-8M	9.2	5.7	7.9	17	NS (14)	NS (10.0)	NS (6.2)	2.5
STM-8S	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
TRC-101	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0
TRC-102	NA	1	6.7	1.7	1.2	<1.0	<1.0	<1.0
TRC-103	NA	NA	NA	NA	3.2	1.2	2.1	1.7
TRC-402	NS (0.99)	<1.0	<1.0	<1.0	NS	NS	NS	NS
TRC-403	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
W-01	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-04	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	NS	NS	NS	NS	NS	NS
GZA-05	NA	NA	NA	NA	<10 (1.0)	NS	NS	NS	NS	NS	NS
GZA-06	NA	NA	NA	<10 (1.0)	NS	NS	NS	NS	NS	NS	NS
GZA-09	<10 (2.0)	NS (2.0)	NS (2.0)	2	<10 (2.0)	<10 (2.0)	NA	NA	NA	NA	NA
GZA-10	NA	NA	NA	NA	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	<10 (4.5)	NS (4.5)	<10 (4.5)	<50 (4.5)	<50 (4.5)	4.5	4.4	7	<5.0	<5.0	<2.0
GZA-103S	17	NS (23)	<25	<200 (55)	84	26	NS (18)	9	<5.0	<25 (5.3)	<2.0
GZA-104D	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
GZA-104S	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-105D	NA	NA	NA	180	NS (163)	NS (147)	130	230	NS (194)	NS (157)	120
GZA-105S	<10 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	<50 (2.0)	<50 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
GZA-106D	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-106M	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-106S	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-107D	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107M	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-108D	<10 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	<10 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	<12 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-13	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-14	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-14A	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-2	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-4A	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-5	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-7	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-1D	NA	NA	<10 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-1M	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-1S	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2M	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2S	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-4	NA	NA	NA	NA	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.1)
PS-5D	NA	NA	<5.0 (1.0)	NS (1.2)	<10 (1.3)	<10 (1.5)	NS (1.5)	NS (1.6)	NS (1.6)	NS (1.7)	NS (1.7)
PS-5S	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
PZ-8D	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
PZ-9D	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-9S	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS	NS	NS	NS	NS
STM-10S	NA	NA	NA	<10 (1.0)	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-3D	NA	NA	NA	NA	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-3S	NA	NA	NA	NA	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-4S	NA	NA	NA	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-8D	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-8M	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-8S	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
WE-02	NA	<500 (1.0)	NS (1.0)	<1,250 (1.0)	<2,000 (1.0)	<1,000 (1.0)	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	<25 (1.0)	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA
WE-03	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
WE-04D	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	<1,000 (1.0)	<1,000 (1.0)	<1,000 (1.0)	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	1	NS (0.98)	NS (0.97)	<2.0 (0.95)	NS (0.94)	NS (0.92)	NS (0.91)	NS (0.89)	NS (0.88)
EMW-10S	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
EMW-11D	NA	NA	NA	12	NS (14)	NS (16)	NS (18)	NS (20)	NS (22)	NS (25)	NS (27)	NS (29)
EMW-11S	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
GZA-102S	5	NS (2.3)	<1.0	2	<20 (1.7)	NS (1.3)	1	NS (1.1)	NS (1.2)	NS (1.4)	NS (1.5)	NS (1.6)
GZA-103S	6	NS (2.7)	<1.0	<1.0	<2.0 (1.0)	NS (1.0)	<2.0 (1.0)	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	<1.0	NS (308)	460	340	NS (333)	NS (326)	NS (319)	NS (312)	NS (305)	NS (298)	NS (291)	NS (284)
GZA-105S	NS (2.0)	NS (2.0)	NS (2.0)	2	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.8)	NS (1.8)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-13	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
GZA-14A	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NS (1.0)	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
MW-4A	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
MW-5	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
MW-7	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.1)	NS (1.1)
PS-1D	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (0.98)	NS (0.96)
PS-1M	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.1)	NS (1.1)	1.1	NS (1.1)	NS (1.1)
PS-2D	NS (1.0)	<2.0 (1.0)	NS (1.0)	1	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
PS-2M	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
PS-2S	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-3	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
PS-4	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.5)
PS-5D	NS (1.7)	NS (1.8)	NS (1.9)	NS (1.9)	NS (2.0)	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
PS-5S	NS (1.0)	<1.0	NS (1.1)	NS (1.1)	NS (1.2)	<2.0 (1.2)	NS (1.3)	NS (1.3)	NS (1.4)	NS (1.5)	NS (1.5)	NS (1.6)
PS-8D	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-3S	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
STM-8M	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
STM-8S	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	<1.0	NS (1.2)	NS (1.4)	NS (1.6)	NS (1.8)	<2.0	<2.0	8	8
W-02	NA	NA	NA	<1.0	NS (1.2)	NS (1.4)	NS (1.6)	NS (1.8)	<2.0	<2.0	4	4
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NS (1.0)	NS (1.0)	<100 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	<1.0	NS (1.0)	<2.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.9
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
EMW-10D	<2.0 (0.85)	<2.0 (0.78)	0.69	0.63	0.55	0.67	0.25	0.4	<1.0	<1.0
EMW-10S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
EMW-11D	33	6.7	1.4	10	NS (11)	12	8.6	6.2	28	7.3
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	NS (1.9)	NS (2.4)	NS (3.1)	NS (3.2)	NS (3.3)	NS (3.5)	NS (3.7)	NS (3.8)	NS (4.0)	NS (4.1)
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	270	65	110	240	NS (225)	210	140	150	128	110
GZA-105S	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.2)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
GZA-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
GZA-14A	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (1.0)	1	NS (1.5)	NS (1.5)	1.6	NS (1.6)	NS (1.6)	1.6	NS (1.7)	NS (1.7)
MW-4A	NS (1.1)	NS (1.2)	NS (1.3)	NS (1.3)	1.3	NS (1.1)	NS (0.81)	0.64	NS (0.69)	NS (0.74)
MW-5	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-7	NS (1.3)	<2.0 (1.6)	NS (2.1)	NS (2.1)	2.2	NS (1.8)	NS (1.1)	0.71	NS (0.75)	NS (0.79)
PS-1D	NS (0.92)	<2.0 (0.85)	0.73	0.79	NS (1.0)	1.3	0.91	0.48	1.1	<1.0
PS-1M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-1S	NS (1.1)	NS (1.1)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2M	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-3	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-4	NS (1.5)	NS (1.6)	NS (1.8)	NS (1.8)	NS (1.8)	NS (1.8)	NS (1.9)	NS (1.9)	NS (1.9)	NS (2.0)
PS-5D	<2.0	5.3	NS (2.1)	NS (1.5)	<1.0	NS (0.83)	NS (0.49)	0.32	NS (0.70)	NS (1.1)
PS-5S	NS (1.7)	NS (1.9)	NS (2.3)	NS (2.3)	NS (2.4)	NS (2.4)	NS (2.5)	NS (2.6)	NS (2.7)	NS (2.7)
PS-8D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

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<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-3S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
STM-8M	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-8S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
TRC-403	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE03	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE04	1	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	1.6	<1.0	<1.0	<1.0	<1.0	<1.0
AE101D	NA	NA	NA	<25 (1.0)	<1.0	<1.0	<1.0	1.7	1.6	2.3	1.8
AE101S	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	1.4
AE102D	NA	NA	NA	10	16	19	4.7	<1.0	2.7	11	33
AE102M	NA	NA	NA	14	<1.0	9.6	22	11	15	13	13
AE102S	NA	NA	NA	<1.0	3.4	NS (3.2)	NS (3.0)	NS (2.8)	NS (2.6)	NS (2.5)	2.3
AE103D	NA	NA	NA	<5.0 (2.4)	2.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE103M	NA	NA	NA	9.4	13	NS (11)	NS (8.1)	NS (6.4)	NS (4.6)	NS (2.8)	<1.0
AE103S	NA	NA	NA	4.8	8.5	2.9	7.4	<1.0	<1.0	<1.0	<1.0
AE104D	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE104M	NA	NA	NA	<1.0	2.3	NS (2.1)	NS (1.8)	NS (1.6)	NS (1.4)	NS (1.2)	<1.0
AE104S	NA	NA	NA	1.2	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE105D	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	4.6
AE105M	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE105S	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE106D	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE106M	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE106S	NA	NA	NA	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	3.6	<1.0
AE109D	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112D	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE1I	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE1S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE23S	NA	<1.0	<1.0	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE24	NA	<10 (1.0)	<20 (1.0)	NS (1.0)	<1.0	<200 (1.0)	<5.0 (1.0)	<10 (1.0)	<50 (1.0)	<2.5 (1.0)	<2.0 (1.0)
AE25D	NA	NA	<1.0	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE25S	NA	NA	<1.0	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26D	NA	NA	<1.0	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26S	NA	NA	<1.0	NS (1.0)	<1.0	<1.0	<5.0 (1.0)	<1.0	<1.0	<1.0	<1.0
AE2I	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
EMW-10D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	1.8	1.8	2.1	5.7	2.9
EMW-10S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
EMW-11D	NS (11)	NS (14)	NS (18)	NS (21)	25	39	11	3.9	1.2	2.3	1.7
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
GZA-102S	4.2	NS (4.7)	NS (5.2)	NS (5.7)	NS (6.2)	NS (7.1)	NS (8.6)	9.6	1.3	1.2	<1.0
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (97)	NS (85)	NS (72)	NS (59)	47	80	84	47	23	16	9.4
GZA-105S	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<1.0	<1.0	<1.0	<7.0 (1.0)	<1.0	<1.0	<1.0
GZA-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
GZA-14A	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
HOW-2	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
HOW-3	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (1.8)	NS (1.8)	NS (1.9)	NS (1.9)	2	1.7	1.5	1.6	3.8	1.6	<1.0
MW-4A	NS (0.79)	NS (0.85)	NS (0.90)	NS (0.95)	<1.0	2	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
MW-5	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	NS (0.83)	NS (0.88)	NS (0.92)	NS (0.96)	<1.0	1.5	1.5	1.4	2	2.8	2.5
PS-1D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0
PS-1M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	1	1.5	2.1	1.3	1.7	1.3
PS-2D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-2M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-3	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-4	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.1)	2.1	<1.0	1.3	NS (1.4)	NS (1.5)	NS (1.7)	1.8
PS-5D	NS (1.5)	NS (1.9)	NS (2.2)	NS (2.6)	3	3.8	3.2	4.3	4.6	2.3	2.5
PS-5S	NS (2.8)	NS (2.8)	NS (2.9)	NS (2.9)	3	<1.0	1.3	NS (1.7)	NS (2.1)	NS (2.5)	2.9
PS-8D	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-3S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-8M	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
TRC-101	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0
TRC-102	NA	NA	NA	NA	<1.0	5.2	1.1	<1.0	<1.0	<1.0	<1.0
TRC-103	NA	NA	NA	NA	NA	NA	NA	2.4	<1.0	1	1.6
TRC-402	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
TRC-403	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

1,4-Dioxane Overburden Input Data

	Mar. 2012	Sep. 2012	Sep. 2013	Mar. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE03	NA	<0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE04	NA	<0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE101D	NA	NA	NA	NA	<0.20	<0.20	<0.20	0.32	<0.20	0.31	<0.30
AE101S	NA	NA	NA	NA	NA	<0.20	<0.20	<0.20	<0.20	0.23	0.38
AE102D	NA	NA	NA	NA	6.9	4.7	6.2	6.7	5.4	4.7	5.3
AE102M	NA	NA	NA	NA	NA	<0.20	0.73	0.76	0.78	0.62	0.73
AE103D	NA	NA	NA	NA	1	<0.20	0.84	0.82	0.82	0.78	0.68
AE103S	NA	NA	NA	NA	NA	0.36	0.7	NS	NS	NS	NS
AE104D	NA	NA	NA	NA	0.3	<0.20	0.31	0.37	0.42	0.34	0.34
AE104S	NA	NA	NA	NA	NA	<0.20	0.35	NS	NS	NS	NS
AE105D	NA	NA	NA	NA	NA	1.4	1.3	2	1.4	0.82	0.67
AE105S	NA	NA	NA	NA	NA	1.1	0.44	NS	NS	NS	NS
AE106D	NA	NA	NA	NA	0.4	NS	NS	NS	NS	NS	NS
AE106M	NA	NA	NA	NA	0.5	NS	NS	NS	NS	NS	NS
AE106S	NA	NA	NA	NA	0.5	NS	NS	NS	NS	NS	NS
AE109D	NA	NA	NA	NA	NA	<0.20	0.31	0.22	0.37	0.42	0.55
AE112D	NA	NA	NA	NA	NA	<0.20	NS	NS	NS	NS	NS
AE1I	NA	<0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE1S	NA	<0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE23S	NA	NA	0.57	NS	NS	NS	NS	NS	NS	NS	NS
AE24	NA	NA	0.39	NS (0.37)	NS (0.32)	NS (0.27)	<0.20	0.29	1.4	<0.20	<0.20
AE25D	NA	NA	NA	<0.20	NS	NS	NS	NS	NS	NS	NS
AE25S	NA	NA	NA	<0.20	<0.20	NS	NS	NS	NS	NS	NS
AE26D	NA	NA	NA	<0.20	NS	NS	NS	NS	NS	NS	NS
AE26S	NA	NA	NA	<0.20	NS	NS	NS	NS	NS	NS	NS
AE2I	NA	<0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-10D	<0.20	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11D	<0.20	0.51	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-105D	2.2	1.6	NS (1.5)	NS (1.5)	NS (1.4)	1.3	6.1	2.3	1	0.68	0.7
GZA-12	NA	<0.20	NS (0.20)	NS (0.20)	<0.20	NS (0.20)	NS (0.20)	<0.20	<0.20	<0.20	<0.20
HOW-2	NA	NA	NA	NA	NA	<0.20	NS	NS	NS	NS	NS
HOW-3	NA	NA	NA	NA	NA	<0.20	NS	NS	NS	NS	NS
MW-4	NA	NA	NA	NA	1.3	0.68	1.2	1.4	0.86	0.84	0.8
MW-4A	NA	NA	NA	NA	1.1	0.69	0.89	NS	NS	NS	NS
PS-1D	<0.20	0.67	NS (0.72)	NS (0.75)	0.8	NS	NS	NS	NS	NS	NS
STM-8D	NA	NA	NA	NA	NA	0.35	0.78	0.76	0.44	0.45	0.41
STM-8M	NA	NA	NA	NA	NA	<0.20	0.65	NS	NS	NS	NS
STM-8S	NA	NA	NA	NA	NA	<0.20	<0.20	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Geochemical Overburden Input Data

	Jan. 1990	Jan. 1990	Jan. 1990	Jan. 1990
AE03	2.3	<0.24	3,100	-87
AE04	NS	NS	NS	11
AE101D	NS	NS	NS	-11
AE101S	NS	NS	NS	-10
AE102D	NS	NS	NS	99
AE102M	<0.17	<0.24	<2.0	213
AE102S	NS	NS	NS	176
AE103D	NS	NS	NS	132
AE103M	NS	NS	NS	-110
AE103S	NS	NS	NS	-121
AE104D	NS	NS	NS	158
AE104M	NS	NS	NS	89
AE104S	NS	NS	NS	26
AE105D	NS	NS	NS	-115
AE105M	NS	NS	NS	39
AE105S	NS	NS	NS	-11
AE106D	<0.17	<0.24	39	173
AE106M	NS	NS	NS	151
AE106S	NS	NS	NS	167
AE109D	NS	NS	NS	83
AE112D	NS	NS	NS	199
AE23S	NS	NS	NS	241
AE24	NS	NS	NS	189
AE25D	NS	NS	NS	161
AE25S	NS	NS	NS	159
AE26D	NS	NS	NS	133
AE26S	NS	NS	NS	149
AE2I	NS	NS	NS	222
EMW-10D	NS	NS	NS	229
EMW-11D	NS	NS	NS	-60
GZA-06	NS	NS	NS	19
GZA-10	NS	NS	NS	142
GZA-102S	NS	NS	NS	38
GZA-105D	1	<0.24	370	70
GZA-105S	NS	NS	NS	-109
GZA-12	NS	NS	NS	212
GZA-14	NS	NS	NS	27
GZA-14A	NS	NS	NS	45
MW-4	NS	NS	NS	-73
MW-4A	NS	NS	NS	-71
MW-5	NS	NS	NS	-72

Notes:

All concentrations in µg/l

<5.00: Analyte not detected. Detection limit used.

Geochemical Overburden Input Data

	Jan. 1990	Jan. 1990	Jan. 1990	Jan. 1990
MW-7	NS	NS	NS	20
PS-1D	NS	NS	NS	-118
PS-1M	NS	NS	NS	-60
PS-1S	NS	NS	NS	-121
PS-2D	NS	NS	NS	-50
PS-2M	NS	NS	NS	-51
PS-2S	NS	NS	NS	-78
PS-3	NS	NS	NS	-35
PS-4	NS	NS	NS	-18
PS-5D	NS	NS	NS	-64
PS-5S	NS	NS	NS	-44
PS-8D	NS	NS	NS	-48
PS-8M	NS	NS	NS	-29
PS-8S	NS	NS	NS	58
PZ-2S	NS	NS	NS	-32
STM-3D	NS	NS	NS	-102
STM-3S	NS	NS	NS	97
STM-8D	<0.17	<0.24	6.6	32
STM-8M	NS	NS	NS	-24
STM-8S	NS	NS	NS	39
TRC-101	<0.17	<0.24	<2.0	-82
TRC-102	NS	NS	NS	-73
TRC-103	NS	NS	NS	-91

Notes:

All concentrations in µg/l

<5.00: Analyte not detected. Detection limit used.

PCE Upper Bedrock Input Data

	Sep. 1989	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Mar. 1997
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-07	NA	NA	<150 (1.0)	<25 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	1,600	21	150	120	360	280	790	630	880	970	900	820
GZA-102R1	380	150	170	190	230	44	45	52	88	570	31	NS (507)
GZA-102R2	NA	NA	580	NS (689)	NS (801)	910	1,100	NS (1,199)	NS (1,300)	1,400	990	NS (1,126)
GZA-103R1	<5.0	140	58,000	110	350	150	250	380	320	130	170	44
GZA-103R2	<5.0	NS (46)	<140 (54)	NS (63)	NS (71)	79	230	NS (339)	NS (450)	560	360	NS (268)
GZA-104R1	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	480	1,900	7,200	1,000	4,200	640	980	2,900	4,400	3,800	2,700	2,800
GZA-106R	NA	NA	52	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	<5.0	NS (5.0)	NS (5.0)	<25 (5.0)	<5.0	5	<5.0	NS (5.0)	<5.0	14	17	NS (16)
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1R	NA	<5.0 (1.0)	<6.4 (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	<5.0 (3.8)	3.8	<5.0 (3.8)	<5,000 (3.8)	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	260	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	<100 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NA	NA	7.9	5.8	5.2	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-10R1	NA	NA	920	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-5R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-8R	NA	NA	<5.0	NS (5.0)	<5.0	NS (6.6)	NS (8.2)	NS (9.9)	NS (11)	NS (13)	NS (15)	NS (16)
STM-9R	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	<680 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	<44 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NA	NA	270	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

PCE Upper Bedrock Input Data

	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	390	150	160
EMW-10R	NA	NA	2	NS (38)	NS (74)	110	NS (78)	NS (47)	15	NS (8.5)	<2.0	NS (2.0)	<2.0
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	NS (523)	230	NS (291)	NS (352)	NS (413)	NS (474)	NS (535)	NS (595)	NS (657)	NS (778)	900	NS (855)	840
GZA-102R1	990	110	33	36	NS (33)	31	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS (1,264)	1,400	700	NS (692)	NS (684)	NS (676)	NS (668)	NS (660)	NS (652)	NS (636)	620	NS	NS
GZA-103R1	110	69	56	<50	50	48	290	NS (219)	NS (148)	<5.0	<2.0	NS (2.0)	<2.0
GZA-103R2	NS (175)	83	280	<50	NS (45)	NS (39)	NS (34)	NS (29)	NS (23)	NS (13)	<2.0	NS (2.0)	<2.0
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	1,700	1,200	1,600	81	4	NS (2,687)	5,400	6,100	NS (6,113)	NS (6,138)	NS (6,163)	6,200	NS (6,144)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NS (15)	14	NS (9.5)	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	510	340
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	190	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	18	NS (10)	2	NS (5.0)	8	NS (7.5)	NS (6.9)	NS (6.4)	5.9	NS (5.8)	NS (5.7)	NS (5.6)	5.5
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	13	NS (13)	NS (12)	NS (11)	NS (9.6)	NS (9.1)
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

PCE Upper Bedrock Input Data

	Sep. 2008	Sep. 2009	Sep. 2011	Sep. 2012	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-1	NA	NA	NA	NA	NA	NA	32	7.2	<1.0	<1.0	635	3.6	<1.0	5.5
AE100R-2	NA	NA	NA	NA	NA	NA	84	162	72	114	NS (410)	NS (707)	NS (1,004)	1,300
AE100R-3	NA	NA	NA	NA	NA	NA	2,080	1,680	2,270	3,440	1,390	5,700	4,000	6,100
AE101R-1	NA	NA	NA	NA	NA	NA	60	22	18	126	166	170	160	130
AE101R-2	NA	NA	NA	NA	NA	NA	482	53	6.4	5.1	4.7	19	8.2	33
AE102RR-1	NA	NA	NA	NA	NA	NA	31	127	NS (108)	NS (80)	NS (61)	NS (42)	NS (23)	4.4
AE103R-1	NA	NA	NA	NA	NA	NA	1,020	343	1,620	1,480	1,130	870	980	1,200
AE104R-1	NA	NA	NA	NA	NA	NA	186	367	469	477	315	130	220	410
AE106R-1	NA	NA	NA	NA	NA	NA	3.5	3.3	12	9.4	10	2.9	2.3	1.8
AE108R-1	NA	NA	NA	NA	NA	NA	2.8	1.8	1.4	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	3.2	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
AE23R	NA	NA	NA	NA	40,800	9,200	NS (9,019)	8,840	76,300	67,300	48,400	100,000	54,000	56,000
AE25R	NA	NA	NA	NA	NA	85	NS (49)	13	NS (11)	NS (8.7)	NS (7.0)	NS (5.2)	NS (3.4)	1.6
AE26R	NA	NA	NA	NA	NA	3,880	NS (2,721)	1,580	NS	NS	NS	NS	NS	NS
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	480	179	316	270	870	340
AE27R	NA	NA	NA	NA	NA	236	NS (130)	26	1,130	71	NS (54)	NS (37)	NS (19)	<2.0
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	6,170	3,600	5,500	3,500	4,300	3,400
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	3.6	<1.0
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE2R	NA	NA	NA	NA	NA	7.7	NS (7.2)	6.6	6.5	9.8	NS (8.4)	NS (7.1)	NS (5.7)	4.4
BRW-1R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-10R	NS (0.87)	<0.50	<1.0	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.2)	1.2	2	25	12	8	34	3.2
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	NS (870)	880	490	461	NS (340)	280	NS (289)	298	441	356	277	300	240	220
GZA-102R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-103R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	NS (5,811)	NS (5,701)	NS (5,479)	NS (5,368)	NS (5,257)	NS (5,202)	NS (5,146)	NS (5,091)	4,980	5,630	5,350	5,100	5,300	5,600
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	NS (5.9)	6	3.7	NS (3.1)	NS (2.6)	NS (2.3)	2	2.9	3.1	3.3	<1.0	<1.0	<1.0	2
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NS (6.6)	NS (5.7)	NS (4.0)	NS (3.1)	NS (2.3)	NS (1.9)	NS (1.4)	<1.0	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	<1.0	<1.0	<1.0
TRC-401R	180	NS (820)	2,100	3,880	NS (3,007)	NS (2,573)	NS (2,133)	1,700	2,240	216	1,070	2,600	1,800	1,300
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Upper Bedrock Input Data

	Sep. 1989	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Mar. 1997
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-07	NA	20	<40 (20)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	3,300	56	400	210	540	570	910	670	720	600	710	500
GZA-102R1	510	220	220	170	260	72	100	70	140	1,600	50	NS (918)
GZA-102R2	NA	NA	1,800	NS (1,966)	NS (2,134)	2,300	2,700	NS (2,468)	NS (2,233)	2,000	1,600	NS (1,965)
GZA-103R1	<5.0	780	5,000	280	590	<250	630	760	420	260	370	140
GZA-103R2	<5.0	NS (272)	<540 (326)	NS (301)	NS (275)	<250	540	NS (629)	NS (720)	810	560	NS (411)
GZA-104R1	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	6,200	3,100	9,600	1,500	5,800	1,400	2,000	4,800	7,400	5,200	6,700	5,000
GZA-106R	NA	NA	90	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	<5.0	12	<5.0	<25 (5.7)	<5.0	<5.0	<5.0	NS (5.0)	<5.0	10	14	NS (15)
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1R	NA	NA	<120 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	<5.0 (4.8)	4.8	<5.0 (4.8)	<5,000 (4.8)	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	330	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	<100 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NA	NA	12	8	8.7	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-10R1	NA	NA	<50 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-5R	NA	NA	11	11	<5.0	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-8R	NA	NA	17	NS (15)	13	NS (20)	NS (27)	NS (34)	NS (40)	NS (47)	NS (54)	NS (61)
STM-9R	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	<960 (1.0)	<1,700 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	<36 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NA	NA	290	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Upper Bedrock Input Data

	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005	Sep. 2008
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,100	370	460	NS
EMW-10R	NA	NA	4	NS (39)	NS (75)	110	NS (87)	NS (65)	42	NS (28)	14	NS (6.4)	3.9	NS (1.6)
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	NS (364)	230	NS (233)	NS (235)	NS (238)	NS (241)	NS (244)	NS (246)	NS (249)	NS (255)	260	NS (170)	140	NS (170)
GZA-102R1	1,800	100	42	33	NS (33)	33	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS (2,335)	2,700	1,100	NS (1,089)	NS (1,078)	NS (1,067)	NS (1,056)	NS (1,045)	NS (1,034)	NS (1,012)	990	NS	NS	NS
GZA-103R1	150	93	75	62	83	53	140	NS (107)	NS (73)	<5.0	<2.0	NS (2.0)	<2.0	NA
GZA-103R2	NS (259)	110	220	NS (198)	NS (176)	NS (155)	NS (133)	NS (111)	NS (89)	NS (46)	<2.0	NS (1.3)	1	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	4,600	3,200	2,200	580	18	NS (3,142)	6,300	8,500	NS (8,815)	NS (9,439)	NS (10,064)	11,000	NS (10,822)	NS (9,764)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NS (16)	17	NS (11)	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,400	1,000	NS
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,300	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	68	NS (43)	18	NS (32)	46	NS (43)	NS (40)	NS (37)	34	NS (33)	NS (31)	NS (29)	28	NS (26)
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	130	NS (132)	NS (135)	NS (138)	NS (143)	NS (145)	NS (155)
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,100
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Upper Bedrock Input Data

	Sep. 2009	Sep. 2011	Sep. 2012	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-1	NA	NA	NA	NA	NA	63	15	<1.0	<1.0	971	13	2.5	44
AE100R-2	NA	NA	NA	NA	NA	117	356	81	182	NS (511)	NS (841)	NS (1,171)	1,500
AE100R-3	NA	NA	NA	NA	NA	3,350	2,890	3,410	4,780	2,200	7,300	4,900	7,300
AE101R-1	NA	NA	NA	NA	NA	78	43	18	65	55	50	44	41
AE101R-2	NA	NA	NA	NA	NA	758	230	28	26	35	44	46	91
AE102RR-1	NA	NA	NA	NA	NA	78	385	NS (357)	NS (314)	NS (285)	NS (257)	NS (228)	200
AE103R-1	NA	NA	NA	NA	NA	3,240	8,380	3,880	2,080	1,590	1,400	1,200	1,800
AE104R-1	NA	NA	NA	NA	NA	421	1,080	1,320	1,500	1,280	540	700	1,200
AE106R-1	NA	NA	NA	NA	NA	13	7.2	12	9	14	4.6	4.9	5.3
AE108R-1	NA	NA	NA	NA	NA	6.2	5.4	7.6	5.1	6.6	4.9	4.4	<1.0
AE109R-1	NA	NA	NA	NA	NA	NA	NA	6.1	3.7	1.8	1.5	1.2	1.1
AE110R-1	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-1	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-1	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE23R	NA	NA	NA	131,000	39,300	NS (68,438)	97,100	156,000	179,000	163,000	240,000	130,000	150,000
AE25R	NA	NA	NA	NA	265	NS (140)	17	NS (16)	NS (15)	NS (15)	NS (14)	NS (14)	13
AE26R	NA	NA	NA	NA	4,670	NS (4,242)	3,820	NS	NS	NS	NS	NS	NS
AE26R-1	NA	NA	NA	NA	NA	NA	NA	602	478	719	500	1,400	600
AE27R	NA	NA	NA	NA	93	NS (66)	40	1,500	101	NS (76)	NS (52)	NS (27)	2.8
AE28R-1	NA	NA	NA	NA	NA	NA	NA	7,390	9,930	13,900	10,000	11,000	6,600
AE29R-1	NA	NA	NA	NA	NA	NA	NA	4.6	2.8	<1.0	2.4	4	1.4
AE29R-2	NA	NA	NA	NA	NA	NA	NA	5.7	3.6	NS (3.1)	NS (2.6)	NS (2.0)	1.5
AE2R	NA	NA	NA	NA	<1.0	NS (1.1)	1.1	<1.0	1.3	NS (1.2)	NS (1.1)	NS (1.1)	<1.0
BRW-1R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-10R	0.83	1.4	NS (2.3)	NS (3.2)	NS (3.7)	NS (4.1)	4.6	5.9	63	35	23	81	11
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	180	160	108	NS (132)	144	NS (118)	93	186	176	134	120	110	110
GZA-102R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-103R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	NS (9,411)	NS (8,707)	NS (8,353)	NS (8,001)	NS (7,826)	NS (7,648)	NS (7,473)	7,120	8,270	7,570	6,700	8,200	7,500
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	26	14	NS (12)	NS (9.1)	NS (7.8)	6.6	20	14	14	6.7	<1.0	<1.0	8.9
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NS (159)	NS (165)	NS (169)	NS (172)	NS (174)	NS (175)	177	63	60	48	50	40	44
TRC-401R	NS (3,900)	9,500	7,700	NS (6,153)	NS (5,387)	NS (4,607)	3,840	4,150	355	1,960	5,200	3,600	2,100
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Upper Bedrock Input Data

	Sep. 1989	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Mar. 1997	Sep. 1997	Mar. 1998
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-07	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	<5.0	<5.0	<12 (5.7)	<5.0	<25 (5.9)	NS (5.7)	NS (5.5)	NS (5.3)	NS (5.2)	<5.0	11	4	NS (3.0)	2
GZA-102R1	<5.0	<5.0	<5.0	200	60	NS (51)	NS (42)	NS (32)	NS (23)	14	63	NS (156)	250	15
GZA-102R2	<5.0	<25	<5.0	NS (30)	NS (55)	NS (80)	NS (105)	NS (130)	NS (155)	180	320	NS (277)	NS (233)	190
GZA-103R1	<5.0	<25	<5,000 (617)	1,200	2,500	NS (2,242)	NS (1,980)	NS (1,722)	NS (1,459)	1,200	1,500	480	1,600	1,200
GZA-103R2	<5.0	<25	<30	NS (182)	NS (336)	NS (487)	NS (642)	NS (793)	NS (948)	1,100	1,100	NS (1,100)	NS (1,100)	1,100
GZA-104R1	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	<5.0	<100 (80)	<120 (95)	110	<250 (110)	NS (109)	NS (109)	NS (109)	NS (108)	108	320	220	530	1,400
GZA-106R	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	<5.0	<5.0	<5.0	NS (26)	NS (46)	NS (67)	NS (88)	NS (108)	NS (129)	150	16	NS (42)	NS (68)	94
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1R	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	<5,000 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	<5.0 (1.0)	NS (1.0)	<25 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	<100 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-10R1	NA	NA	<50 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.2)
STM-5R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	NA	NA	<5.0	NS (5.0)	<5.0	NS (5.1)	NS (5.2)	NS (5.4)	NS (5.5)	NS (5.6)	NS (5.8)	NS (5.9)	6	NS (5.5)
STM-9R	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	<25 (1.0)	<1,700 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
WE-105R2	NA	NA	<5.0 (1.0)	<500 (1.0)	<250 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Upper Bedrock Input Data

	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	83	43	40	NS	NS
EMW-10R	2	NS (15)	NS (29)	42	NS (34)	NS (27)	19	NS (15)	10	NS (17)	20	NS (26)	28
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	NS (2.0)	<13 (2.0)	NS (2.0)	<20 (2.0)	NS (2.0)	NS (2.0)	<2.0	<20 (2.0)	<20 (1.9)	NS (1.9)	<10 (1.9)	NS (1.7)	1.7
GZA-102R1	20	8.4	NS (8.7)	9	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	210	NS (197)	NS (185)	NS (172)	NS (159)	NS (147)	NS (134)	NS (108)	83	NS	NS	NS	NS
GZA-103R1	690	1,300	470	340	240	NS (201)	NS (161)	NS (82)	3.7	NS (4.1)	4.2	NA	NA
GZA-103R2	1,700	NS (1,154)	NS (599)	<50	NS (44)	NS (39)	NS (33)	NS (22)	11	NS (13)	14	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	130	1,700	13	NS (76)	140	180	NS (269)	NS (447)	NS (624)	890	NS (859)	NS (675)	NS (614)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	29	21	NS	NS
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	180	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NS (1.5)	NS (1.7)	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	5	NS (3.5)	<2.0	NS (2.2)	NS (2.5)	NS (2.7)	2.9	NS (3.9)	NS (4.9)	NS (6.5)	7	NS (7.2)	7.2
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	47	NS (53)	NS (65)	NS (78)	NS (96)	NS (102)	NS (139)	NS (151)
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100 (98)	98	NS (115)
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Upper Bedrock Input Data

	Sep. 2011	Sep. 2012	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-1	NA	NA	NA	NA	8	25	7.5	5.3	36	16	6.5	33
AE100R-2	NA	NA	NA	NA	45	60	54	49	NS (55)	NS (61)	NS (67)	73
AE100R-3	NA	NA	NA	NA	<50 (29)	29	<50 (36)	<50 (47)	<100 (54)	61	52	61
AE101R-1	NA	NA	NA	NA	10	14	13	39	33	30	29	33
AE101R-2	NA	NA	NA	NA	38	420	116	63	80	34	71	74
AE102RR-1	NA	NA	NA	NA	17	97	NS (105)	NS (118)	NS (126)	NS (134)	NS (142)	150
AE103R-1	NA	NA	NA	NA	146	1,970	1,830	630	336	360	340	320
AE104R-1	NA	NA	NA	NA	16	46	79	122	166	240	220	170
AE106R-1	NA	NA	NA	NA	7.1	3.8	5.5	5	18	28	14	18
AE108R-1	NA	NA	NA	NA	2.6	3.5	15	22	38	24	23	<1.0
AE109R-1	NA	NA	NA	NA	NA	NA	2.9	3.7	2.8	3.1	2.6	2.4
AE110R-1	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-1	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-1	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE23R	NA	NA	<2,000 (1.0)	<500 (1.0)	NS (1.0)	<1,000 (1.0)	<2,000 (1.0)	<500 (1.0)	<5,000 (1.0)	<500 (1.0)	<500 (1.0)	<500 (1.0)
AE25R	NA	NA	NA	20	NS (16)	13	NS (14)	NS (15)	NS (15)	NS (16)	NS (16)	17
AE26R	NA	NA	NA	<100 (85)	NS (85)	85	NS	NS	NS	NS	NS	NS
AE26R-1	NA	NA	NA	NA	NA	NA	29	152	248	260	230	78
AE27R	NA	NA	NA	<5.0 (3.0)	NS (3.0)	3	<10	393	NS (420)	NS (446)	NS (473)	500
AE28R-1	NA	NA	NA	NA	NA	NA	<50	738	1,280	1,900	2,200	2,100
AE29R-1	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE29R-2	NA	NA	NA	NA	NA	NA	1.5	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE2R	NA	NA	NA	<1.0	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
BRW-1R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-10R	32	NS (32)	NS (32)	NS (32)	NS (32)	32	37	56	42	29	56	6.7
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	1.2	<10 (1.6)	NS (1.9)	<10 (2.1)	NS (2.3)	2.5	4.5	<10 (4.8)	<5.0	<5.0	5.4	4.8
GZA-102R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-103R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	NS (492)	NS (430)	NS (369)	NS (339)	NS (308)	NS (277)	216	222	264	210	190	150
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	3.7	NS (3.9)	NS (4.0)	NS (4.1)	4.2	7.2	7.5	6.6	5.1	<1.0	<1.0	6.6
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NS (175)	NS (188)	NS (200)	NS (206)	NS (212)	218	165	178	160	170	140	180
TRC-401R	150	138	NS (120)	NS (112)	NS (103)	94	107	29	127	100	90	64
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Upper Bedrock Input Data

	Sep. 1989	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-07	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA	NA
GZA-101R	<10 (1.0)	<10 (1.0)	<25 (1.0)	<10 (1.0)	<10 (1.0)	<100 (1.0)	<50 (1.0)	<25 (1.0)	<25 (1.0)	<2.0 (1.0)
GZA-102R1	<10	<10	12	<10	12	8.3	<5.0	<5.0 (4.3)	<5.0 (3.7)	3
GZA-102R2	<10	NS (42)	49	<100 (48)	<500 (46)	<200 (45)	<100 (44)	<50 (43)	<50 (41)	40
GZA-103R1	3,900	2,100	<10,000 (1,646)	1,200	3,600	970	710	1,500	510	1,200
GZA-103R2	NA	NA	1,300	NS (995)	NS (685)	380	1,500	NS (1,315)	NS (1,126)	940
GZA-104R1	<10 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-104R2	<10 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-105R	19	<200 (13)	<250 (12)	11	3	<500 (3.2)	<100 (3.4)	<120 (3.6)	<100 (3.8)	4
GZA-106R	<10 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-108R1	<10 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	<10 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	38	<10	NS (22)	NS (33)	45	14	NS (9.5)	<5.0	46
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1R	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
PZ-2R	NA	NA	24	<10	<10,000 (10)	NS	NS	NS	NS	NS
PZ-4R	NA	NA	<10 (1.0)	<10 (1.0)	<50 (1.0)	NA	NA	NA	NA	NA
PZ-7R	NA	NA	<250 (1.0)	<1,000 (1.0)	NA	NA	NA	NA	NA	NA
PZ-8R	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS	NS	NS	NS	NS
PZ-9R	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-10R1	NA	NA	<100 (1.0)	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-5R	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
STM-8R	NA	NA	<10 (1.0)	NS (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-9R	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	1,800	<2,500 (1,403)	<1,000	NA	NA	NA	NA	NA
WE-06R	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
WE-105R2	NA	NA	<10 (1.0)	<1,000 (1.0)	<500 (1.0)	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Upper Bedrock Input Data

	Sep. 1996	Mar. 1997	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10R	NA	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (2.2)	NS (3.4)	4.6	NS (3.4)	NS (2.2)
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	<1.0	<1.0	NS (1.0)	<1.0	NS (1.0)	<5.0 (1.0)	NS (1.0)	<40 (1.0)	NS (1.0)	NS (1.0)
GZA-102R1	5	NS (8.0)	11	3	<1.0	<2.0 (1.0)	NS (1.0)	<4.0 (1.0)	NS	NS
GZA-102R2	130	NS (96)	NS (60)	26	21	<20	<100 (20)	<100 (20)	<100 (20)	NS (20)
GZA-103R1	1,200	210	920	1,200	590	720	330	<200	<200 (172)	NS (144)
GZA-103R2	970	NS (867)	NS (763)	660	1,100	NS (993)	NS (885)	NS (778)	NS (670)	NS (563)
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	46	7	12	20	5	27	6	NS (6.0)	<400 (6.0)	<50 (6.0)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	5	NS (25)	NS (45)	65	NA	NA	NA	NA	NA	NA
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Upper Bedrock Input Data

	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009	Sep. 2011	Sep. 2012	Sep. 2013
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2,000 (1.0)
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	6.7	<10 (6.7)	<10 (6.7)	NS	NS	NS	NS	NS
EMW-10R	<1.0	NS (1.5)	<2.0	NS (4.1)	4.8	NS (4.1)	3.9	4.8	NS (4.2)	NS (3.7)
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	<2.0 (1.0)	<20 (1.0)	<20 (1.0)	NS (1.0)	<10 (1.0)	NS (1.0)	<1.0	<1.0	<10 (1.0)	NS (1.0)
GZA-102R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS (20)	NS (20)	<20	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	NS (115)	NS (59)	2.7	NS (2.8)	2.9	NA	NA	NA	NA	NA
GZA-103R2	NS (455)	NS (240)	25	NS (15)	11	NA	NA	NA	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	<50 (6.0)	<100 (6.0)	NS (6.0)	<100 (6.0)	NS (6.0)	NS (6.0)	NS (6.0)	NS (6.0)	NS (6.0)	NS (6.0)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NA	NA	NA	<20 (1.0)	<20 (1.0)	NS	NS	NS	NS	NS
IP-04R1	NA	NA	NA	35	NS	NS	NS	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	<1.0	<1.0	NS (1.0)	NS (1.0)
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NS (1.1)	NS (1.3)	NS (1.4)	NS (1.7)	NS (1.8)	NS (2.3)	NS (2.5)	NS (2.8)	NS (3.0)	NS (3.1)
TRC-401R	NA	NA	NA	NA	<100 (5.5)	5.5	NS (4.8)	<50 (3.4)	<100 (2.7)	NS (2.0)
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Upper Bedrock Input Data

	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-1	NA	1.5	<1.0	3.8	1.4	<20 (3.1)	4.8	4.1	13
AE100R-2	NA	9.5	8	14	9.9	NS (9.9)	NS (9.9)	NS (9.9)	<10 (9.9)
AE100R-3	NA	<50 (1.5)	1.5	<50 (1.5)	<50 (1.5)	<100 (1.5)	<50 (1.5)	<25 (1.5)	<25 (1.5)
AE101R-1	NA	<1.0	<1.0	<1.0	7.4	6.4	6.4	7.6	8.5
AE101R-2	NA	<10 (1.0)	<1.0	12	11	14	5.8	18	13
AE102RR-1	NA	<1.0	<1.0	NS (3.3)	NS (6.8)	NS (9.1)	NS (11)	NS (14)	16
AE103R-1	NA	<50	<50	112	75	49	23	23	18
AE104R-1	NA	<5.0 (1.0)	<1.0	<20 (8.2)	<20 (19)	26	29	34	18
AE106R-1	NA	1.1	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0
AE108R-1	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-1	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-1	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-1	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-1	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE23R	<500 (1.0)	NS (1.0)	<1,000 (1.0)	<2,000 (1.0)	<500 (1.0)	<5,000 (1.0)	<500 (1.0)	<500 (1.0)	<500 (1.0)
AE25R	<10 (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26R	<100 (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
AE26R-1	NA	NA	NA	<5.0 (2.5)	<10 (2.5)	<5.0 (2.5)	<2.5	2.5	130
AE27R	<5.0 (1.0)	NS (1.0)	<1.0	<10 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)
AE28R-1	NA	NA	NA	<50	<200 (192)	<500 (286)	380	540	710
AE29R-1	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE29R-2	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE2R	<1.0	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
BRW-1R2	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-10R	NS (3.4)	NS (3.1)	2.8	4.5	6.2	15	17	11	<1.0
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	<10 (1.0)	NS (1.0)	<1.0	<1.0	<10 (1.0)	<5.0 (1.0)	<2.5 (1.0)	<1.0	<1.0
GZA-102R1	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-103R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	NS (6.0)	NS (6.0)	NS (6.0)	<200 (6.0)	<200 (6.0)	<200 (6.0)	<50 (6.0)	<50 (6.0)	<20 (6.0)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R1	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NS (3.2)	NS (3.3)	3.4	<5.0 (3.1)	<5.0 (2.7)	<5.0 (2.4)	2.1	2.3	2.4
TRC-401R	NS (1.7)	NS (1.3)	<1.0	<100 (1.0)	<5.0 (1.0)	<20 (1.0)	<10 (1.0)	<10 (1.0)	<10 (1.0)
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

1,4-Dioxane Upper Bedrock Input Data

	Sep. 2009	Sep. 2012	Sep. 2013	Mar. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-1	NA	NA	NA	NA	0.4	0.42	0.5	NS	NS	NS	NS
AE100R-2	NA	NA	NA	NA	NA	1.3	1.8	NS	NS	NS	NS
AE100R-3	NA	NA	NA	NA	6.2	4	9.8	9.4	13	9.2	12
AE101R-1	NA	NA	NA	NA	0.6	<0.20	0.92	NS	NS	NS	NS
AE101R-2	NA	NA	NA	NA	5.9	3.3	6.7	6.8	5.2	5.8	6.5
AE102RR-1	NA	NA	NA	NA	6.2	NS	NS	NS	NS	NS	NS
AE103R-1	NA	NA	NA	NA	18	16	9	8.7	8	4.2	9.4
AE104R-1	NA	NA	NA	NA	4.8	7.2	13	12	9	10	14
AE106R-1	NA	NA	NA	NA	1	NS	NS	NS	NS	NS	NS
AE108R-1	NA	NA	NA	NA	2.2	NS	NS	NS	NS	NS	NS
AE111R-1	NA	NA	NA	NA	NA	0.81	NS	NS	NS	NS	NS
AE112R-1	NA	NA	NA	NA	NA	<0.20	NS	NS	NS	NS	NS
AE23R	NA	NA	4.5	38	17	16	19	19	15	<0.20	12
AE25R	NA	NA	NA	3.8	NS	NS	NS	NS	NS	NS	NS
AE26R	NA	NA	NA	17	19	NS	NS	NS	NS	NS	NS
AE26R-1	NA	NA	NA	NA	NA	18	32	22	25	21	20
AE27R	NA	NA	NA	<0.20	NS (0.75)	1.3	NS	NS	NS	NS	NS
AE28R-1	NA	NA	NA	NA	NA	10	NS	NS	NS	NS	NS
AE29R-1	NA	NA	NA	NA	NA	0.62	NS	NS	NS	NS	NS
AE29R-2	NA	NA	NA	NA	NA	1.2	NS	NS	NS	NS	NS
AE2R	NA	NA	NA	<0.20	NS	NS	NS	NS	NS	NS	NS
EMW-10R	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-101R	1.4	1.2	NS (0.53)	<0.20	1.3	NS	NS	NS	NS	NS	NS
GZA-102R2	2.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	<0.51	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-103R2	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R2	27	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-8R	NA	NA	NA	NA	NA	0.4	0.82	0.81	<0.20	<0.20	0.53
TRC-401R	NA	29	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Geochemical Upper Bedrock Input Data

	Jan. 1990	Jan. 1990	Jan. 1990	Jan. 1990
AE100R-1	2	3.5	<2.0	-51
AE100R-2	NS	NS	NS	24
AE100R-3	NS	NS	NS	44
AE101R-1	NS	NS	NS	67
AE101R-2	NS	NS	NS	-108
AE102RR-1	NS	NS	NS	-113
AE103R-1	0.35	2.9	66	115
AE104R-1	NS	NS	NS	-184
AE106R-1	NS	NS	NS	-24
AE108R-1	<0.17	<0.24	<2.0	-43
AE109R-1	NS	NS	NS	-29
AE110R-1	NS	NS	NS	-206
AE111R-1	NS	NS	NS	-10
AE112R-1	NS	NS	NS	-162
AE23R	NS	NS	NS	-82
AE25R	NS	NS	NS	-51
AE26R-1	NS	NS	NS	-256
AE27R	NS	NS	NS	-172
AE28R-1	NS	NS	NS	-128
AE29R-1	NS	NS	NS	116
AE29R-2	NS	NS	NS	132
AE2R	NS	NS	NS	-76
EMW-10R	<0.17	<0.24	<2.0	107
GZA-101R	<0.17	<0.24	2.2	-114
GZA-105R	2.3	1.6	88	-47
STM-8R	NS	NS	NS	-118
TRC-201R	NS	NS	NS	-126
TRC-401R	NS	NS	NS	-139

Notes:

All concentrations in µg/l

<5.00: Analyte not detected. Detection limit used.

PCE Middle Bedrock Input Data

	Sep. 1992	Mar. 1993	Sep. 1993	Sep. 1997	Sep. 1998	Sep. 1999	Mar. 2000	Sep. 2001	Sep. 2002
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11R1	NA	NA	NA	NA	160	NS (307)	380	330	740
EMW-11R2	NA	NA	NA	NA	47	NS (17)	<2.0	8,200	8,200
GZA-107R	6.2	<5.0	NS (4.9)	NS (4.3)	NS (4.1)	NS (3.9)	NS (3.9)	NS (3.6)	NS (3.4)
IP-01R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-03R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R1	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-3R	NA	<5.0 (1.0)	<5.0 (1.0)	<1.0	NS (1.5)	<2.0	NS (2.0)	NS (1.9)	NS (1.8)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

PCE Middle Bedrock Input Data

	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009	Sep. 2011	Sep. 2012
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	29	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	1,600	830	370	280	250	32	16	1,400	860
EMW-11R2	120	250	140	170	140	190	NS (407)	840	1,770
GZA-107R	NS (3.3)	NS (3.2)	NS (3.1)	NS (3.0)	NS (3.0)	NS (2.5)	NS (2.3)	NS (2.0)	NS (1.8)
IP-01R2	NA	NA	NA	3,100	590	440	NS (380)	260	3,910
IP-02R3	NA	NA	NA	180	170	NS	NS	NS	NS
IP-03R2	NA	NA	NA	450	NS	NS	NS	NS	NS
IP-04R3	NA	NA	NA	1,000	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.2)	NS (1.2)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

PCE Middle Bedrock Input Data

	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-4	862	1,000	1,490	1,900	1,500	4,000	3,400	2,600
AE100R-5	362	1,870	302	493	884	1,400	1,100	1,100
AE100R-6	507	716	754	849	744	1,200	900	600
AE101R-3	287	82	16	8.7	2.2	6.9	2.1	4.3
AE102RR-2	99	181	256	109	128	130	93	120
AE102RR-3	120	130	NS (127)	NS (122)	NS (119)	NS (116)	NS (113)	110
AE103R-2	3,560	2,300	4,550	2,790	NS (2,743)	NS (2,695)	NS (2,647)	2,600
AE103R-3	2,770	1,400	3,290	2,950	1,730	1,700	950	3,400
AE103R-4	4,160	5,520	7,170	6,190	4,700	4,100	3,200	4,900
AE104R-2	314	460	NS (434)	NS (395)	NS (368)	NS (342)	NS (316)	290
AE104R-3	4,420	3,220	3,850	3,300	2,410	1,800	1,300	1,600
AE105R-1	29	11	41	51	29	34	31	26
AE105R-2	34	34	46	71	28	52	41	45
AE105R-3	34	38	NS (41)	NS (44)	NS (46)	NS (49)	NS (51)	53
AE106R-2	6.9	9.9	NS (8.6)	NS (6.7)	NS (5.5)	NS (4.2)	NS (3.0)	1.7
AE106R-3	10	14	25	25	7.8	2.3	2.5	2.2
AE108R-2	12	7.8	10	18	NS (22)	NS (27)	NS (31)	36
AE108R-3	12	11	15	22	37	35	49	41
AE109R-2	NA	NA	3.2	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-2	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-2	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-3	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-2	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-3	NA	NA	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-4	NA	NA	2.8	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26R-2	NA	NA	179	<5.0	2.6	9.3	7	<1.0
AE26R-3	NA	NA	174	<5.0	NS (4.6)	NS (4.2)	NS (3.8)	3.4
AE26R-4	NA	NA	724	188	NS (251)	NS (314)	NS (377)	440
AE28R-2	NA	NA	19,700	20,200	18,300	17,000	15,000	20,000
AE28R-3	NA	NA	9,940	5,400	4,200	3,600	6,900	4,100
AE29R-3	NA	NA	<1.0	<1.0	5.4	<1.0	<1.0	<1.0
AE29R-4	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE29R-5	NA	NA	<1.0	<5.0 (2.3)	3.2	<1.0	<1.0	<1.0
BRW-1R3	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	NS (543)	464	1,240	1,450	1,250	2,400	2,100	2,700
EMW-11R2	NS (3,485)	3,910	4,390	3,200	4,500	4,200	3,600	3,600
GZA-107R	NS (1.5)	NS (1.4)	NS (1.2)	<1.0	NA	NA	NA	NA
IP-01R2	NS (2,051)	1,590	3,560	4,700	3,090	3,400	2,900	2,600
IP-02R3	NS	NS	NS	NS	NS	NS	NS	NS
IP-03R2	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R3	NS	NS	NS	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8R1	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRC-301R-1	16	32	33	29	NS (26)	NS (22)	NS (19)	16
TRC-301R-2	22	9.6	51	56	41	43	37	41
TRC-301R-3	22	17	60	58	NS (53)	NS (49)	NS (44)	40
TRC-301R-4	2.1	9.1	16	13	14	13	10	8.7

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Middle Bedrock Input Data

	Sep. 1992	Mar. 1993	Sep. 1993	Sep. 1997	Sep. 1998	Sep. 1999	Mar. 2000	Sep. 2001
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11R1	NA	NA	NA	NA	220	NS (727)	980	950
EMW-11R2	NA	NA	NA	NA	100	NS (967)	1,400	17,000
GZA-107R	10	<5.0	NS (4.9)	NS (4.4)	NS (4.2)	NS (4.1)	NS (4.0)	NS (3.8)
IP-01R2	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R3	NA	NA	NA	NA	NA	NA	NA	NA
IP-03R2	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R3	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R1	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-2R2	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-3R	NA	<5.0 (1.0)	<5.0 (1.0)	<1.0	NS (1.5)	<2.0	NS (2.0)	NS (1.9)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Middle Bedrock Input Data

	Sep. 2002	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009	Sep. 2011
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	260	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	3,100	6,500	1,100	460	270	270	130	260	2,800
EMW-11R2	14,000	3,900	2,700	980	1,200	1,500	580	NS (2,387)	6,000
GZA-107R	NS (3.7)	NS (3.6)	NS (3.5)	NS (3.4)	NS (3.3)	NS (3.3)	NS (2.9)	NS (2.7)	NS (2.5)
IP-01R2	NA	NA	NA	NA	16,000	5,600	5,000	NS (4,533)	3,600
IP-02R3	NA	NA	NA	NA	1,300	1,200	NS	NS	NS
IP-03R2	NA	NA	NA	NA	2,600	NS	NS	NS	NS
IP-04R3	NA	NA	NA	NA	3,100	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.8)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.2)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Middle Bedrock Input Data

	Sep. 2012	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-4	NA	1,410	1,600	2,350	2,990	2,740	5,400	4,700	3,400
AE100R-5	NA	901	3,500	718	1,020	1,810	2,300	2,200	1,600
AE100R-6	NA	658	1,160	1,170	1,320	1,350	1,600	1,300	760
AE101R-3	NA	693	264	43	28	13	18	7.3	12
AE102RR-2	NA	228	465	468	256	413	400	370	420
AE102RR-3	NA	209	274	NS (289)	NS (311)	NS (326)	NS (340)	NS (355)	370
AE103R-2	NA	6,200	11,500	7,840	3,970	NS (4,052)	NS (4,135)	NS (4,218)	4,300
AE103R-3	NA	5,330	13,400	6,430	4,450	3,190	3,200	1,300	6,000
AE103R-4	NA	6,560	14,100	13,500	9,660	8,890	7,400	6,000	8,000
AE104R-2	NA	1,250	2,220	NS (2,124)	NS (1,981)	NS (1,886)	NS (1,791)	NS (1,695)	1,600
AE104R-3	NA	7,160	7,760	5,860	4,790	4,340	3,500	2,200	2,800
AE105R-1	NA	102	74	132	192	143	140	110	110
AE105R-2	NA	130	187	130	246	120	170	130	140
AE105R-3	NA	170	220	NS (209)	NS (193)	NS (182)	NS (172)	NS (161)	150
AE106R-2	NA	20	26	NS (23)	NS (18)	NS (15)	NS (12)	NS (9.0)	6
AE106R-3	NA	24	34	27	34	19	4.8	5.5	8.6
AE108R-2	NA	19	17	11	17	NS (20)	NS (22)	NS (25)	28
AE108R-3	NA	14	15	9.4	13	29	23	30	24
AE109R-2	NA	NA	NA	6	2.9	1.5	1.4	1.2	1.3
AE110R-2	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-2	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-3	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-2	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-3	NA	NA	NA	<1.0	<1.0	1.3	1.5	<1.0	1.2
AE112R-4	NA	NA	NA	<1.0	2.1	NS (1.8)	NS (1.6)	NS (1.3)	1
AE26R-2	NA	NA	NA	193	110	88	79	60	53
AE26R-3	NA	NA	NA	173	134	NS (116)	NS (99)	NS (81)	63
AE26R-4	NA	NA	NA	395	580	NS (568)	NS (555)	NS (542)	530
AE28R-2	NA	NA	NA	15,700	18,000	19,600	19,000	16,000	19,000
AE28R-3	NA	NA	NA	6,180	5,190	6,220	5,100	9,000	3,800
AE29R-3	NA	NA	NA	95	48	17	21	8.8	3.4
AE29R-4	NA	NA	NA	48	5.7	NS (5.1)	NS (4.5)	NS (3.9)	3.3
AE29R-5	NA	NA	NA	130	22	13	41	33	52
BRW-1R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	1,840	NS (1,944)	1,970	2,780	3,400	3,470	5,300	4,000	5,100
EMW-11R2	4,230	NS (7,884)	8,790	8,820	11,500	12,400	11,000	7,100	6,300
GZA-107R	NS (2.3)	NS (2.0)	NS (2.0)	NS (1.8)	1.6	NA	NA	NA	NA
IP-01R2	7,490	NS (5,294)	4,750	7,290	8,590	7,570	7,300	6,600	5,800
IP-02R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-03R2	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.2)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8R1	NA	6.1	3.6	1.8	2.3	2	1.9	1.7	1.9
TRC-301R-1	NA	88	107	64	69	NS (67)	NS (65)	NS (63)	61
TRC-301R-2	NA	77	44	102	144	101	110	87	97
TRC-301R-3	NA	84	75	118	139	NS (129)	NS (120)	NS (110)	100
TRC-301R-4	NA	36	45	35	36	36	27	27	27

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

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<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Middle Bedrock Input Data

	Sep. 1992	Mar. 1993	Sep. 1993	Sep. 1997	Sep. 1998	Sep. 1999	Mar. 2000	Sep. 2001	Sep. 2002
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11R1	NA	NA	NA	NA	15	NS (60)	82	220	<20
EMW-11R2	NA	NA	NA	NA	7	NS (69)	100	750	630
GZA-107R	<5.0 (2.0)	<5.0 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
IP-01R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-03R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R1	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-3R	NA	<5.0 (1.0)	<5.0 (1.0)	<1.0	NS (1.5)	<2.0	NS (2.0)	NS (1.9)	NS (1.8)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Middle Bedrock Input Data

	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009	Sep. 2011	Sep. 2012
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	43	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	1,200	25	22	17	7.8	12	47	120	120
EMW-11R2	6,400	250	500	490	150	330	NS (1,320)	3,300	897
GZA-107R	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
IP-01R2	NA	NA	NA	<200 (100)	100	130	NS (116)	89	131
IP-02R3	NA	NA	NA	34	30	NS	NS	NS	NS
IP-03R2	NA	NA	NA	46	NS	NS	NS	NS	NS
IP-04R3	NA	NA	NA	<40 (1.0)	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.2)	NS (1.2)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Middle Bedrock Input Data

	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-4	<25	27	59	<50	<100 (70)	89	92	140
AE100R-5	15	33	118	65	69	160	400	740
AE100R-6	29	80	188	160	101	110	140	71
AE101R-3	38	462	32	21	39	19	9.6	26
AE102RR-2	37	98	89	211	188	130	170	150
AE102RR-3	30	44	NS (63)	NS (93)	NS (112)	NS (131)	NS (151)	170
AE103R-2	171	1,020	2,320	373	NS (332)	NS (292)	NS (251)	210
AE103R-3	144	770	3,130	511	436	330	140	480
AE103R-4	259	427	1,080	1,290	888	700	690	510
AE104R-2	58	87	NS (115)	NS (158)	NS (186)	NS (214)	NS (242)	270
AE104R-3	<200 (141)	141	149	136	139	230	140	150
AE105R-1	19	9	17	25	23	26	26	31
AE105R-2	18	20	15	25	21	30	28	35
AE105R-3	17	24	NS (26)	NS (29)	NS (32)	NS (34)	NS (36)	38
AE106R-2	10	16	NS (17)	NS (18)	NS (19)	NS (20)	NS (21)	22
AE106R-3	11	16	14	14	42	33	19	23
AE108R-2	5.7	8.7	6.6	7.5	NS (8.1)	NS (8.7)	NS (9.4)	10
AE108R-3	2	2.6	2.3	2.9	8.4	7.6	9.4	7.5
AE109R-2	NA	NA	2	2	2.1	2.3	2.7	3.8
AE110R-2	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-2	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-3	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-2	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-3	NA	NA	<1.0	<1.0	<1.0	1.9	2.3	3.8
AE112R-4	NA	NA	<1.0	3.2	NS (4.3)	NS (5.4)	NS (6.5)	7.6
AE26R-2	NA	NA	34	131	153	130	130	70
AE26R-3	NA	NA	43	158	NS (137)	NS (116)	NS (94)	73
AE26R-4	NA	NA	69	440	NS (438)	NS (435)	NS (432)	430
AE28R-2	NA	NA	<200	298	<500	840	1,100	1,600
AE28R-3	NA	NA	<200	294	462	730	1,500	830
AE29R-3	NA	NA	36	48	21	36	31	16
AE29R-4	NA	NA	35	47	NS (59)	NS (72)	NS (85)	98
AE29R-5	NA	NA	75	212	224	190	220	140
BRW-1R3	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	NS (201)	221	234	330	609	420	300	280
EMW-11R2	NS (576)	496	844	1,320	1,430	1,500	750	420
GZA-107R	NS (2.0)	NS (2.0)	NS (2.0)	2	NA	NA	NA	NA
IP-01R2	NS (104)	97	110	121	<200 (121)	120	87	89
IP-02R3	NS	NS	NS	NS	NS	NS	NS	NS
IP-03R2	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R3	NS	NS	NS	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8R1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRC-301R-1	20	23	17	19	NS (19)	NS (18)	NS (17)	17
TRC-301R-2	25	15	22	26	19	17	18	20
TRC-301R-3	26	23	26	26	NS (24)	NS (22)	NS (20)	18
TRC-301R-4	18	22	17	22	19	14	17	20

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Middle Bedrock Input Data

	Sep. 1992	Mar. 1993	Sep. 1993	Sep. 1997	Sep. 1998	Sep. 1999	Mar. 2000	Sep. 2001
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11R1	NA	NA	NA	NA	<1.0	NS (1.7)	<2.0	26
EMW-11R2	NA	NA	NA	NA	<1.0	NS (1.7)	<2.0	250
GZA-107R	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
IP-01R2	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R3	NA	NA	NA	NA	NA	NA	NA	NA
IP-03R2	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R3	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R1	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-2R2	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-3R	NA	<10 (1.0)	<10 (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Middle Bedrock Input Data

	Sep. 2002	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009	Sep. 2011
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	<4.0 (1.0)	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	190	590	<10	<10 (9.0)	<4.0	<4.0 (3.6)	1.2	3.3	<25 (4.0)
EMW-11R2	430	1,500	58	300	180	63	120	NS (193)	340
GZA-107R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
IP-01R2	NA	NA	NA	NA	<200 (3.4)	<100 (3.4)	3.4	NS (3.4)	<50 (3.5)
IP-02R3	NA	NA	NA	NA	<4.0 (1.0)	<20 (1.0)	NS	NS	NS
IP-03R2	NA	NA	NA	NA	<40 (1.0)	<40 (1.0)	NS	NS	NS
IP-04R3	NA	NA	NA	NA	<40 (1.0)	<40 (1.0)	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Middle Bedrock Input Data

	Sep. 2012	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-4	NA	<25 (1.6)	1.6	<50 (1.6)	<50 (1.6)	<100 (1.6)	<50 (1.6)	<25 (1.6)	<10 (1.6)
AE100R-5	NA	<10 (1.5)	1.5	33	<10	<50 (19)	<25	38	33
AE100R-6	NA	<10 (1.0)	<1.0	<25 (2.1)	<20 (3.7)	<50 (4.8)	<10 (5.9)	7	<2.5
AE101R-3	NA	<10 (1.0)	<1.0	5.8	2.9	11	4.9	3.6	9.3
AE102RR-2	NA	<5.0 (1.0)	<1.0	<1.0	5.3	9.1	5.8	12	9
AE102RR-3	NA	<5.0 (1.0)	<1.0	NS (1.7)	NS (2.7)	NS (3.4)	NS (4.1)	NS (4.8)	5.5
AE103R-2	NA	<100 (33)	<50 (33)	<200 (33)	<100 (33)	NS (33)	NS (33)	NS (33)	33
AE103R-3	NA	<100 (50)	<50	268	139	147	100	36	110
AE103R-4	NA	<100 (50)	<50	<200 (61)	<200 (78)	<200 (89)	100	150	59
AE104R-2	NA	<10 (2.0)	2	NS (5.7)	NS (11)	NS (15)	NS (19)	NS (22)	26
AE104R-3	NA	<200 (2.7)	2.7	<100 (5.7)	<100 (10)	<100 (13)	16	11	6.3
AE105R-1	NA	<1.0	<1.0	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	<1.0	1.1	1.3
AE105R-2	NA	<1.0	<1.0	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	<1.0	1.4	2
AE105R-3	NA	<1.0	<1.0	NS (1.1)	NS (1.3)	NS (1.5)	NS (1.6)	NS (1.8)	1.9
AE106R-2	NA	1.3	1.3	NS (1.3)	NS (1.3)	NS (1.4)	NS (1.4)	NS (1.4)	1.4
AE106R-3	NA	1.5	1.3	1.7	1.5	1.3	1.6	1.6	1.1
AE108R-2	NA	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE108R-3	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-2	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-2	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-2	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-3	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-2	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-3	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26R-2	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<1.0	<2.0	<2.0	33
AE26R-3	NA	NA	NA	<5.0	<5.0	NS (28)	NS (51)	NS (75)	98
AE26R-4	NA	NA	NA	<10	<10	NS (42)	NS (75)	NS (108)	140
AE28R-2	NA	NA	NA	<200 (99)	<200 (99)	<500 (99)	99	370	180
AE28R-3	NA	NA	NA	<200 (50)	<200 (130)	<100	<50	290	340
AE29R-3	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE29R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE29R-5	NA	NA	NA	<1.0	<5.0 (1.0)	<1.0	<1.0	<1.0	<1.0
BRW-1R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	<20 (4.4)	NS (5.1)	5.3	<25 (4.1)	<50 (2.2)	<1.0	71	50	31
EMW-11R2	97	NS (36)	21	<200 (82)	<200 (173)	234	140	120	36
GZA-107R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA
IP-01R2	<100 (3.6)	NS (3.7)	3.7	<100 (3.7)	<100 (3.7)	<200 (3.7)	<20 (3.7)	<10 (3.7)	<10 (3.7)
IP-02R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-03R2	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8R1	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRC-301R-1	NA	1.8	2.5	1.4	1.3	NS (1.4)	NS (1.5)	NS (1.6)	1.7
TRC-301R-2	NA	3.9	6.2	<5.0	<5.0 (3.7)	<5.0 (2.8)	1.9	2.3	1.9
TRC-301R-3	NA	4.8	7.7	<5.0	<5.0 (4.1)	NS (3.5)	NS (3.0)	NS (2.4)	1.8
TRC-301R-4	NA	12	9.5	5.9	9.1	6.8	7.9	8.8	10

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

1,4-Dioxane Middle Bedrock Input Data

	Mar. 2008	Sep. 2008	Sep. 2009	Sep. 2012	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-4	NA	NA	NA	NA	NA	3.6	8.6	11	13	10	9.5
AE100R-5	NA	NA	NA	NA	NA	5	9.9	NS	NS	NS	NS
AE100R-6	NA	NA	NA	NA	10	5.7	12	14	12	10	8.1
AE101R-3	NA	NA	NA	NA	NA	2.6	5.4	4.6	3.5	2.7	2.7
AE102RR-2	NA	NA	NA	NA	5.3	2.8	6.1	6.4	6	6.2	5.9
AE102RR-3	NA	NA	NA	NA	3.7	NS	NS	NS	NS	NS	NS
AE103R-2	NA	NA	NA	NA	23	23	18	NS	NS	NS	NS
AE103R-3	NA	NA	NA	NA	25	21	24	NS	NS	NS	NS
AE103R-4	NA	NA	NA	NA	33	34	46	45	43	38	41
AE104R-2	NA	NA	NA	NA	16	NS	NS	NS	NS	NS	NS
AE104R-3	NA	NA	NA	NA	13	17	17	16	14	11	14
AE105R-2	NA	NA	NA	NA	NA	3.6	6.1	5.8	5.9	5.1	5.3
AE105R-3	NA	NA	NA	NA	4.9	NS	NS	NS	NS	NS	NS
AE106R-2	NA	NA	NA	NA	1.6	NS	NS	NS	NS	NS	NS
AE106R-3	NA	NA	NA	NA	2	NS	NS	NS	NS	NS	NS
AE108R-2	NA	NA	NA	NA	1.6	NS	NS	NS	NS	NS	NS
AE108R-3	NA	NA	NA	NA	0.3	NS	NS	NS	NS	NS	NS
AE109R-2	NA	NA	NA	NA	NA	NA	NA	4	3.6	5.6	6.8
AE111R-2	NA	NA	NA	NA	NA	<0.20	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)
AE111R-3	NA	NA	NA	NA	NA	0.2	NS	NS	NS	NS	NS
AE112R-2	NA	NA	NA	NA	NA	<0.20	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)
AE112R-3	NA	NA	NA	NA	NA	<0.20	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)
AE112R-4	NA	NA	NA	NA	NA	<0.20	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)
AE26R-2	NA	NA	NA	NA	NA	14	NS	NS	NS	NS	NS
AE26R-3	NA	NA	NA	NA	NA	19	NS	NS	NS	NS	NS
AE26R-4	NA	NA	NA	NA	NA	17	NS	NS	NS	NS	NS
AE28R-2	NA	NA	NA	NA	NA	34	66	50	60	48	48
AE28R-3	NA	NA	NA	NA	NA	31	NS (36)	39	46	39	40
AE29R-3	NA	NA	NA	NA	NA	11	NS	NS	NS	NS	NS
AE29R-4	NA	NA	NA	NA	NA	8.6	NS	NS	NS	NS	NS
AE29R-5	NA	NA	NA	NA	NA	14	NS	NS	NS	NS	NS
EMW-11R1	NA	NA	7.5	8.4	11	NS	NS	NS	NS	NS	NS
EMW-11R2	NA	22	40	20	28	NS	NS	NS	NS	NS	NS
IP-01R2	32	32	32	22	NS	NS	NS	NS	NS	NS	NS
IP-02R3	NA	NA	32	NS	NS	NS	NS	NS	NS	NS	NS
IP-03R2	NA	NA	27	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R3	33	33	31	NS	NS	NS	NS	NS	NS	NS	NS
STM-8R1	NA	NA	NA	NA	NA	<0.20	0.29	0.4	0.28	0.32	0.38
TRC-301R-1	NA	NA	NA	NA	3.2	NS	NS	NS	NS	NS	NS
TRC-301R-2	NA	NA	NA	NA	2	NS	NS	NS	NS	NS	NS
TRC-301R-3	NA	NA	NA	NA	4.2	NS	NS	NS	NS	NS	NS
TRC-301R-4	NA	NA	NA	NA	2.5	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

Geochemical Middle Bedrock Input Data

	Jan. 1990	Jan. 1990	Jan. 1990	Jan. 1990
AE100R-4	NS	NS	NS	68
AE100R-5	2	2.4	42	68
AE100R-6	NS	NS	NS	-7.9
AE101R-3	NS	NS	NS	-106
AE102RR-2	NS	NS	NS	-68
AE102RR-3	NS	NS	NS	-73
AE103R-2	NS	NS	NS	110
AE103R-3	NS	NS	NS	93
AE103R-4	NS	NS	NS	54
AE104R-2	NS	NS	NS	-170
AE104R-3	NS	NS	NS	-133
AE105R-1	0.37	1.4	150	43
AE105R-2	NS	NS	NS	8.6
AE105R-3	NS	NS	NS	-17
AE106R-2	NS	NS	NS	-13
AE106R-3	<0.17	1.5	300	-20
AE108R-2	NS	NS	NS	-25
AE108R-3	NS	NS	NS	66
AE109R-2	NS	NS	NS	-75
AE110R-2	NS	NS	NS	-172
AE111R-2	NS	NS	NS	-39
AE111R-3	NS	NS	NS	-63
AE112R-2	NS	NS	NS	-153
AE112R-3	NS	NS	NS	-140
AE112R-4	NS	NS	NS	-131
AE26R-2	<0.17	2.9	38	-175
AE26R-3	NS	NS	NS	-199
AE26R-4	NS	NS	NS	-180
AE28R-2	6.2	10	120	-257
AE28R-3	NS	NS	NS	-265
AE29R-3	NS	NS	NS	56
AE29R-4	NS	NS	NS	-188
AE29R-5	NS	NS	NS	-188
EMW-11R1	NS	NS	NS	-108
EMW-11R2	0.91	9.1	100	-91
IP-01R2	NS	NS	NS	-142
STM-3R	NS	NS	NS	-110
STM-8R1	<0.17	0.31	<2.0	93
TRC-301R-1	NS	NS	NS	-102
TRC-301R-2	NS	NS	NS	-129
TRC-301R-3	1	1.9	56	-141
TRC-301R-4	NS	NS	NS	-174

Notes:

All concentrations in µg/l

<5.00: Analyte not detected. Detection limit used.

PCE Lower Bedrock Input Data

	Sep. 1998	Mar. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005
AE101R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-4	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-5	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-8	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-6	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R4	NA	NA	NA	NA	NA	450	230	260
EMW-11R3	3,800	3,300	2,000	4,000	1,800	260	NS (140)	<100

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

PCE Lower Bedrock Input Data

	Sep. 2011	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE101R-4	NA	262	96	NS (86)	NS (71)	NS (61)	NS (51)	NS (41)	31
AE101R-5	NA	1,500	1,320	245	623	451	730	480	670
AE101R-6	NA	654	422	145	378	28	17	27	170
AE102RR-4	NA	393	615	657	414	548	340	310	650
AE102RR-5	NA	869	1,200	1,750	1,200	1,320	1,200	1,400	1,800
AE102RR-6	NA	3,000	2,990	3,940	2,910	3,230	3,200	3,600	4,000
AE103R-5	NA	4,070	4,810	7,620	7,030	5,960	5,500	4,700	5,000
AE103R-6	NA	562	1,680	2,450	2,080	NS (2,335)	NS (2,590)	NS (2,845)	3,100
AE103R-7	NA	2,880	2,210	3,590	3,600	2,690	2,100	2,000	3,700
AE104R-4	NA	1,330	3,640	4,610	3,800	3,100	2,100	1,400	1,500
AE104R-5	NA	769	2,890	3,980	3,890	2,800	2,400	2,100	1,300
AE104R-6	NA	2,080	3,030	4,180	4,120	3,570	2,400	2,400	1,300
AE105R-4	NA	36	34	58	67	47	55	52	51
AE105R-5	NA	16	27	NS (39)	56	18	50	43	46
AE106R-4	NA	3	2.8	NS (2.6)	NS (2.2)	NS (1.9)	NS (1.7)	NS (1.4)	1.2
AE106R-5	NA	4.3	3	NS (4.1)	5.8	3	1.6	<1.0	1.8
AE108R-4	NA	13	6.8	15	14	NS (16)	NS (17)	NS (19)	20
AE108R-5	NA	9.8	7.3	8.9	9.3	15	24	19	21
AE109R-3	NA	NA	NA	<5.0 (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-4	NA	NA	NA	159	112	<10	<2.0	2.1	<1.0
AE109R-5	NA	NA	NA	318	293	127	77	71	44
AE109R-6	NA	NA	NA	98	58	20	18	12	6.1
AE109R-7	NA	NA	NA	42	<5.0	<2.0	<1.0	<1.0	<1.0
AE109R-8	NA	NA	NA	11	2.4	1	<1.0	<1.0	<1.0
AE110R-3	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-4	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-5	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-6	NA	NA	NA	<1.0	<1.0	2.6	<1.0	<1.0	<1.0
AE110R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-5	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-6	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-5	NA	NA	NA	17	6.5	<1.0	<1.0	<1.0	<1.0
AE112R-6	NA	NA	NA	9.2	5.6	1	<1.0	<1.0	<1.0
AE112R-7	NA	NA	NA	16	5.1	NS (4.1)	NS (3.1)	NS (2.0)	<1.0
AE26R-5	NA	NA	NA	1,750	965	952	1,000	1,300	1,300
AE28R-4	NA	NA	NA	6,960	6,910	5,110	7,000	5,900	6,200
AE29R-6	NA	NA	NA	<1.0	<1.0	<5.0 (1.0)	<5.0 (1.0)	<1.0	<2.0
BRW-1R4	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R3	280	NS (1,859)	2,120	3,450	3,180	2,560	3,300	2,300	2,900

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Lower Bedrock Input Data

	Sep. 1998	Mar. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005
AE101R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-4	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-5	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-8	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-6	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R4	NA	NA	NA	NA	NA	1,200	560	550
EMW-11R3	4,500	5,500	3,200	6,700	3,600	700	NS (4,292)	5,500

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Lower Bedrock Input Data

	Sep. 2011	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE101R-4	NA	565	286	NS (267)	NS (237)	NS (218)	NS (199)	NS (179)	160
AE101R-5	NA	2,010	2,770	2,490	2,560	2,280	2,800	2,300	2,400
AE101R-6	NA	1,420	1,930	695	1,270	993	1,300	920	1,800
AE102RR-4	NA	522	1,230	970	606	864	550	490	1,100
AE102RR-5	NA	1,110	2,650	2,360	1,650	2,060	2,100	1,800	2,700
AE102RR-6	NA	4,300	5,920	5,310	3,680	4,540	4,300	4,600	4,700
AE103R-5	NA	5,160	12,400	12,800	9,980	9,710	9,200	7,600	6,900
AE103R-6	NA	2,280	11,700	8,020	7,500	NS (7,325)	NS (7,150)	NS (6,975)	6,800
AE103R-7	NA	6,030	6,560	5,170	4,710	4,380	4,000	3,200	5,200
AE104R-4	NA	3,650	8,840	7,150	5,820	5,650	4,200	3,100	3,400
AE104R-5	NA	1,710	7,360	6,390	5,600	5,440	4,400	4,200	2,700
AE104R-6	NA	4,030	8,180	6,540	6,130	6,770	4,600	4,900	2,800
AE105R-4	NA	107	215	166	230	187	190	150	170
AE105R-5	NA	56	153	NS (169)	193	88	150	120	150
AE106R-4	NA	12	16	NS (16)	NS (15)	NS (15)	NS (15)	NS (14)	14
AE106R-5	NA	14	41	NS (49)	61	58	36	26	40
AE108R-4	NA	34	24	30	37	NS (40)	NS (44)	NS (47)	50
AE108R-5	NA	24	23	14	22	48	54	51	51
AE109R-3	NA	NA	NA	16	18	2.9	1.1	5.3	<1.0
AE109R-4	NA	NA	NA	366	453	76	20	21	10
AE109R-5	NA	NA	NA	832	1,190	739	360	390	240
AE109R-6	NA	NA	NA	342	377	237	200	180	110
AE109R-7	NA	NA	NA	150	57	29	12	10	3.6
AE109R-8	NA	NA	NA	30	11	6.9	5	2.9	1.9
AE110R-3	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-4	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-5	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-6	NA	NA	NA	<1.0	<1.0	10	<1.0	<1.0	<1.0
AE110R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-5	NA	NA	NA	<1.0	1.2	<1.0	<1.0	<1.0	<1.0
AE111R-6	NA	NA	NA	<1.0	1.1	<1.0	<1.0	<1.0	<1.0
AE111R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-5	NA	NA	NA	2.5	8.1	3.6	3.9	2.1	5.6
AE112R-6	NA	NA	NA	1.7	4.1	2.6	1.9	1.3	1.5
AE112R-7	NA	NA	NA	2.5	7	NS (5.5)	NS (4.0)	NS (2.5)	<1.0
AE26R-5	NA	NA	NA	1,260	2,030	1,970	1,900	2,100	1,600
AE28R-4	NA	NA	NA	4,240	6,060	5,550	7,300	6,500	6,700
AE29R-6	NA	NA	NA	183	146	91	85	120	70
BRW-1R4	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R3	5,000	NS (4,571)	4,500	4,720	4,410	4,040	5,100	3,700	4,400

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Lower Bedrock Input Data

	Sep. 1998	Mar. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005
AE101R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-4	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-5	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-8	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-6	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R4	NA	NA	NA	NA	NA	60	25	39
EMW-11R3	110	<20	62	570	280	82	NS (492)	630

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Lower Bedrock Input Data

	Sep. 2011	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE101R-4	NA	35	114	NS (155)	NS (216)	NS (257)	NS (298)	NS (339)	380
AE101R-5	NA	89	114	786	924	809	1,200	1,300	1,600
AE101R-6	NA	53	120	853	1,140	1,620	1,500	1,700	1,500
AE102RR-4	NA	45	73	65	74	92	83	61	100
AE102RR-5	NA	56	150	122	125	127	180	130	160
AE102RR-6	NA	<100	219	229	215	202	240	120	120
AE103R-5	NA	192	354	882	936	1,190	1,100	1,000	510
AE103R-6	NA	136	478	2,140	3,490	NS (2,893)	NS (2,296)	NS (1,697)	1,100
AE103R-7	NA	306	271	286	341	381	390	400	280
AE104R-4	NA	104	165	<200 (189)	224	218	490	550	430
AE104R-5	NA	62	138	<200 (199)	291	280	520	590	500
AE104R-6	NA	114	162	<200	324	338	490	520	330
AE105R-4	NA	18	25	20	24	32	37	36	44
AE105R-5	NA	9.6	19	NS (19)	19	18	41	37	45
AE106R-4	NA	4.6	8.3	NS (9.8)	NS (12)	NS (14)	NS (15)	NS (17)	18
AE106R-5	NA	5.8	7.5	NS (8.8)	11	12	15	17	13
AE108R-4	NA	15	15	19	27	NS (29)	NS (31)	NS (32)	34
AE108R-5	NA	10	13	11	14	26	23	27	35
AE109R-3	NA	NA	NA	<5.0	32	27	14	17	7.9
AE109R-4	NA	NA	NA	36	439	299	200	170	140
AE109R-5	NA	NA	NA	53	230	351	240	220	170
AE109R-6	NA	NA	NA	27	121	159	180	170	170
AE109R-7	NA	NA	NA	16	96	138	130	92	66
AE109R-8	NA	NA	NA	2.8	2.2	3.8	4.7	4.6	4.9
AE110R-3	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-4	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-5	NA	NA	NA	<1.0	<1.0	NS (1.1)	NS (1.3)	NS (1.5)	1.6
AE110R-6	NA	NA	NA	<1.0	<1.0	4	1.5	1.5	1.8
AE110R-7	NA	NA	NA	<1.0	<1.0	NS (1.2)	NS (1.3)	NS (1.5)	1.7
AE111R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-5	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-6	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-5	NA	NA	NA	<1.0	3.6	12	14	13	12
AE112R-6	NA	NA	NA	<1.0	2	7	8.6	8.3	9.3
AE112R-7	NA	NA	NA	<1.0	1.7	NS (5.0)	NS (8.4)	NS (12)	15
AE26R-5	NA	NA	NA	111	310	466	510	390	340
AE28R-4	NA	NA	NA	170	311	484	540	640	690
AE29R-6	NA	NA	NA	185	325	349	320	320	300
BRW-1R4	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R3	2,400	NS (495)	180	242	429	432	840	600	370

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Lower Bedrock Input Data

	Sep. 1998	Mar. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005
AE101R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-4	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-5	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-8	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-6	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R4	NA	NA	NA	NA	NA	<20 (1.0)	<10 (1.0)	<10 (1.0)
EMW-11R3	1	<20	<50	710	120	40	NS (182)	230

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Lower Bedrock Input Data

	Sep. 2011	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE101R-4	NA	<10 (1.0)	<1.0	NS (4.9)	NS (11)	NS (14)	NS (18)	NS (22)	26
AE101R-5	NA	<50 (1.0)	<1.0	<50 (3.9)	<50 (8.2)	<20 (11)	14	16	20
AE101R-6	NA	<25 (1.2)	1.2	<10	<20	52	250	310	340
AE102RR-4	NA	<10 (1.0)	<1.0	<20 (1.0)	<20 (1.0)	<20 (1.0)	<2.5 (1.0)	<2.5 (1.0)	<2.5 (1.0)
AE102RR-5	NA	<25 (1.0)	<1.0	<50 (1.0)	<50 (1.0)	<100 (1.0)	<10 (1.0)	<10 (1.0)	<5.0 (1.0)
AE102RR-6	NA	<100 (2.7)	2.7	<100 (2.7)	<100 (2.7)	<200 (2.7)	<10 (2.7)	<10 (2.7)	<10 (2.7)
AE103R-5	NA	<100 (50)	<50	<200 (81)	<200 (128)	<200 (159)	190	270	64
AE103R-6	NA	<50	<50	<200 (75)	<200 (112)	NS (136)	NS (161)	NS (185)	210
AE103R-7	NA	<100 (42)	<50 (42)	<100 (42)	<100 (42)	<100 (42)	42	68	31
AE104R-4	NA	<50 (3.3)	3.3	<200 (13)	<100 (29)	<100 (39)	49	63	27
AE104R-5	NA	<20 (3.3)	3.3	<200 (18)	<100 (41)	<100 (56)	71	91	43
AE104R-6	NA	<50 (4.1)	4.1	<200 (16)	<200 (33)	<200 (44)	56	75	20
AE105R-4	NA	<1.0	<1.0	<5.0 (1.0)	<5.0 (1.1)	<5.0 (1.1)	<2.0 (1.2)	1.2	1.6
AE105R-5	NA	<1.0	<1.0	NS (1.0)	<5.0 (1.0)	<1.0	<1.0	<1.0	1.1
AE106R-4	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE106R-5	NA	<1.0	<1.0	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0
AE108R-4	NA	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE108R-5	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-3	NA	NA	NA	<5.0 (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-4	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<10 (1.0)	<2.0 (1.0)	<1.0	<1.0
AE109R-5	NA	NA	NA	<10 (1.0)	<10 (1.0)	<20 (1.0)	<2.5 (1.0)	<1.0	1.3
AE109R-6	NA	NA	NA	<5.0 (2.5)	<5.0 (2.9)	<10 (3.2)	<2.5	3.7	6.2
AE109R-7	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<2.0 (1.0)	<1.0	11	3.8
AE109R-8	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-3	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-4	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-5	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-6	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-5	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-6	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-5	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-6	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26R-5	NA	NA	NA	<20 (5.0)	<50 (12)	<5.0	<10	<10	32
AE28R-4	NA	NA	NA	<100 (1.0)	<100 (1.0)	<1.0	<50 (38)	76	130
AE29R-6	NA	NA	NA	2	1.8	<5.0 (2.6)	<2.5	<2.0	4.9
BRW-1R4	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R3	140	NS (30)	12	<100 (12)	<100 (11)	<100 (11)	<20 (11)	<20 (10)	<10

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

1,4-Dioxane Lower Bedrock Input Data

	Sep. 2009	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE101R-4	NA	3.4	NS	NS	NS	NS	NS	NS
AE101R-5	NA	NA	9	17	17	16	15	18
AE101R-6	NA	4.3	2.8	6.8	8.5	11	9.6	9.2
AE102RR-4	NA	NA	4.4	5.7	6.8	6	5.2	8.1
AE102RR-5	NA	13	10	14	NS	NS	NS	NS
AE102RR-6	NA	21	10	22	23	26	25	25
AE103R-5	NA	32	34	47	48	36	37	38
AE103R-6	NA	NA	18	30	NS	NS	NS	NS
AE103R-7	NA	NA	17	26	NS	NS	NS	NS
AE104R-4	NA	16	11	26	19	19	17	22
AE104R-5	NA	14	17	22	NS	NS	NS	NS
AE104R-6	NA	15	10	24	24	20	21	21
AE105R-4	NA	NA	NA	5.9	6.3	5.3	5.3	5.5
AE106R-4	NA	1	NS	NS	NS	NS	NS	NS
AE106R-5	NA	<0.20	NS (0.28)	0.4	0.37	0.27	0.4	0.4
AE108R-4	NA	2.3	NS	NS	NS	NS	NS	NS
AE108R-5	NA	1.6	NS	NS	NS	NS	NS	NS
AE109R-5	NA	NA	4.8	3	2.1	1.4	1.7	NS
AE109R-6	NA	NA	0.82	1.4	NS	NS	NS	NS
AE109R-7	NA	NA	6.5	1.6	1.4	1.6	1.5	1.5
AE110R-6	NA	NA	8	1.4	1.4	1.3	1.3	1.4
AE110R-7	NA	NA	12	0.78	NS	NS	NS	NS
AE111R-4	NA	NA	<0.20	NS	NS	NS	NS	NS
AE111R-5	NA	NA	<0.20	NS	NS	NS	NS	NS
AE111R-6	NA	NA	<0.20	NS	NS	NS	NS	NS
AE111R-7	NA	NA	0.22	NS	NS	NS	NS	NS
AE112R-5	NA	NA	0.33	NS	NS	NS	NS	NS
AE112R-6	NA	NA	<0.20	NS	NS	NS	NS	NS
AE112R-7	NA	NA	<0.20	NS	NS	NS	NS	NS
AE26R-5	NA	NA	20	43	29	34	27	28
AE28R-4	NA	NA	32	NS	NS	NS	NS	NS
AE29R-6	NA	NA	23	42	43	50	43	43
BRW-1R4	5.7	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Geochemical Lower Bedrock Input Data

	Jan. 1990	Jan. 1990	Jan. 1990	Jan. 1990
AE101R-4	NS	NS	NS	-56
AE101R-5	NS	NS	NS	-43
AE101R-6	NS	NS	NS	-116
AE102RR-4	NS	NS	NS	-39
AE102RR-5	NS	NS	NS	-37
AE102RR-6	NS	NS	NS	-96
AE103R-5	0.49	29	60	48
AE103R-6	NS	NS	NS	-20
AE103R-7	NS	NS	NS	-34
AE104R-4	NS	NS	NS	-138
AE104R-5	NS	NS	NS	-161
AE104R-6	NS	NS	NS	-159
AE105R-4	NS	NS	NS	-45
AE105R-5	NS	NS	NS	-58
AE106R-4	NS	NS	NS	-40
AE106R-5	NS	NS	NS	-37
AE108R-4	NS	NS	NS	-12
AE108R-5	NS	NS	NS	-53
AE109R-3	NS	NS	NS	-110
AE109R-4	NS	NS	NS	-154
AE109R-5	NS	NS	NS	-172
AE109R-6	NS	NS	NS	-160
AE109R-7	NS	NS	NS	-165
AE109R-8	NS	NS	NS	-165
AE110R-3	NS	NS	NS	-138
AE110R-4	NS	NS	NS	-127
AE110R-5	NS	NS	NS	-123
AE110R-6	NS	NS	NS	-105
AE110R-7	NS	NS	NS	-99
AE111R-4	NS	NS	NS	-156
AE111R-5	NS	NS	NS	-155
AE111R-6	NS	NS	NS	-127
AE111R-7	NS	NS	NS	-152
AE112R-5	NS	NS	NS	-111
AE112R-6	1.3	0.25	1,400	-98
AE112R-7	NS	NS	NS	-110
AE26R-5	NS	NS	NS	-218
AE28R-4	NS	NS	NS	-275
AE29R-6	0.61	1.1	<2.0	-177
EMW-11R3	NS	NS	NS	-117

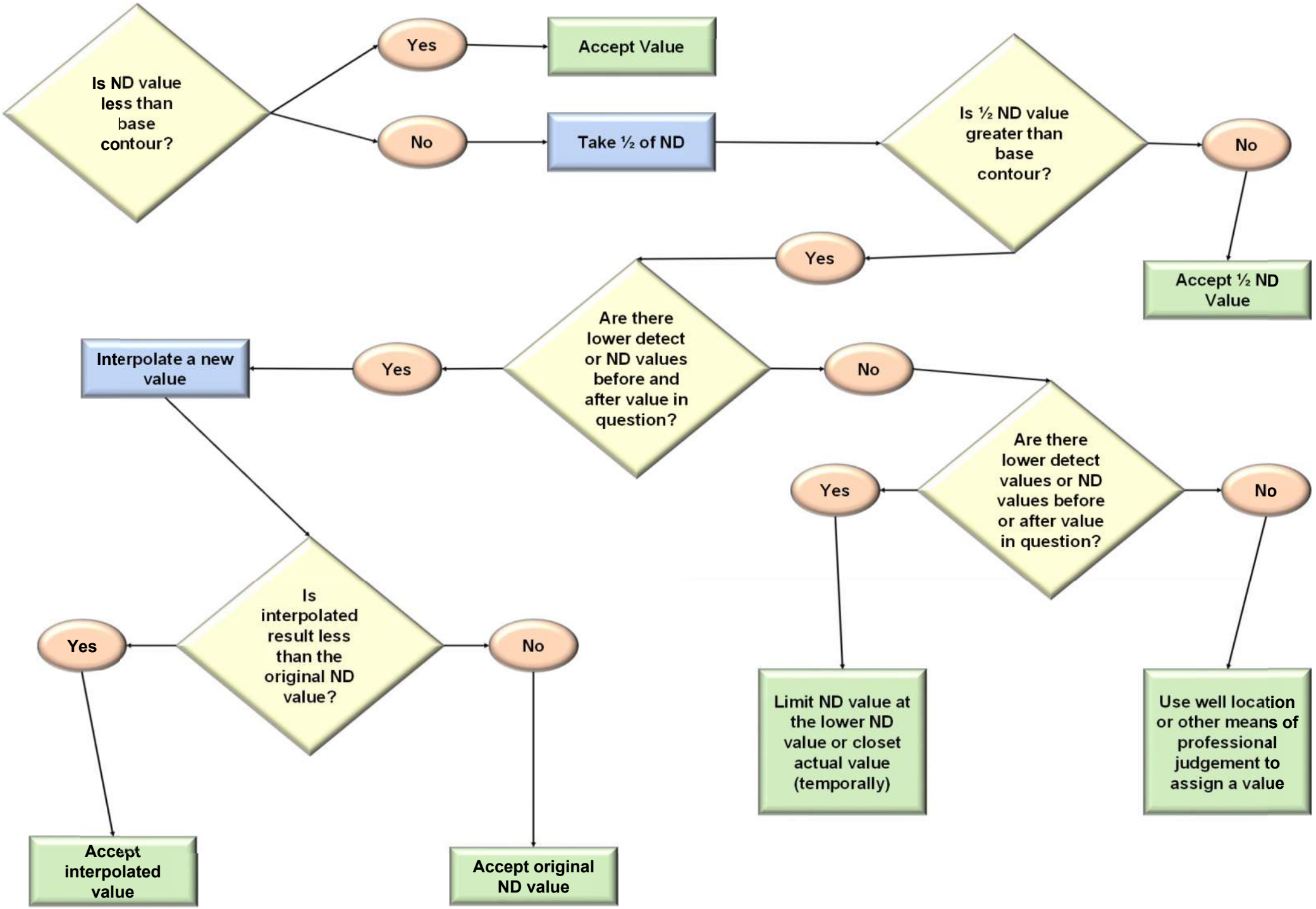
Notes:

All concentrations in µg/l

<5.00: Analyte not detected. Detection limit used.

Appendix C:

Non-Detect Value Determination Flow Chart.pdf



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Appendix D:

Ricker Method® Plume Stability Analysis Metrics Summary.pdf

Ricker Method® Plume Stability Characteristics PCE Overburden			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	4.42	13.7	1.64
Sep-91	6.06	10.6	1.75
Mar-92	7.22	9.71	1.91
Sep-92	14.6	14.0	5.58
Mar-93	5.67	8.73	1.35
Sep-93	3.86	8.00	0.84
Mar-94	4.93	7.67	1.03
Sep-94	5.39	8.00	1.17
Mar-95	5.48	9.03	1.35
Sep-95	4.43	8.13	0.98
Mar-96	4.01	8.69	0.95
Sep-96	4.80	17.2	2.25
Sep-97	3.95	16.5	1.78
Mar-98	3.50	16.0	1.52
Sep-98	16.0	10.8	4.71
Mar-99	12.6	10.0	3.44
Sep-99	7.12	10.1	1.96
Mar-00	3.86	11.8	1.24
Sep-00	3.80	12.1	1.25
Mar-01	3.90	12.0	1.27
Sep-01	4.18	11.6	1.32
Mar-02	4.44	11.4	1.38
Sep-02	4.59	11.3	1.42
Sep-03	4.74	11.5	1.48
Sep-05	3.20	8.12	0.71
Sep-08	0.87	6.72	0.16
Mar-09	1.38	10.2	0.38
Sep-09	1.20	8.99	0.29
Mar-10	1.17	7.31	0.23
Mar-11	1.23	24.7	0.83
Sep-11	1.29	26.0	0.91
Mar-12	1.66	18.2	0.82
Sep-12	1.80	12.9	0.63
Mar-13	1.50	12.5	0.51
Sep-13	1.84	20.3	1.02
Mar-14	2.16	40.7	2.39
Sep-14	6.75	48.9	8.98
Mar-15	3.98	51.1	5.53
Mar-16	4.11	46.4	5.18
Sep-17	4.18	19.2	2.19
Sep-18	4.79	19.8	2.58
Sep-19	3.93	41.0	4.38
Sep-20	4.00	19.0	2.06
Sep-21	4.62	15.8	1.98

Ricker Method® Plume Stability Characteristics TCE Overburden			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	3.60	13.8	1.35
Sep-91	4.27	10.2	1.19
Mar-92	5.44	9.05	1.34
Sep-92	14.5	14.1	5.57
Mar-93	5.88	8.67	1.39
Sep-93	4.02	7.96	0.87
Mar-94	5.13	7.64	1.06
Sep-94	5.64	7.95	1.22
Mar-95	5.81	8.93	1.41
Sep-95	4.74	8.07	1.04
Mar-96	4.34	8.59	1.01
Sep-96	5.26	16.6	2.38
Sep-97	4.31	16.1	1.88
Mar-98	3.77	15.6	1.60
Sep-98	16.2	10.8	4.76
Mar-99	12.8	10.0	3.48
Sep-99	7.13	10.1	1.96
Mar-00	3.86	11.8	1.24
Sep-00	3.80	12.1	1.25
Mar-01	3.89	12.0	1.27
Sep-01	4.18	11.7	1.33
Mar-02	4.44	11.4	1.38
Sep-02	4.59	11.3	1.42
Sep-03	4.74	11.5	1.48
Sep-05	3.20	8.12	0.71
Sep-08	0.86	6.72	0.16
Mar-09	1.38	10.2	0.38
Sep-09	1.20	8.99	0.29
Mar-10	1.17	7.31	0.23
Mar-11	1.23	24.7	0.83
Sep-11	1.29	26.0	0.91
Mar-12	1.66	18.2	0.82
Sep-12	1.80	12.9	0.63
Mar-13	1.50	12.5	0.51
Sep-13	1.84	20.3	1.02
Mar-14	2.16	40.7	2.39
Sep-14	6.75	48.9	8.98
Mar-15	3.98	51.1	5.53
Mar-16	4.24	45.1	5.20
Sep-17	4.24	18.9	2.18
Sep-18	4.78	20.0	2.61
Sep-19	3.94	41.0	4.40
Sep-20	3.93	19.3	2.07
Sep-21	4.78	15.8	2.05

Ricker Method® Plume Stability Characteristics cis-1,2-DCE Overburden			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	0.00	5.00	0.00
Sep-91	0.30	6.40	0.05
Mar-92	0.22	6.63	0.04
Sep-92	1.18	13.4	0.43
Mar-93	13.3	11.1	4.01
Sep-93	13.4	14.6	5.33
Mar-94	14.1	13.8	5.30
Sep-94	13.9	13.4	5.04
Mar-95	13.2	13.2	4.71
Sep-95	12.1	13.0	4.30
Mar-96	10.6	13.3	3.85
Sep-96	10.6	11.9	3.43
Sep-97	8.50	13.9	3.22
Mar-98	7.86	15.9	3.40
Sep-98	14.5	17.8	7.04
Mar-99	12.8	19.3	6.72
Sep-99	9.56	22.6	5.87
Mar-00	8.56	25.1	5.85
Sep-00	8.92	24.6	5.98
Mar-01	9.22	24.2	6.06
Sep-01	9.47	23.8	6.13
Mar-02	10.4	22.6	6.41
Sep-02	11.1	22.0	6.66
Sep-03	11.9	21.8	7.03
Sep-05	11.5	15.1	4.71
Sep-08	11.1	17.1	5.17
Mar-09	13.1	17.4	6.19
Sep-09	15.2	16.2	6.68
Mar-10	14.6	15.2	6.03
Mar-11	14.2	16.8	6.48
Sep-11	13.1	16.7	5.91
Mar-12	13.4	17.1	6.21
Sep-12	12.2	14.8	4.91
Mar-13	12.3	15.0	5.00
Sep-13	12.7	15.2	5.22
Mar-14	13.8	15.0	5.64
Sep-14	19.3	14.5	7.63
Mar-15	21.1	13.9	7.95
Mar-16	19.9	12.5	6.76
Sep-17	21.8	11.9	7.07
Sep-18	19.4	10.6	5.61
Sep-19	17.4	9.43	4.46
Sep-20	17.3	9.74	4.57
Sep-21	16.0	9.06	3.94

Ricker Method® Plume Stability Characteristics Vinyl Chloride Overburden			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	1.99	3.76	0.20
Sep-91	2.19	4.14	0.25
Mar-92	2.22	4.25	0.26
Sep-92	4.74	6.76	0.87
Mar-93	4.93	7.07	0.95
Sep-93	4.57	5.90	0.73
Mar-94	5.50	5.06	0.76
Sep-94	4.87	6.27	0.83
Mar-95	3.85	6.42	0.67
Sep-95	3.89	5.85	0.62
Mar-96	2.20	7.10	0.43
Sep-96	1.38	2.86	0.11
Sep-97	2.77	9.79	0.74
Mar-98	2.51	13.0	0.88
Sep-98	2.86	12.5	0.97
Mar-99	2.87	12.9	1.01
Sep-99	2.90	13.1	1.03
Mar-00	2.93	13.2	1.05
Sep-00	2.95	13.4	1.07
Mar-01	2.98	13.5	1.09
Sep-01	3.01	13.6	1.11
Mar-02	3.06	13.6	1.13
Sep-02	3.11	13.6	1.15
Sep-03	3.22	13.5	1.18
Sep-05	5.45	4.22	0.62
Sep-08	2.09	5.89	0.33
Mar-09	3.56	8.57	0.83
Sep-09	3.79	8.15	0.84
Mar-10	3.77	8.14	0.83
Mar-11	3.56	6.70	0.65
Sep-11	3.56	6.45	0.62
Mar-12	4.35	7.83	0.93
Sep-12	4.28	5.71	0.66
Mar-13	4.21	5.45	0.62
Sep-13	4.54	5.39	0.67
Mar-14	4.84	5.27	0.69
Sep-14	4.64	4.38	0.55
Mar-15	5.00	4.05	0.55
Mar-16	5.05	5.12	0.70
Sep-17	3.89	4.65	0.49
Sep-18	4.70	3.49	0.45
Sep-19	5.52	3.03	0.45
Sep-20	4.98	2.84	0.38
Sep-21	4.10	2.92	0.33

Ricker Method® Plume Stability Characteristics 1,4-dioxane Overburden			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Mar-12	2.07	0.48	0.03
Sep-12	6.10	0.44	0.07
Sep-13	9.43	0.43	0.11
Mar-14	9.44	0.43	0.11
Mar-15	9.49	0.56	0.15
Mar-16	18.4	0.60	0.30
Sep-17	23.8	0.69	0.45
Sep-18	20.4	0.83	0.46
Sep-19	19.9	0.64	0.35
Sep-20	18.1	0.55	0.27
Sep-21	18.6	0.51	0.26

Ricker Method® Plume Stability Characteristics Chloroethanes Overburden			
Event	**Area (acres)**	**Average Concentration (nmol/L)**	**Mass Indicator (moles)**
Sep-89	4.26	202	10.6
Sep-91	6.07	146	10.9
Mar-92	7.26	133	11.9
Sep-92	16.1	215	42.8
Mar-93	17.5	158	34.1
Sep-93	16.3	177	35.6
Mar-94	17.7	168	36.8
Sep-94	17.3	174	37.0
Mar-95	16.5	174	35.4
Sep-95	15.3	164	30.9
Mar-96	14.0	157	27.2
Sep-96	13.2	192	31.2
Sep-97	11.8	219	31.8
Mar-98	11.0	235	32.0
Sep-98	21.6	260	69.3
Mar-99	18.6	262	60.1
Sep-99	11.7	324	47.0
Mar-00	9.48	365	42.6
Sep-00	9.71	362	43.4
Mar-01	10.0	356	44.1
Sep-01	10.4	350	44.9
Mar-02	11.4	332	46.7
Sep-02	12.1	322	48.2
Sep-03	13.0	315	50.5
Sep-05	13.7	183	31.0
Sep-08	11.1	202	27.6
Mar-09	13.2	229	37.3
Sep-09	15.1	210	39.2
Mar-10	14.7	197	35.8
Mar-11	13.9	234	40.2
Sep-11	12.9	238	37.8
Mar-12	13.4	247	40.9
Sep-12	13.7	188	31.7
Mar-13	13.3	190	31.1
Sep-13	13.8	209	35.4
Mar-14	14.5	258	46.1
Sep-14	20.5	377	95.2
Mar-15	21.2	288	75.3
Mar-16	20.6	271	68.8
Sep-17	22.0	184	50.1
Sep-18	20.8	178	45.5
Sep-19	18.8	220	51.2
Sep-20	17.9	168	36.9
Sep-21	16.9	159	33.2

Ricker Method® Plume Stability Characteristics PCE Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	6.53	55.3	0.46
Mar-92	6.37	53.7	0.44
Sep-92	11.7	200	2.98
Mar-93	6.57	53.2	0.45
Sep-93	8.24	104	1.10
Mar-94	6.94	66.5	0.59
Sep-94	7.52	88.2	0.85
Mar-95	8.17	125	1.30
Sep-95	8.53	151	1.65
Mar-96	8.63	151	1.66
Sep-96	8.50	118	1.28
Mar-97	8.56	118	1.29
Sep-97	8.25	95.7	1.01
Mar-98	7.52	83.3	0.80
Sep-98	6.84	90.5	0.79
Mar-99	8.07	35.1	0.36
Sep-99	7.52	30.0	0.29
Mar-00	9.95	105	1.34
Sep-00	10.1	152	1.95
Mar-01	9.88	155	1.96
Sep-01	9.09	148	1.72
Sep-02	8.44	138	1.49
Sep-03	8.83	194	2.19
Mar-05	7.70	108	1.06
Sep-05	8.17	144	1.50
Sep-08	5.95	73.0	0.56
Sep-09	6.28	83.2	0.67
Sep-11	6.63	90.6	0.77
Sep-12	6.77	106	0.92
Sep-13	7.36	359	3.38
Mar-14	6.90	222	1.95
Sep-14	8.97	290	3.33
Mar-15	8.96	242	2.78
Mar-16	9.83	411	5.16
Sep-17	9.98	340	4.34
Sep-18	9.61	311	3.82
Sep-19	7.82	539	5.39
Sep-20	8.21	439	4.61
Sep-21	7.29	505	4.70

Ricker Method® Plume Stability Characteristics TCE Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	7.69	148	1.46
Mar-92	7.06	77.8	0.70
Sep-92	14.0	110	1.97
Mar-93	8.64	68.8	0.76
Sep-93	8.78	144	1.61
Mar-94	8.04	109	1.12
Sep-94	8.55	141	1.54
Mar-95	9.11	177	2.06
Sep-95	9.47	201	2.43
Mar-96	9.42	170	2.05
Sep-96	9.70	174	2.15
Mar-97	9.57	156	1.91
Sep-97	9.54	151	1.84
Mar-98	8.94	133	1.51
Sep-98	7.80	101	1.01
Mar-99	9.52	59.9	0.73
Sep-99	9.50	35.5	0.43
Mar-00	10.9	116	1.62
Sep-00	10.8	157	2.18
Mar-01	11.0	181	2.55
Sep-01	10.7	180	2.46
Sep-02	10.4	179	2.37
Sep-03	10.6	278	3.78
Mar-05	9.65	209	2.58
Sep-05	9.59	227	2.78
Sep-08	7.65	106	1.04
Sep-09	7.78	134	1.34
Sep-11	7.89	174	1.76
Sep-12	7.90	161	1.62
Sep-13	8.55	970	10.6
Mar-14	8.11	472	4.90
Sep-14	11.5	616	9.08
Mar-15	11.6	689	10.2
Mar-16	11.3	646	9.30
Sep-17	11.4	639	9.33
Sep-18	11.1	633	8.96
Sep-19	9.31	921	11.0
Sep-20	9.75	746	9.30
Sep-21	9.45	748	9.03

Ricker Method® Plume Stability Characteristics cis-1,2-DCE Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	0.00	5.00	0.00
Mar-92	2.68	11.4	0.04
Sep-92	2.73	19.6	0.07
Mar-93	3.81	35.2	0.17
Sep-93	3.98	41.9	0.21
Mar-94	3.96	66.2	0.34
Sep-94	4.00	67.5	0.35
Mar-95	4.04	68.2	0.35
Sep-95	4.06	67.6	0.35
Mar-96	4.08	66.0	0.34
Sep-96	4.70	73.1	0.44
Mar-97	4.47	66.1	0.38
Sep-97	5.07	82.6	0.54
Mar-98	5.62	94.4	0.68
Sep-98	4.21	80.6	0.43
Mar-99	6.63	101	0.86
Sep-99	5.37	32.2	0.22
Mar-00	6.32	31.9	0.26
Sep-00	6.30	33.2	0.27
Mar-01	6.66	34.1	0.29
Sep-01	6.50	35.8	0.30
Sep-02	6.37	37.3	0.30
Sep-03	6.62	44.7	0.38
Mar-05	6.54	38.9	0.33
Sep-05	6.19	24.0	0.19
Sep-08	6.12	24.9	0.19
Sep-09	6.24	25.3	0.20
Sep-11	6.38	26.2	0.21
Sep-12	6.34	25.1	0.20
Sep-13	6.29	23.8	0.19
Mar-14	7.21	27.9	0.26
Sep-14	8.52	27.3	0.30
Mar-15	8.82	57.3	0.65
Mar-16	9.14	51.7	0.60
Sep-17	9.45	59.5	0.72
Sep-18	10.8	63.0	0.87
Sep-19	11.3	68.2	0.98
Sep-20	10.6	73.6	1.00
Sep-21	9.93	70.5	0.89

Ricker Method® Plume Stability Characteristics Vinyl Chloride Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	3.96	46.2	0.23
Mar-92	3.84	35.9	0.18
Sep-92	4.39	31.2	0.18
Mar-93	4.62	26.7	0.16
Sep-93	3.81	48.1	0.23
Mar-94	3.24	31.5	0.13
Sep-94	3.13	35.5	0.14
Mar-95	3.11	34.5	0.14
Sep-95	3.02	28.9	0.11
Mar-96	3.37	33.3	0.14
Sep-96	4.47	33.1	0.19
Mar-97	3.73	30.1	0.14
Sep-97	4.05	28.5	0.15
Mar-98	4.26	28.6	0.16
Sep-98	3.51	32.1	0.14
Mar-99	4.97	24.8	0.16
Sep-99	4.66	21.8	0.13
Mar-00	5.02	19.0	0.12
Sep-00	4.63	18.7	0.11
Mar-01	3.95	19.5	0.10
Sep-01	3.55	19.2	0.09
Sep-02	3.62	13.7	0.06
Sep-03	4.91	5.30	0.03
Mar-05	5.32	5.31	0.04
Sep-05	4.60	3.52	0.02
Sep-08	2.86	2.89	0.01
Sep-09	2.75	2.78	0.01
Sep-11	2.83	2.67	0.01
Sep-12	2.50	2.52	0.01
Sep-13	1.71	2.48	0.01
Mar-14	1.45	2.48	0.00
Sep-14	3.96	3.83	0.02
Mar-15	3.69	3.77	0.02
Mar-16	6.88	6.84	0.06
Sep-17	7.31	8.49	0.08
Sep-18	7.94	9.37	0.10
Sep-19	7.68	9.46	0.09
Sep-20	7.70	10.6	0.10
Sep-21	6.82	16.3	0.14

Ricker Method® Plume Stability Characteristics 1,4-dioxane Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-09	11.7	1.97	0.03
Sep-12	8.64	1.47	0.02
Sep-13	2.18	0.77	0.00
Mar-14	3.33	2.39	0.01
Mar-15	15.7	2.11	0.04
Mar-16	13.0	2.09	0.03
Sep-17	13.7	2.77	0.05
Sep-18	13.6	2.57	0.04
Sep-19	12.9	2.64	0.04
Sep-20	11.7	1.94	0.03
Sep-21	13.4	2.62	0.04

Ricker Method® Plume Stability Characteristics Chloroethenes Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (nmol/L)**	**Mass Indicator (moles)**
Sep-89	8.32	1,654	7.98
Mar-92	7.21	1,213	5.07
Sep-92	14.2	1,996	16.5
Mar-93	9.35	1,067	5.79
Sep-93	9.48	2,047	11.2
Mar-94	8.20	1,681	7.99
Sep-94	8.60	2,059	10.3
Mar-95	9.13	2,510	13.3
Sep-95	9.51	2,775	15.3
Mar-96	9.60	2,564	14.3
Sep-96	9.54	2,593	14.3
Mar-97	9.66	2,302	12.9
Sep-97	9.66	2,262	12.7
Mar-98	9.08	2,225	11.7
Sep-98	8.11	1,849	8.69
Mar-99	9.92	1,505	8.66
Sep-99	9.67	758	4.25
Mar-00	11.0	1,771	11.3
Sep-00	11.0	2,330	14.9
Mar-01	11.0	2,548	16.2
Sep-01	10.7	2,457	15.2
Sep-02	10.4	2,348	14.1
Sep-03	10.9	3,322	21.0
Mar-05	10.1	2,324	13.6
Sep-05	10.1	2,511	14.7
Sep-08	8.87	1,184	6.09
Sep-09	9.07	1,417	7.45
Sep-11	8.89	1,790	9.23
Sep-12	8.76	1,797	9.12
Sep-13	9.19	8,759	46.6
Mar-14	8.74	4,625	23.4
Sep-14	11.5	6,263	41.9
Mar-15	11.6	6,844	45.9
Mar-16	11.4	7,491	49.4
Sep-17	11.4	7,281	47.9
Sep-18	11.4	6,958	46.1
Sep-19	11.9	8,396	57.7
Sep-20	11.1	7,808	50.1
Sep-21	10.6	7,974	49.1

Ricker Method® Plume Stability Characteristics PCE Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-92	0.06	5.39	0.00
Mar-93	0.00	5.00	0.00
Sep-93	0.00	5.00	0.00
Sep-97	0.00	5.00	0.00
Sep-98	3.69	19.3	0.27
Sep-99	4.22	26.3	0.42
Mar-00	4.38	29.2	0.49
Sep-01	6.44	177	4.38
Sep-02	6.41	177	4.36
Sep-03	4.37	50.6	0.85
Mar-04	4.86	44.0	0.82
Sep-04	4.22	28.7	0.46
Mar-05	6.17	130	3.07
Sep-05	5.87	49.8	1.12
Sep-08	5.46	39.3	0.82
Sep-09	5.87	47.3	1.06
Sep-11	6.43	73.3	1.81
Sep-12	7.16	165	4.52
Sep-14	12.8	191	9.39
Mar-15	13.5	187	9.65
Mar-16	15.7	347	20.9
Sep-17	15.6	338	20.2
Sep-18	15.3	297	17.4
Sep-19	14.8	359	20.3
Sep-20	14.4	316	17.5
Sep-21	14.3	339	18.5

Ricker Method® Plume Stability Characteristics TCE Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-92	0.47	6.31	0.01
Mar-93	0.00	5.00	0.00
Sep-93	0.00	5.00	0.00
Sep-97	0.00	5.00	0.00
Sep-98	3.99	22.3	0.34
Sep-99	5.11	48.1	0.94
Mar-00	5.36	59.6	1.23
Sep-01	6.87	292	7.69
Sep-02	6.74	254	6.57
Sep-03	6.00	136	3.13
Mar-04	5.72	87.7	1.92
Sep-04	5.01	48.4	0.93
Mar-05	7.42	440	12.5
Sep-05	7.44	207	5.90
Sep-08	6.76	142	3.69
Sep-09	7.49	193	5.54
Sep-11	7.85	255	7.68
Sep-12	7.80	282	8.44
Sep-14	16.6	281	17.9
Mar-15	15.9	377	23.1
Mar-16	17.5	460	30.9
Sep-17	17.9	459	31.6
Sep-18	17.6	468	31.6
Sep-19	17.4	494	33.0
Sep-20	17.0	419	27.4
Sep-21	17.0	421	27.4

Ricker Method® Plume Stability Characteristics cis-1,2-DCE Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-92	0.00	5.00	0.00
Mar-93	0.00	5.00	0.00
Sep-93	0.00	5.00	0.00
Sep-97	0.00	5.00	0.00
Sep-98	0.88	7.31	0.02
Sep-99	2.47	13.2	0.12
Mar-00	2.83	15.5	0.17
Sep-01	4.53	41.6	0.72
Sep-02	4.40	37.8	0.64
Sep-03	4.80	109	2.00
Mar-04	3.65	23.6	0.33
Sep-04	4.22	33.5	0.54
Mar-05	5.29	32.0	0.65
Sep-05	4.71	24.2	0.44
Sep-08	5.33	34.3	0.70
Sep-09	6.14	64.5	1.52
Sep-11	6.57	105	2.65
Sep-12	5.96	53.8	1.23
Sep-14	10.9	28.2	1.18
Mar-15	11.8	42.4	1.92
Mar-16	13.9	51.2	2.73
Sep-17	14.7	56.8	3.19
Sep-18	15.5	62.2	3.70
Sep-19	15.5	64.6	3.83
Sep-20	15.9	66.8	4.06
Sep-21	16.9	66.2	4.30

Ricker Method® Plume Stability Characteristics Vinyl Chloride Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-92	0.00	2.00	0.00
Mar-93	0.00	2.00	0.00
Sep-93	0.00	2.00	0.00
Sep-97	0.00	2.00	0.00
Sep-98	0.00	2.00	0.00
Sep-99	0.00	2.00	0.00
Mar-00	0.00	2.00	0.00
Sep-01	5.15	11.5	0.23
Sep-02	5.52	15.1	0.32
Sep-03	4.64	23.7	0.42
Mar-04	3.96	6.14	0.09
Sep-04	5.28	12.6	0.26
Mar-05	4.49	9.16	0.16
Sep-05	3.76	5.92	0.09
Sep-08	5.00	8.16	0.16
Sep-09	5.32	10.1	0.21
Sep-11	5.67	13.2	0.29
Sep-12	4.88	7.44	0.14
Sep-14	6.56	3.97	0.10
Mar-15	5.21	3.82	0.08
Mar-16	9.97	8.08	0.31
Sep-17	10.8	7.91	0.33
Sep-18	11.5	10.2	0.45
Sep-19	12.0	9.40	0.43
Sep-20	12.4	13.1	0.62
Sep-21	12.5	11.9	0.57

Ricker Method® Plume Stability Characteristics 1,4-dioxane Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Mar-08	8.62	3.02	0.10
Sep-08	10.5	3.67	0.15
Sep-09	11.2	4.59	0.20
Sep-12	10.2	2.48	0.10
Mar-15	17.3	2.57	0.17
Mar-16	18.1	2.63	0.18
Sep-17	18.2	3.23	0.23
Sep-18	18.7	3.32	0.24
Sep-19	18.5	3.24	0.23
Sep-20	18.3	2.93	0.21
Sep-21	18.5	3.06	0.22

Ricker Method® Plume Stability Characteristics Chloroethenes Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (nmol/L)**	**Mass Indicator (moles)**
Sep-92	0.42	59.3	0.04
Mar-93	0.00	0.00	0.00
Sep-93	0.00	0.00	0.00
Sep-97	0.00	0.00	0.00
Sep-98	3.81	307	2.04
Sep-99	4.92	585	5.00
Mar-00	5.14	709	6.34
Sep-01	6.61	3,777	43.4
Sep-02	6.57	3,497	39.9
Sep-03	6.03	2,434	25.5
Mar-04	5.50	1,160	11.1
Sep-04	5.57	915	8.86
Mar-05	8.26	3,878	55.7
Sep-05	7.55	1,984	26.1
Sep-08	7.17	1,553	19.4
Sep-09	7.63	2,306	30.6
Sep-11	7.95	3,320	45.9
Sep-12	7.62	3,638	48.2
Sep-14	16.2	3,319	93.7
Mar-15	15.5	4,288	115
Mar-16	17.1	6,009	179
Sep-17	17.7	5,895	181
Sep-18	17.6	5,770	177
Sep-19	17.4	6,276	190
Sep-20	17.7	5,375	166
Sep-21	18.4	5,283	169

Ricker Method® Plume Stability Characteristics PCE Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-98	8.69	118	7.86
Mar-00	8.55	107	7.05
Mar-01	8.05	78.6	4.85
Sep-01	8.73	122	8.17
Sep-02	7.94	73.8	4.49
Sep-03	7.11	42.4	2.31
Mar-05	6.22	28.8	1.38
Sep-05	6.07	27.9	1.30
Sep-11	5.75	25.9	1.14
Sep-14	11.7	190	17.1
Mar-15	11.2	226	19.4
Mar-16	19.4	274	40.8
Sep-17	17.5	283	38.0
Sep-18	16.6	246	31.3
Sep-19	16.3	256	32.0
Sep-20	16.0	238	29.2
Sep-21	16.2	237	29.4

Ricker Method® Plume Stability Characteristics TCE Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-98	8.79	132	8.90
Mar-00	8.97	151	10.4
Mar-01	8.46	106	6.87
Sep-01	9.15	172	12.1
Sep-02	8.58	114	7.50
Sep-03	8.26	80.2	5.08
Mar-05	8.72	127	8.50
Sep-05	8.83	143	9.66
Sep-11	8.88	142	9.66
Sep-14	13.9	292	31.1
Mar-15	15.2	406	47.2
Mar-16	21.0	422	67.8
Sep-17	22.7	393	68.5
Sep-18	22.3	378	64.6
Sep-19	21.1	374	60.5
Sep-20	20.6	350	55.4
Sep-21	21.1	321	52.0

Ricker Method® Plume Stability Characteristics cis-1,2-DCE Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-98	4.41	16.5	0.56
Mar-00	1.67	8.15	0.10
Mar-01	3.53	12.8	0.35
Sep-01	6.60	37.8	1.92
Sep-02	5.71	25.9	1.14
Sep-03	4.71	17.1	0.62
Mar-05	5.22	28.5	1.14
Sep-05	5.76	33.2	1.47
Sep-11	8.18	88.3	5.54
Sep-14	9.79	35.3	2.65
Mar-15	10.6	33.4	2.72
Mar-16	16.4	54.4	6.83
Sep-17	17.8	85.5	11.7
Sep-18	20.3	81.2	12.6
Sep-19	20.9	89.5	14.3
Sep-20	20.6	82.2	13.0
Sep-21	21.4	70.2	11.5

Ricker Method® Plume Stability Characteristics Vinyl Chloride Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-98	0.04	2.19	0.00
Mar-00	2.27	3.98	0.07
Mar-01	3.02	5.35	0.12
Sep-01	4.62	16.6	0.59
Sep-02	3.63	7.43	0.21
Sep-03	2.85	4.98	0.11
Mar-05	3.89	8.84	0.26
Sep-05	4.03	9.78	0.30
Sep-11	4.41	8.11	0.27
Sep-14	3.06	5.23	0.12
Mar-15	2.46	4.67	0.09
Mar-16	6.29	5.19	0.25
Sep-17	8.31	6.23	0.40
Sep-18	8.00	7.26	0.45
Sep-19	10.4	9.59	0.77
Sep-20	11.5	11.6	1.02
Sep-21	12.2	11.4	1.06

Ricker Method® Plume Stability Characteristics 1,4-Dioxane Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (nmol/L)**	**Mass Indicator (moles)**
Sep-09	6.25	0.89	0.04
Mar-15	11.8	2.50	0.23
Mar-16	16.9	3.38	0.44
Sep-17	20.0	4.12	0.63
Sep-18	19.9	3.87	0.59
Sep-19	19.4	3.72	0.55
Sep-20	19.7	3.58	0.54
Sep-21	19.8	3.68	0.56

Ricker Method® Plume Stability Characteristics Chloroethenes Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (nmol/L)**	**Mass Indicator (moles)**
Sep-98	8.53	1,847	54.8
Mar-00	8.71	1,850	56.1
Mar-01	8.21	1,384	39.5
Sep-01	8.89	2,497	77.2
Sep-02	8.33	1,554	45.0
Sep-03	8.02	987	27.5
Mar-05	8.45	1,372	40.3
Sep-05	8.57	1,542	46.0
Sep-11	8.60	2,148	64.3
Sep-14	13.6	3,550	168
Mar-15	14.8	4,456	229
Mar-16	22.6	4,828	379
Sep-17	22.2	5,149	398
Sep-18	23.2	4,593	371
Sep-19	22.6	4,688	369
Sep-20	21.9	4,457	339
Sep-21	22.9	4,038	321

Appendix E:

LMC Wilmington Well Sufficiency Analysis.pptx

SharePoint Link to Presentation

Groundwater Plume Analytics® Services

Former General Electric Facility

Wilmington, MA

Prepared For:
Lockheed Martin Corporation

DRAFT

December 17, 2021

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Plume Analytics® Services

Overburden	Upper Bedrock	Middle Bedrock	Lower Bedrock
PCE	PCE	PCE	PCE
TCE	TCE	TCE	TCE
Cis-1,2-DCE	Cis-1,2-DCE	Cis-1,2-DCE	Cis-1,2-DCE
Vinyl Chloride	Vinyl Chloride	Vinyl Chloride	Vinyl Chloride
Total Chloroethenes	Total Chloroethenes	Total Chloroethenes	Total Chloroethenes
1,4-Dioxane	1,4-Dioxane	1,4-Dioxane	1,4-Dioxane
Groundwater	Groundwater		
Flux	Flux	Flux	Flux
Geochemical	Geochemical	Geochemical	Geochemical

Summary

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0 ft 450 ft 900 ft

PCE
Overburden
Sep-1989

Concentration (µg/L)

1,000
750
500
250
100
50
25
15
10
5

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **4.4 acres**
Plume Average Concentration: **13.7 µg/L**
Plume Mass Indicator: **1.6 lbs**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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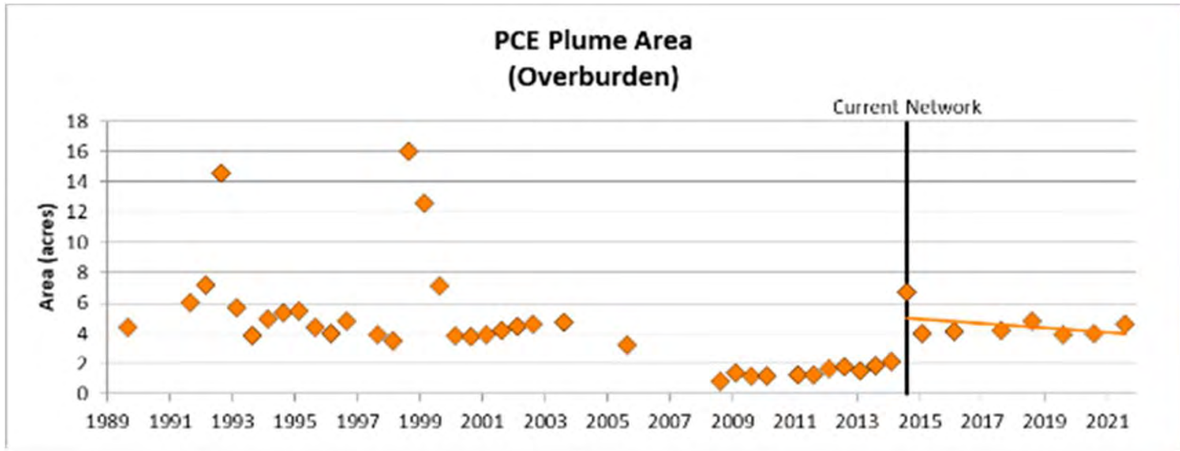
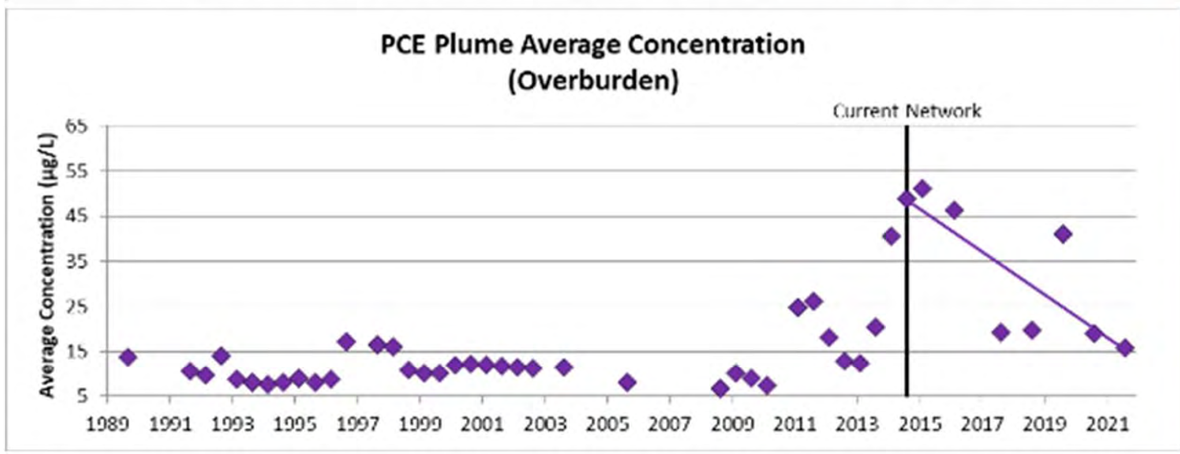
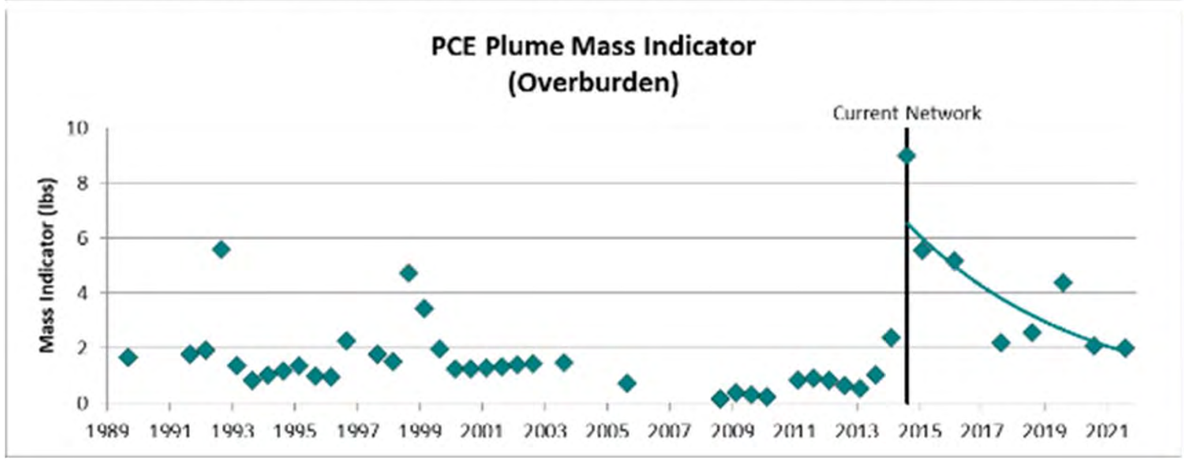


Sep-2014 to Sep-2021
No Trend
Mann-Kendall: 55% Confidence
Regression: 68% Confidence



Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: 99% Confidence
Regression: 98% Confidence



Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: >99% Confidence
Regression: 99% Confidence

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TCE
Overburden
Sep-1989

Concentration (µg/L)

- 1,000
- 750
- 500
- 250
- 100
- 50
- 25
- 15
- 10
- 5

0 ft — 450 ft — 900 ft

LEGEND

- MW-4 — Monitoring Well
- MW-5 — Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **3.6 acres**
Plume Average Concentration: **13.8 µg/L**
Plume Mass Indicator: **1.3 lbs**

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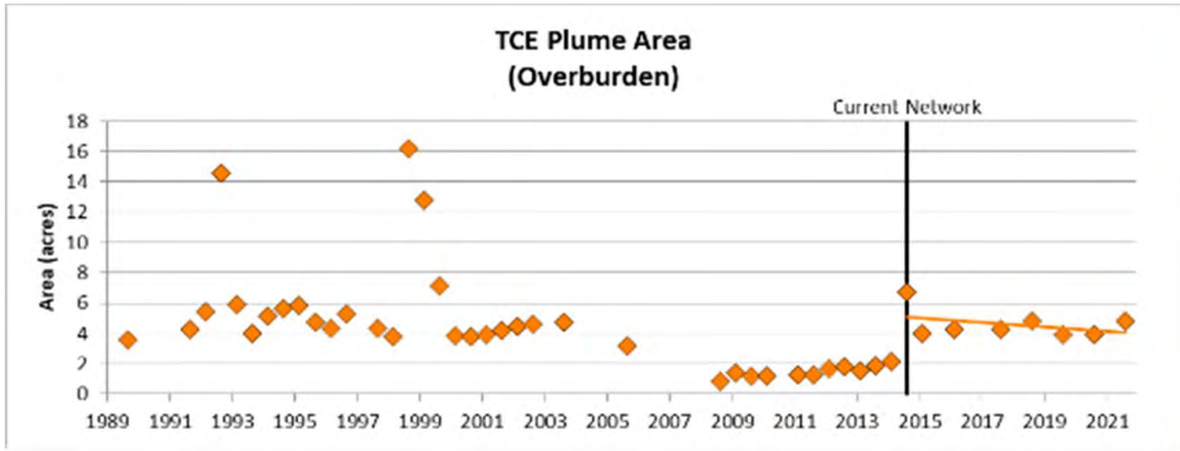
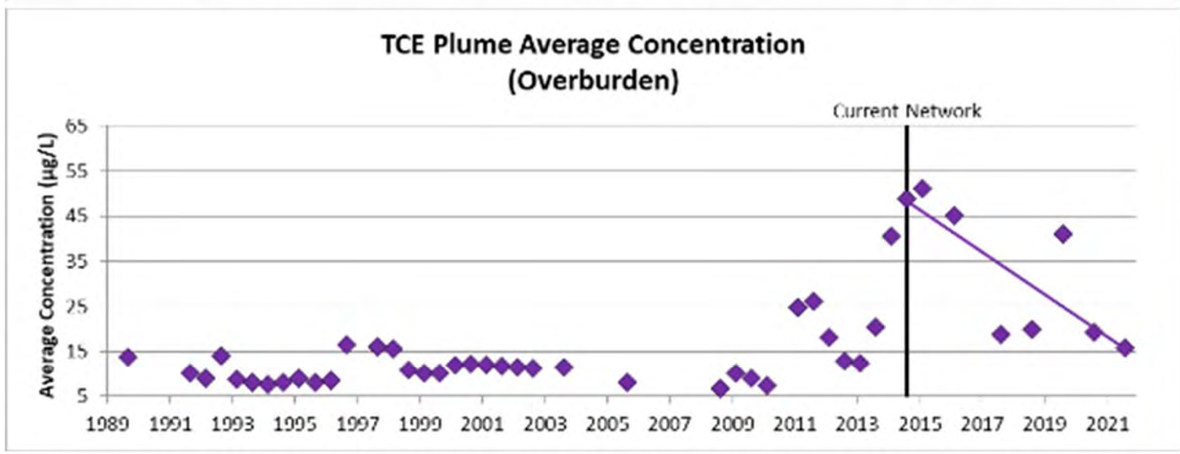
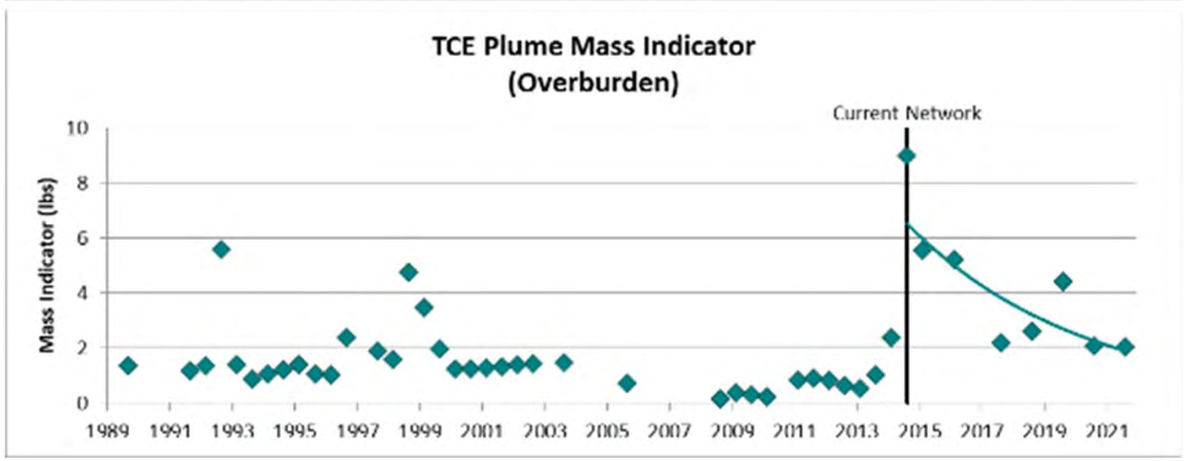


Sep-2014 to Sep-2021
No Trend
Mann-Kendall: 73% Confidence
Regression: 67% Confidence



Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: 98% Confidence
Regression: 98% Confidence



Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: >99% Confidence
Regression: 99% Confidence

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0 ft 450 ft 900 ft

cis-1,2-DCE
Overburden
Sep-1989

Concentration (µg/L)

1,000
750
500
250
100
MCL 70
25
15
10
5

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Plume Characteristics

Plume Area: **0.000 acres**
Plume Average Concentration: **< 5.0 µg/L**
Plume Mass Indicator: **0.000 lbs**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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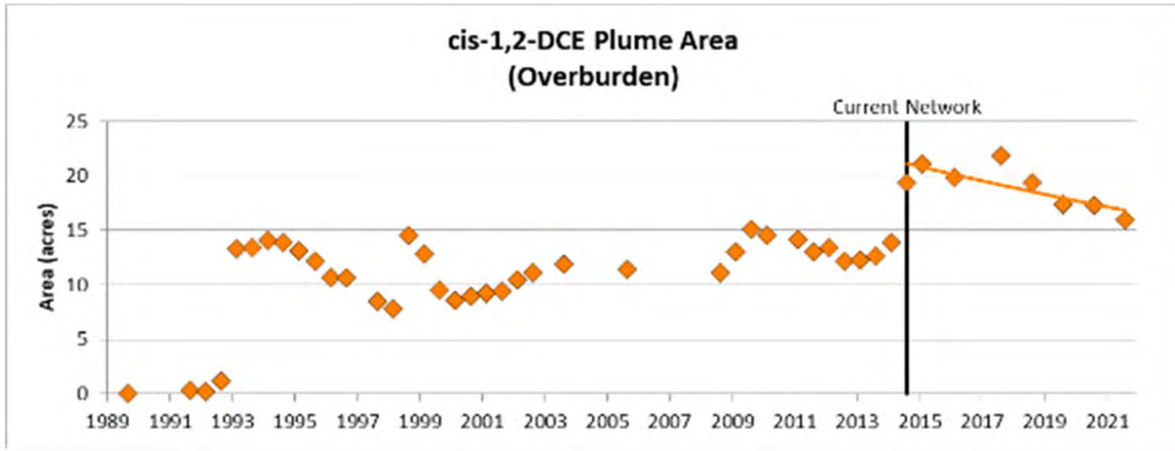
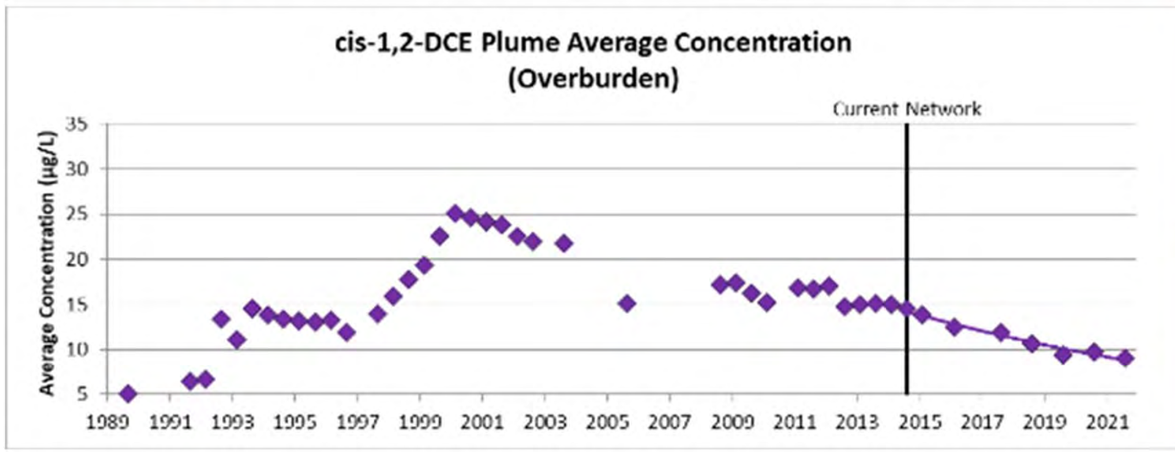
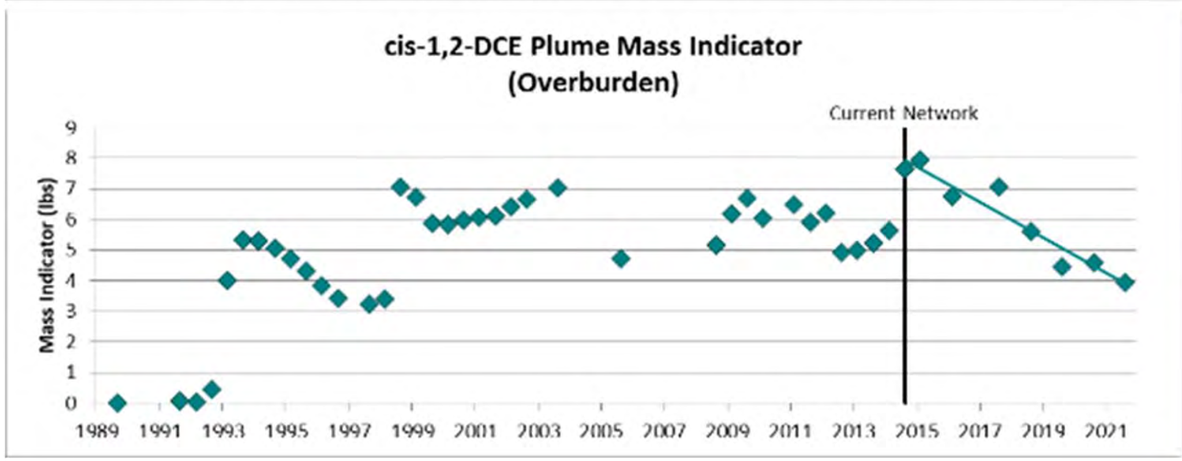


Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: 97% Confidence
Regression: 98% Confidence



Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence



Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence

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Vinyl Chloride
Overburden
Sep-1989

Concentration (µg/L)

- 1,000
- 750
- 500
- 250
- 100
- 50
- 25
- 15
- 10
- 2

0 ft 450 ft 900 ft

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **2.0 acres**
Plume Average Concentration: **3.8 µg/L**
Plume Mass Indicator: **0.20 lbs**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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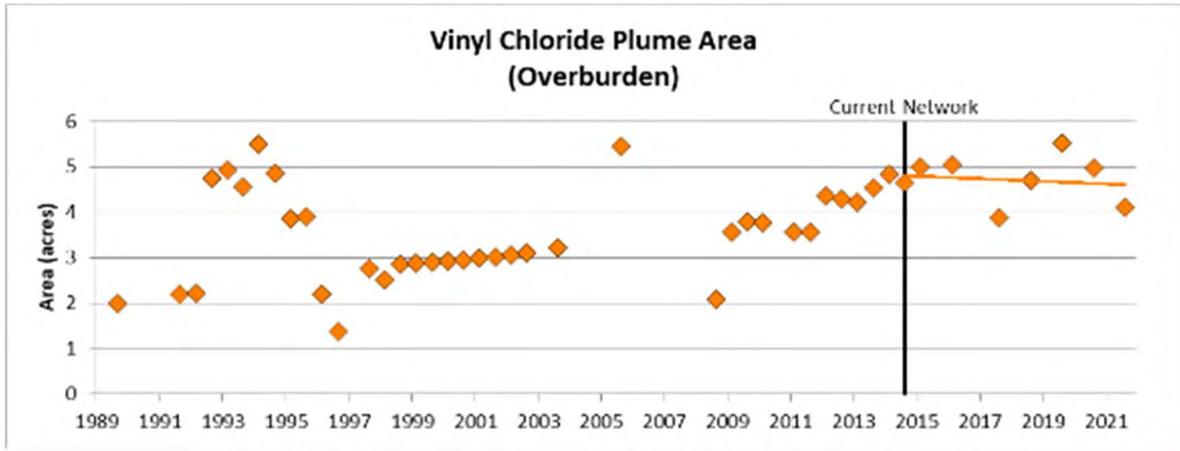
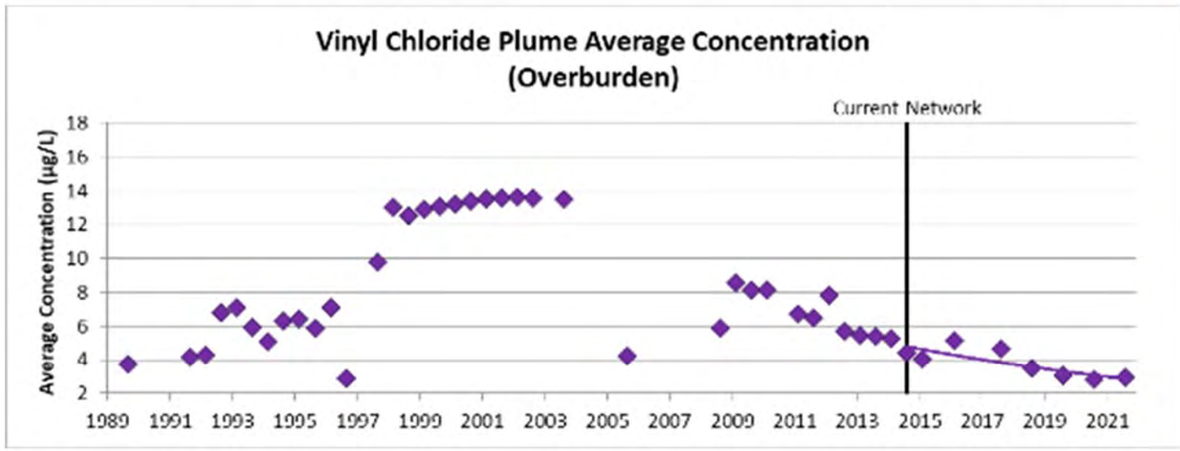
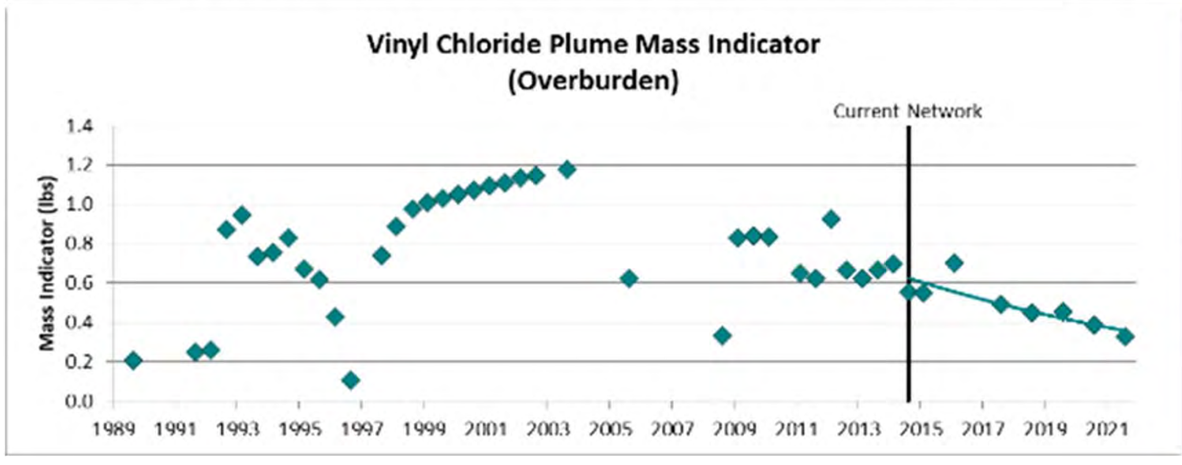


Sep-2014 to Sep-2021
No Trend
Mann-Kendall: 45% Confidence
Regression: 25% Confidence



Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: 98% Confidence
Regression: 99% Confidence



Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence

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Chloroethenes
Overburden
Sep-1989

Concentration (nmol/L)

- 4,500
- 4,000
- 3,500
- 3,000
- 2,500
- 2,000
- 1,500
- 1,000
- 500
- 0

0 ft 450 ft 900 ft

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **4.3 acres**
Plume Average Concentration: **202 nmol/L**
Plume Mass Indicator: **10.6 moles**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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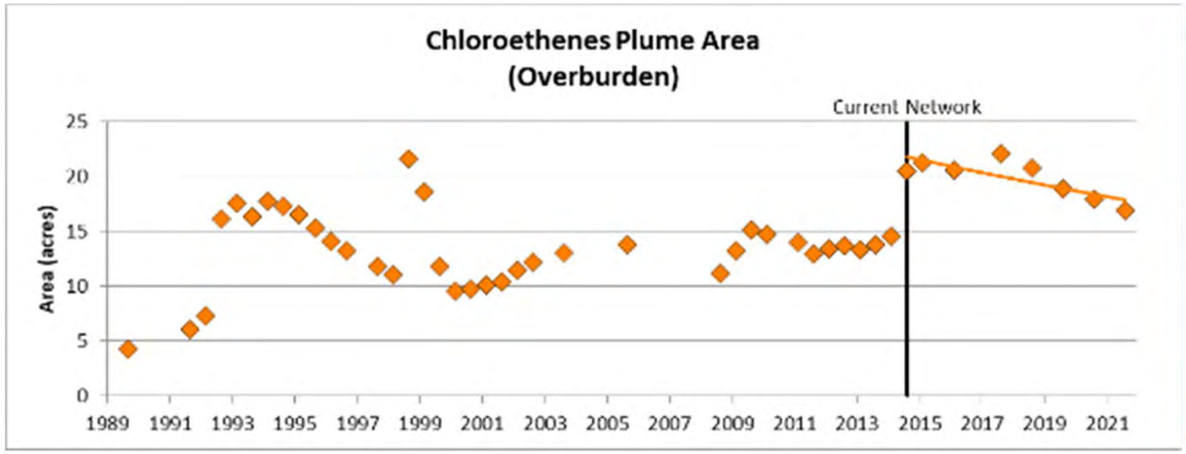
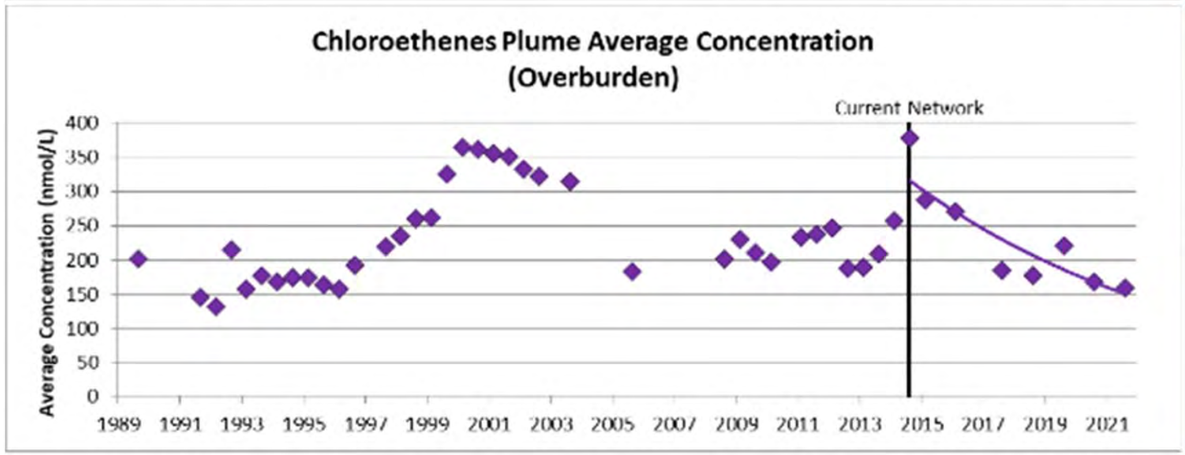
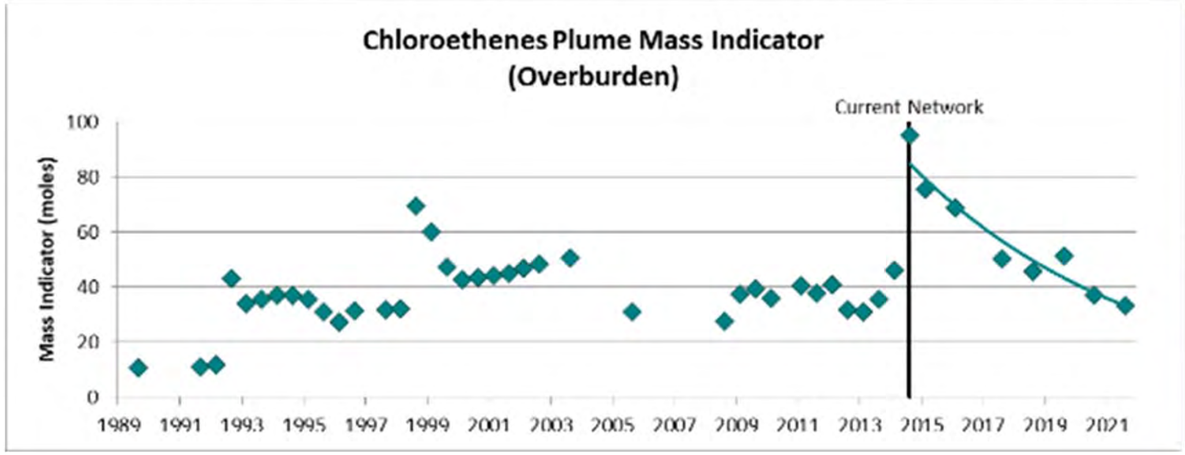


Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: 95% Confidence
Regression: 98% Confidence



Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence



Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence

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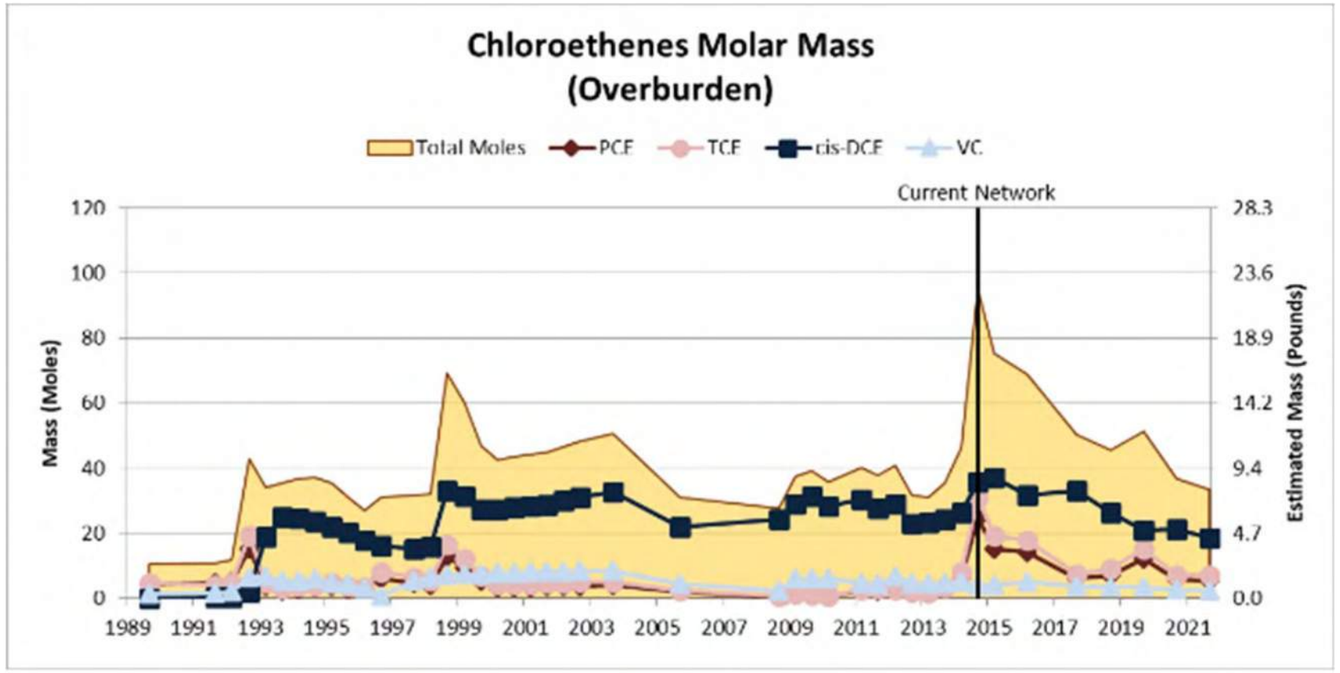
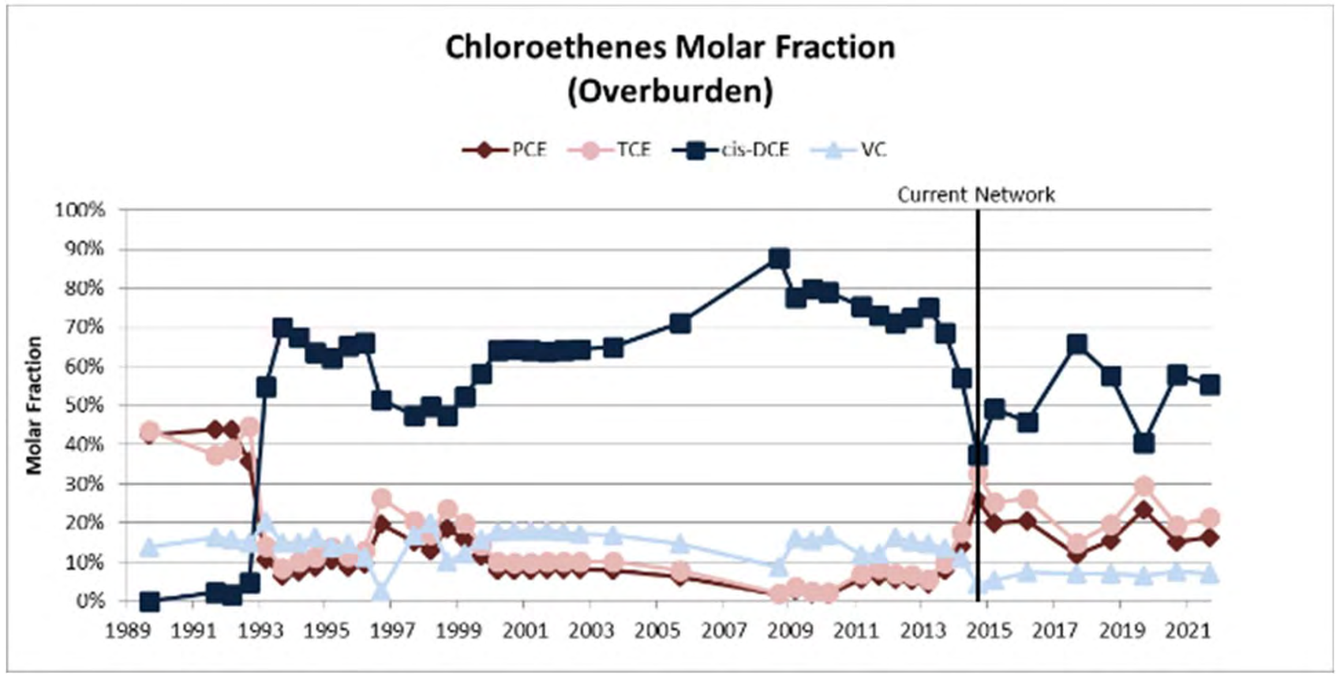
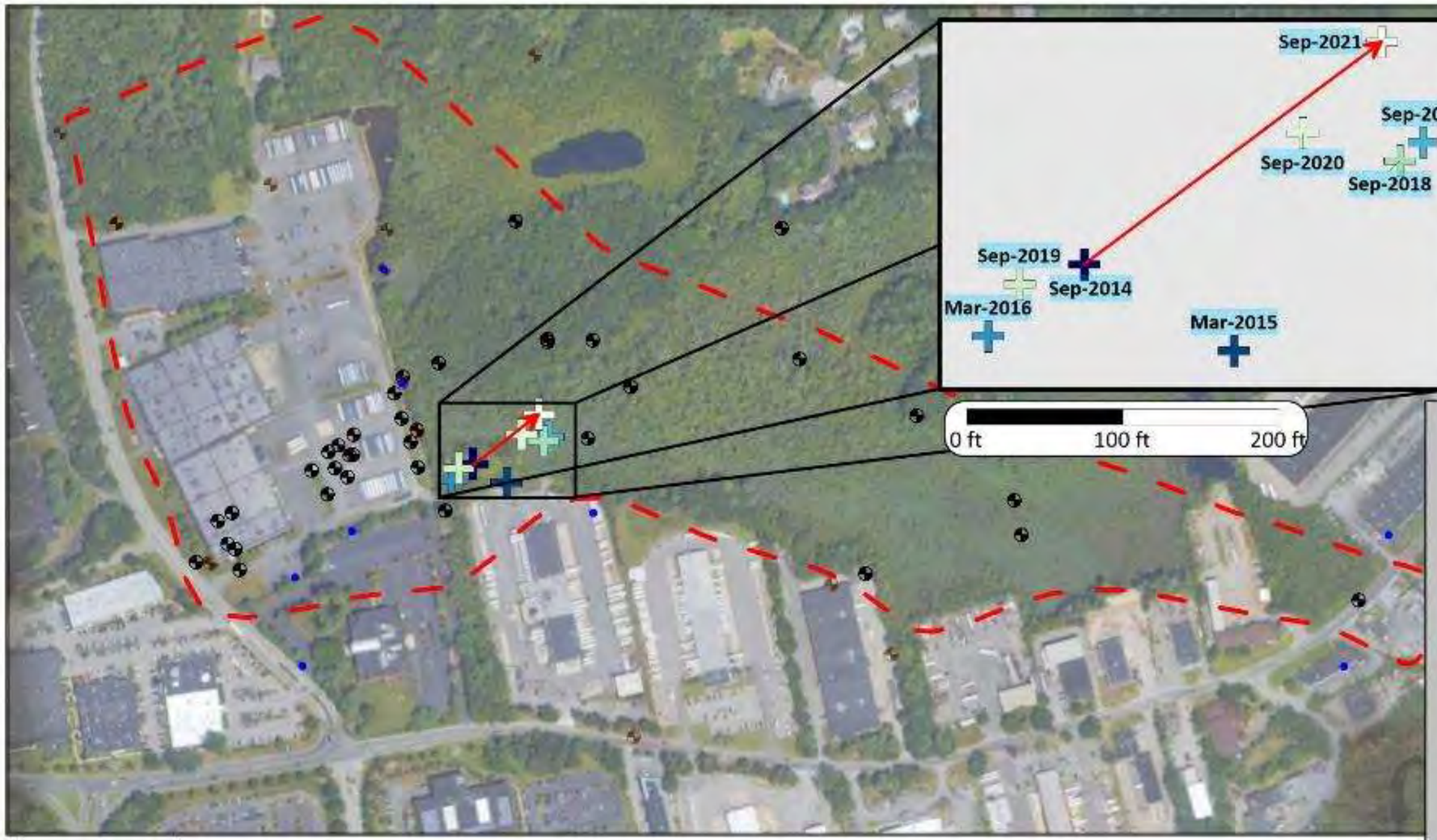

Chloroethenes Molar Mass
(Overburden)
Total Moles
PCE
TCE
cis-DCE
VC
Current Network
Mass (Moles)
Estimated Mass (Pounds)
120
100
80
60
40
20
0
28.3
23.6
18.9
14.2
9.4
4.7
0.0
1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2021


Chloroethenes Molar Fraction
(Overburden)
PCE
TCE
cis-DCE
VC
Current Network
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2021

© WSP 2021

Chloroethenes Overburden Center of Mass





Center of Mass Scale

Sep-2014 → **Sep-2021**

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Point
- MCP Site Boundary
- Net COM Movement

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Sep-2014

Mar-2015

0 ft 925 ft 1850 ft

Concentration (nmol/L)

0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500

LEGEND

MW-4 Monitoring Well

MW-5 Hanging Well

Plume Center of Mass

Control Point

MCP Site Boundary

Sep-2014 Plume Boundary

Mar-2015 Plume Boundary

Chloroethenes Overburden

Plume Differences Sep-2014 vs Mar-2015

N

0 ft 600 ft 1200 ft

Spatial Change Indicator™

Decrease Increase

Plume Characteristics

Area: **4% Increase**
Average Concentration: **24% Decrease**
Mass Indicator: **21% Decrease**
Mass Increase: **11.3 moles Increase**
Mass Decrease: **31.2 moles Decrease**

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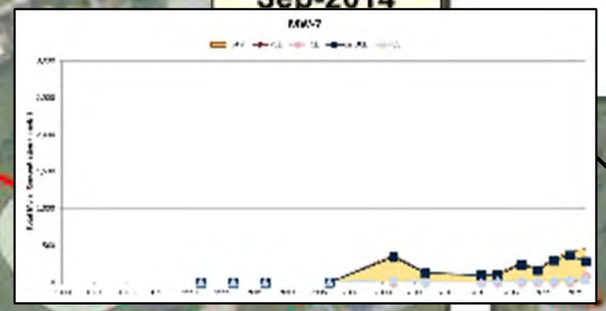
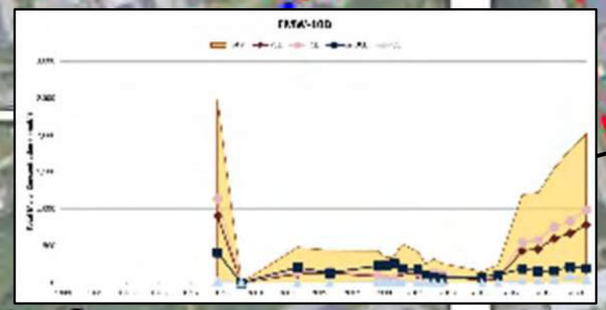
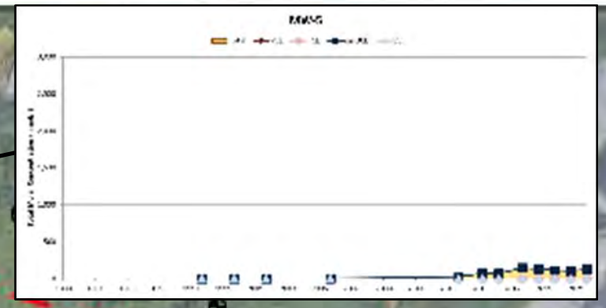
Chloroethenes Overburden

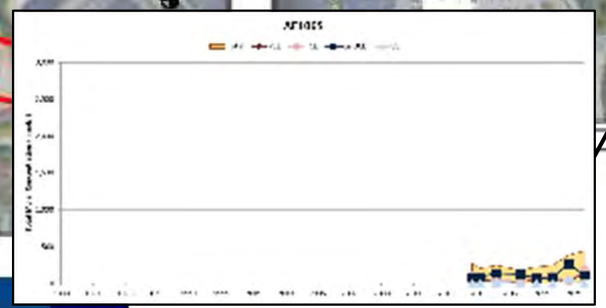
Plume Differences Sep-2014 vs Sep-2021

Sep-2014









0 ft 925 ft 1850 ft

1200 ft

Concentration (nmol/L)

0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500

Spatial Change Indicator™

Decrease — Increase

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2014 Plume Boundary
- Sep-2021 Plume Boundary

Plume Characteristics

Area: **17% Decrease**
Average Concentration: **58% Decrease**
Mass Indicator: **65% Decrease**
Mass Increase: **8.55 moles Increase**
Mass Decrease: **70.5 moles Decrease**

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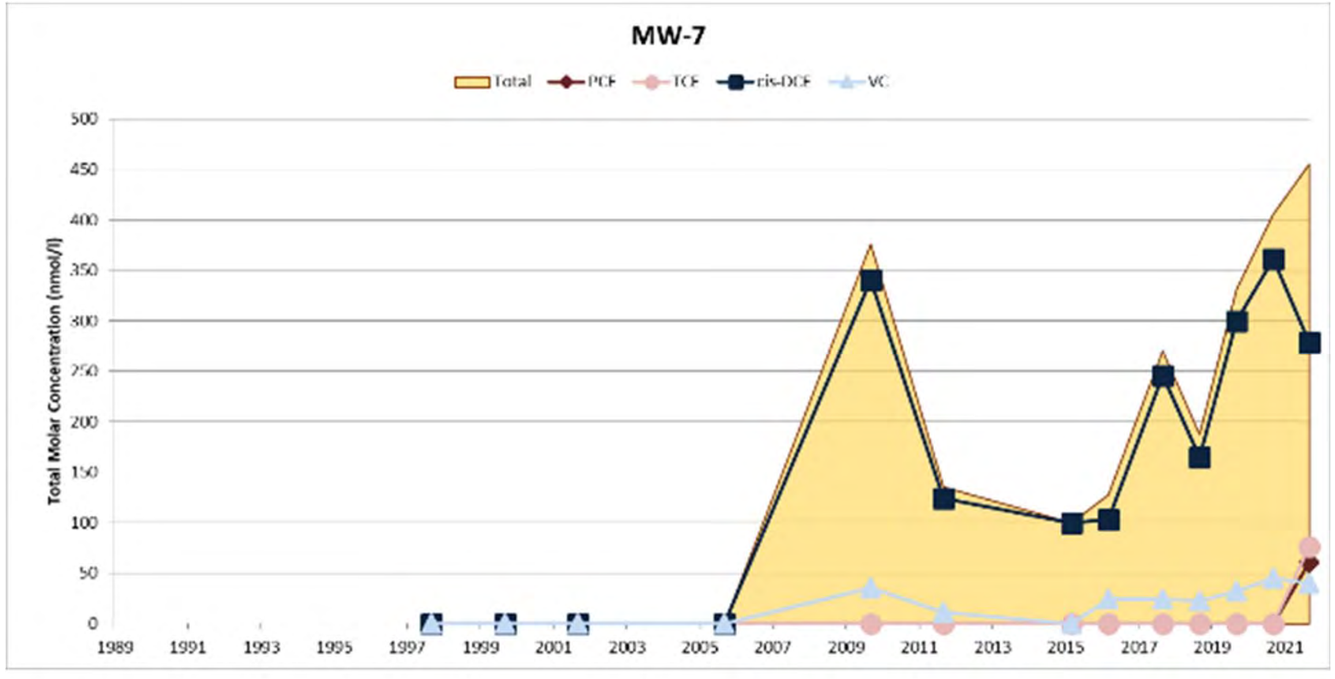
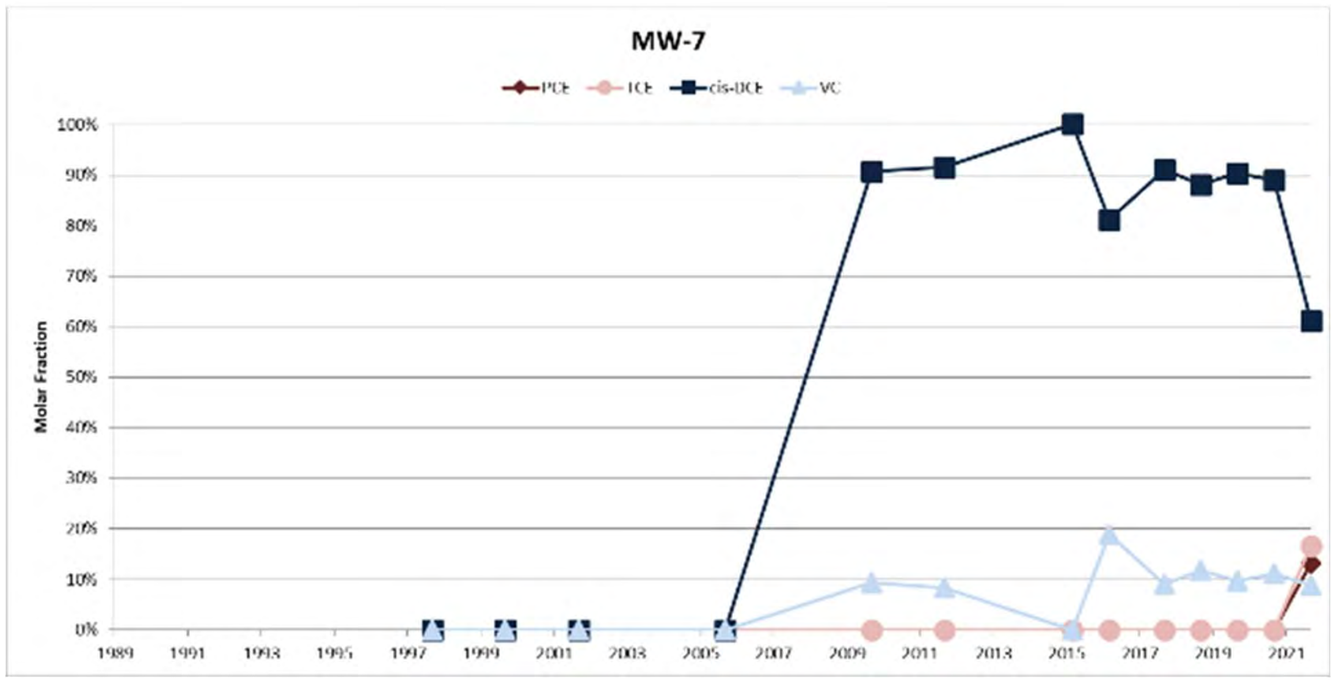
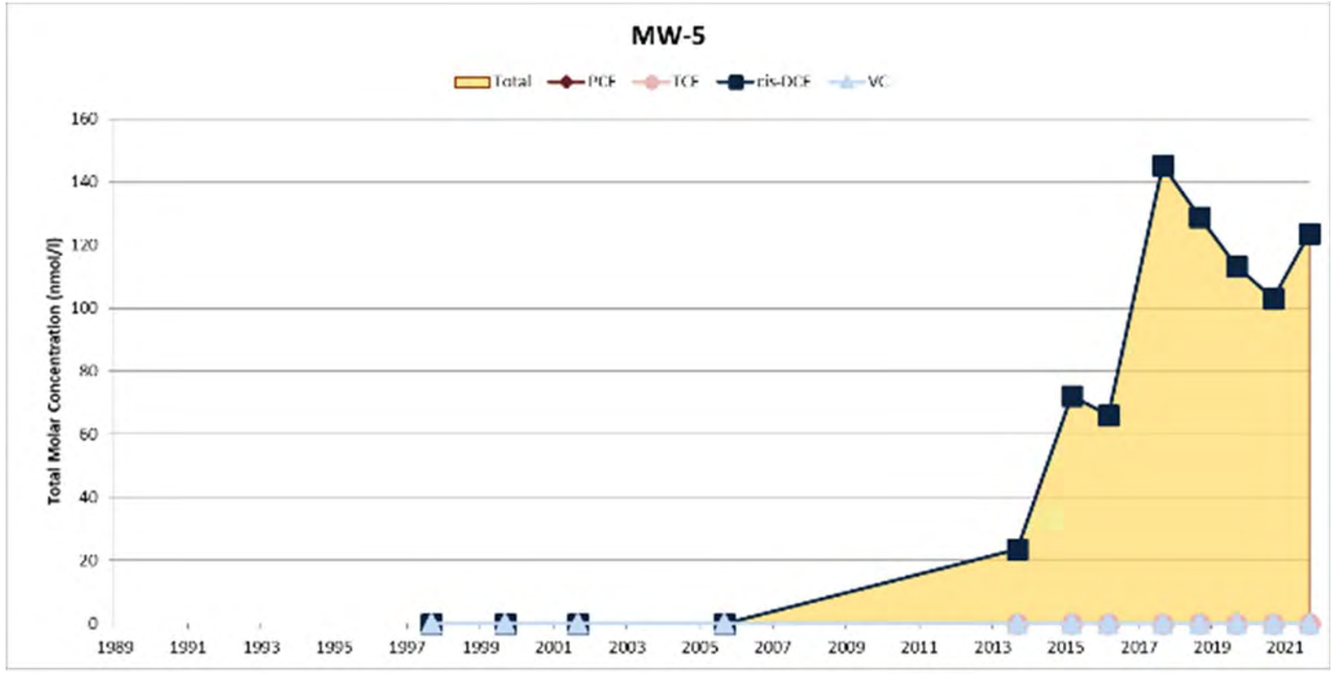
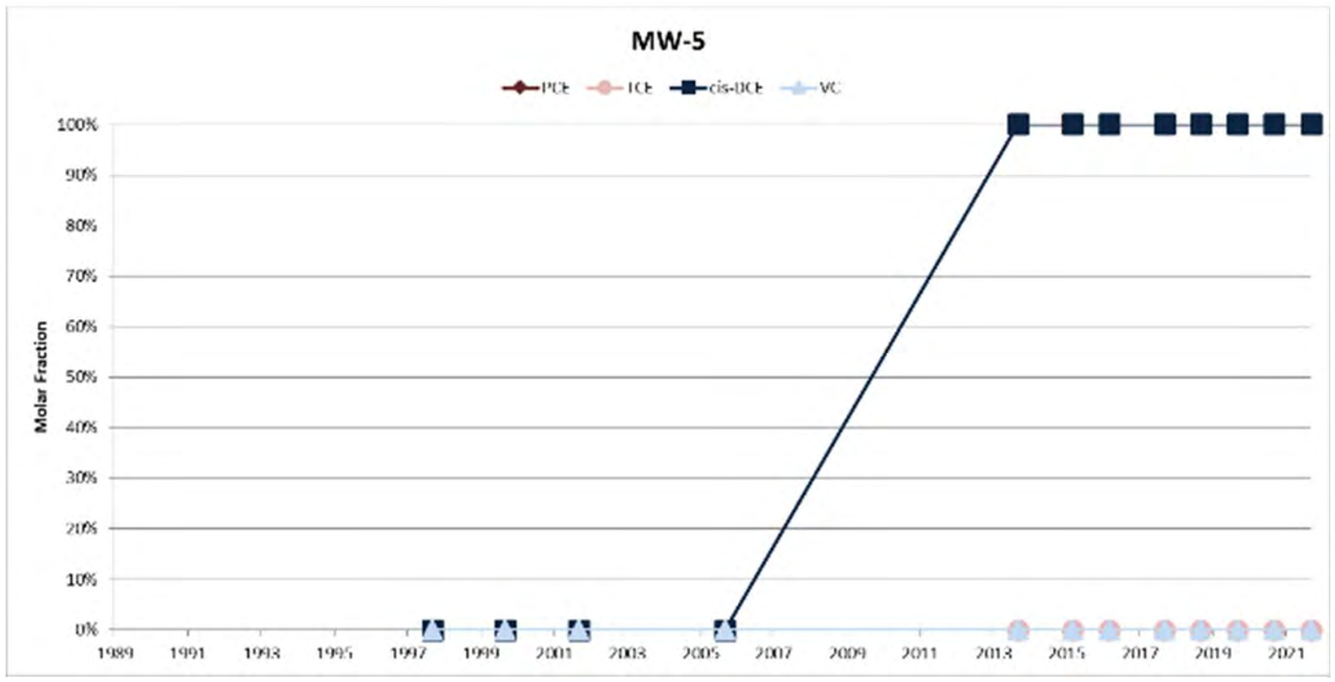

MW-7
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
500
450
400
350
300
250
200
150
100
50
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

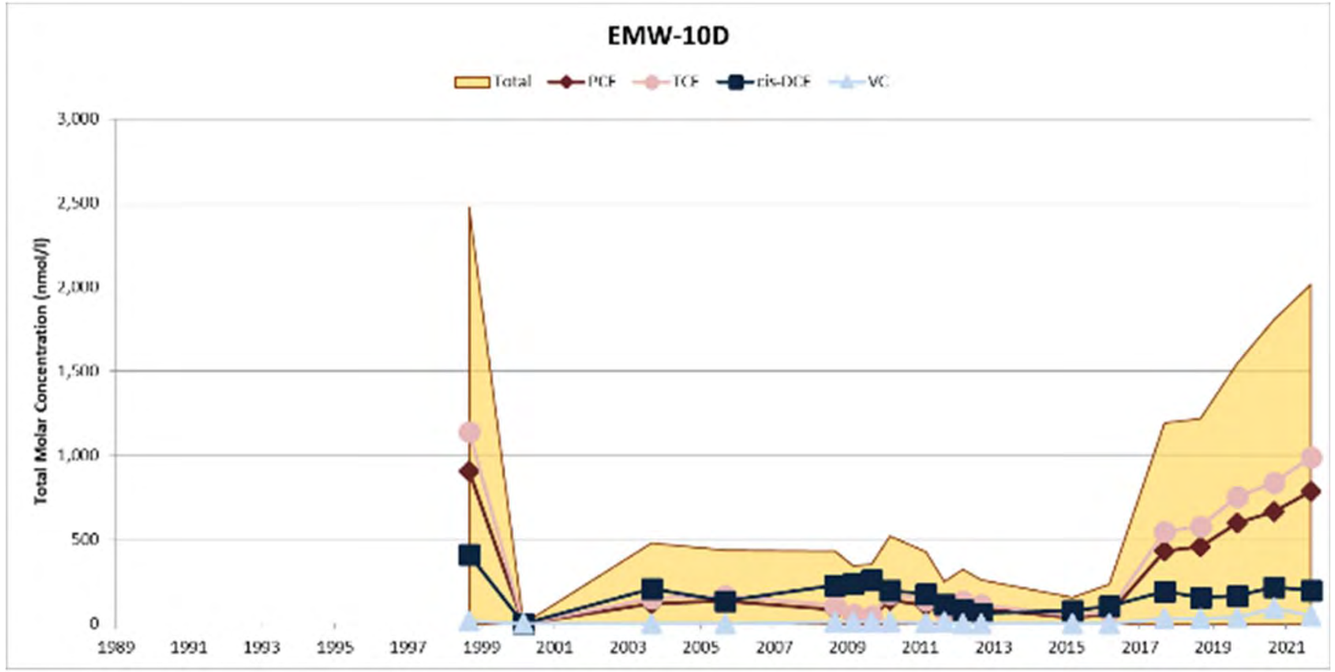

MW-7
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

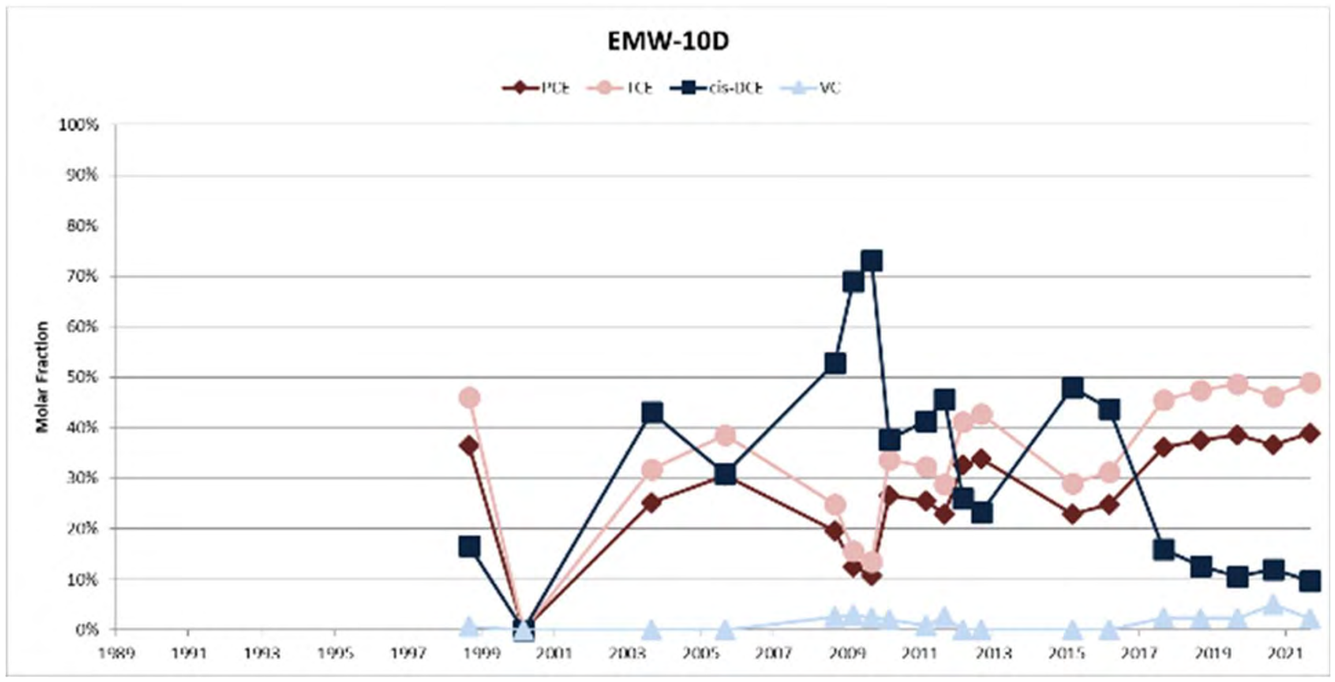
© WSP 2021


MW-5
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
160
140
120
100
80
60
40
20
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

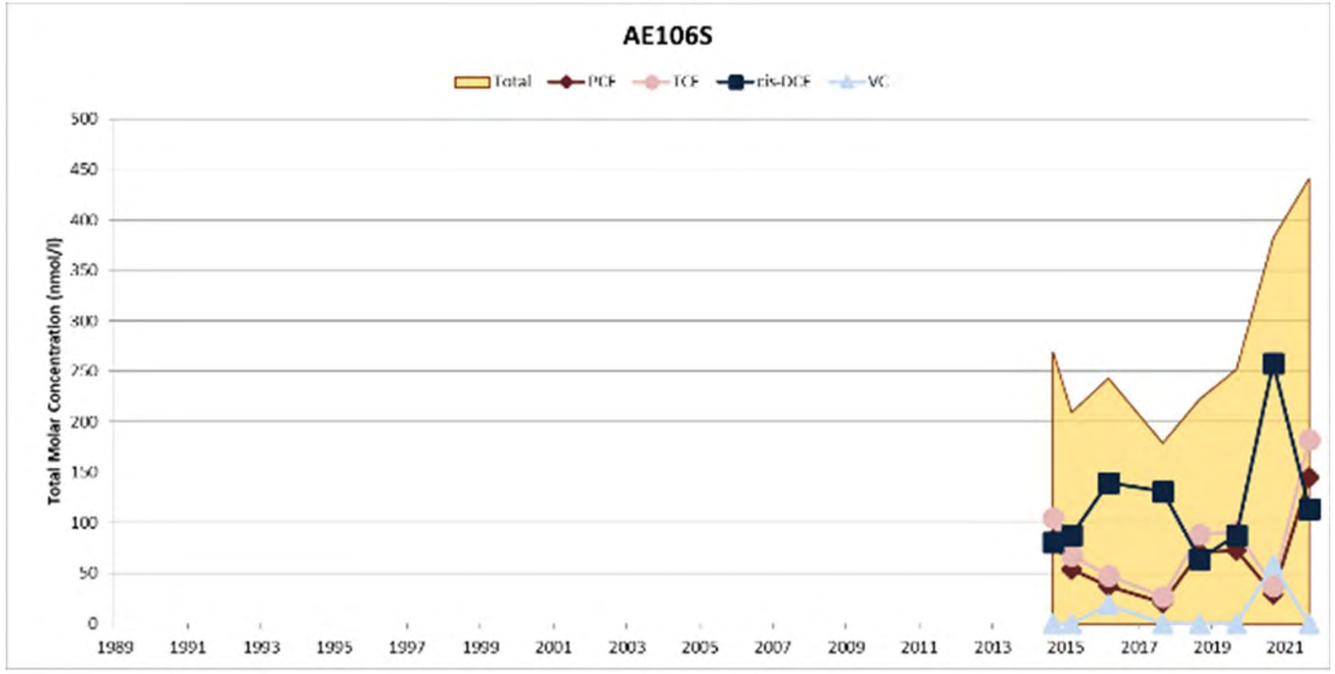

MW-5
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

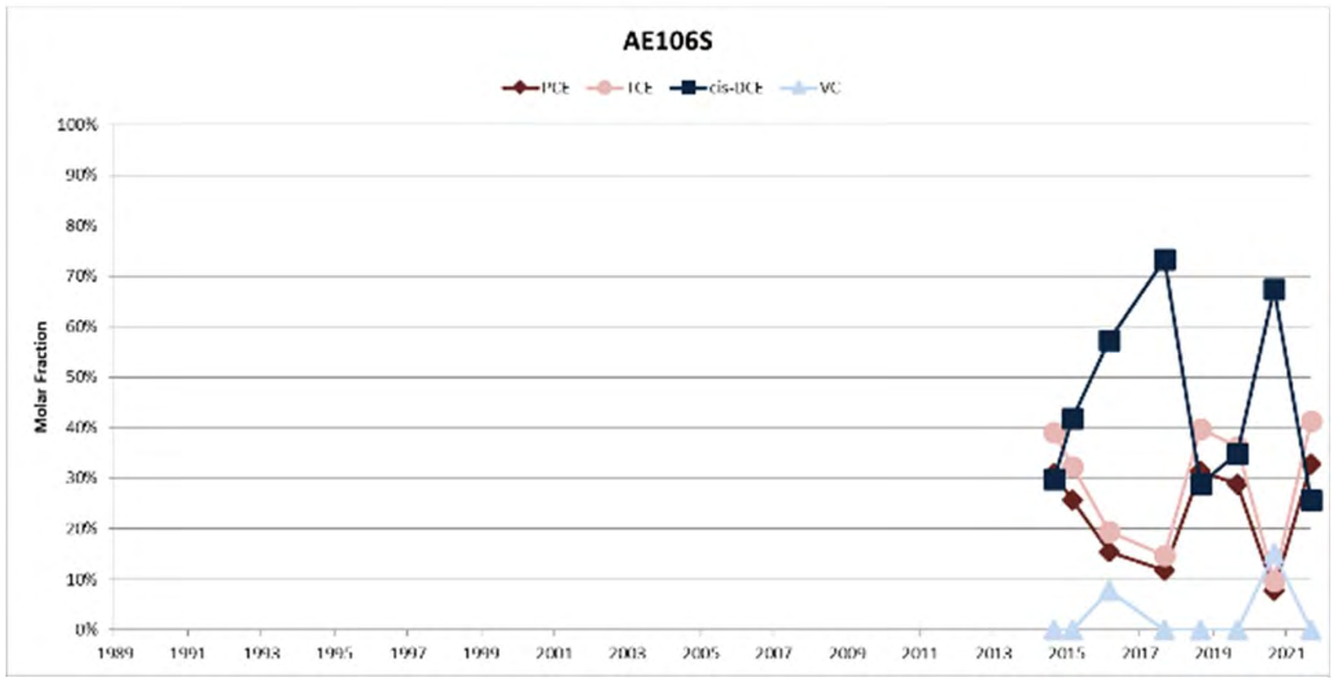
© WSP 2021


EMW-10D
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
3,000
2,500
2,000
1,500
1,000
500
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021


EMW-10D
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

© WSP 2021


AE106S
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
500
450
400
350
300
250
200
150
100
50
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021


AE106S
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

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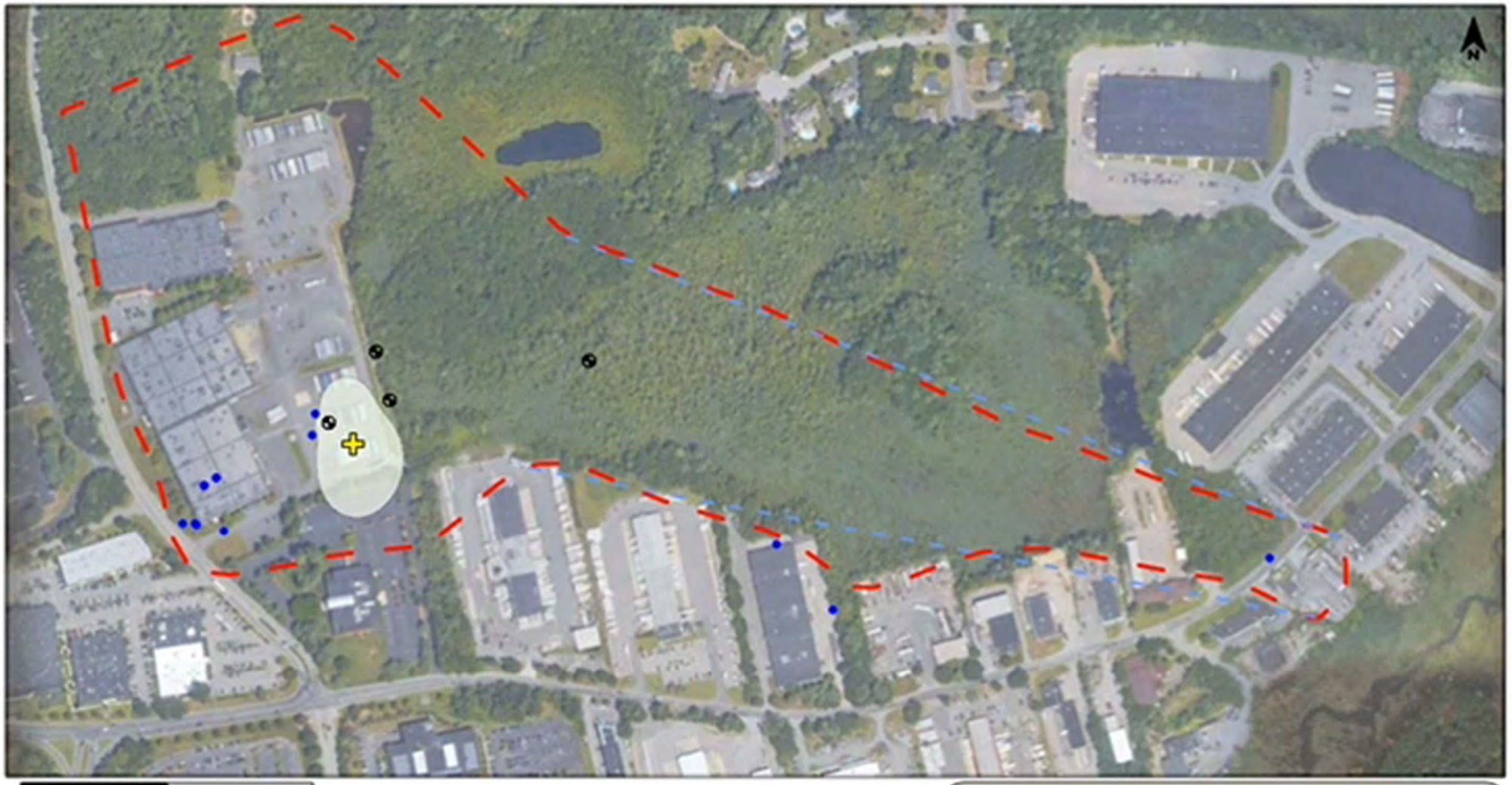

1,4-Dioxane
Overburden
Mar-2012

Concentration (µg/L)

45
40
35
30
25
20
15
10
5
0.3

0 ft 450 ft 900 ft

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Control Fence

Plume Characteristics

Plume Area: **2.1 acres**
Plume Average Concentration: **0.48 µg/L**
Plume Mass Indicator: **0.027 lbs**

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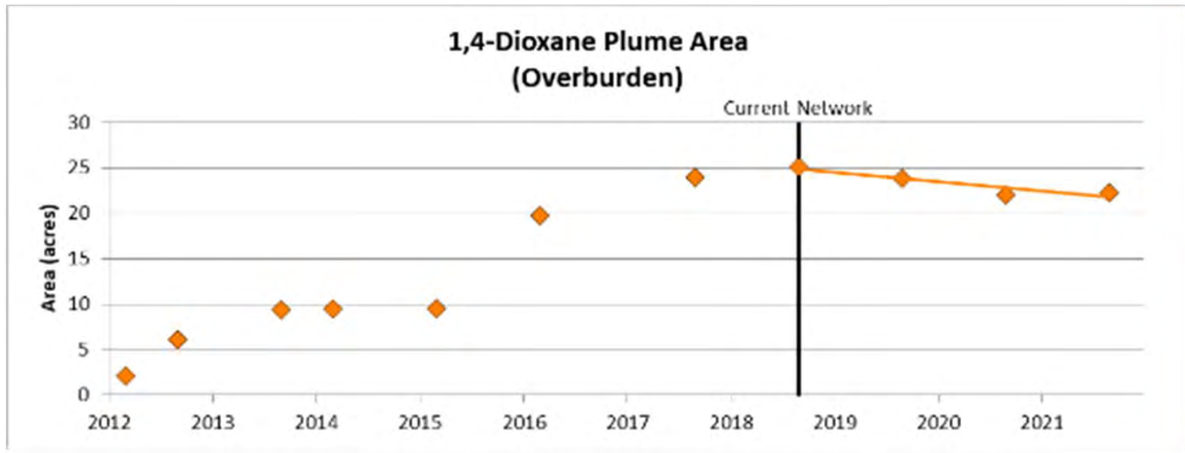
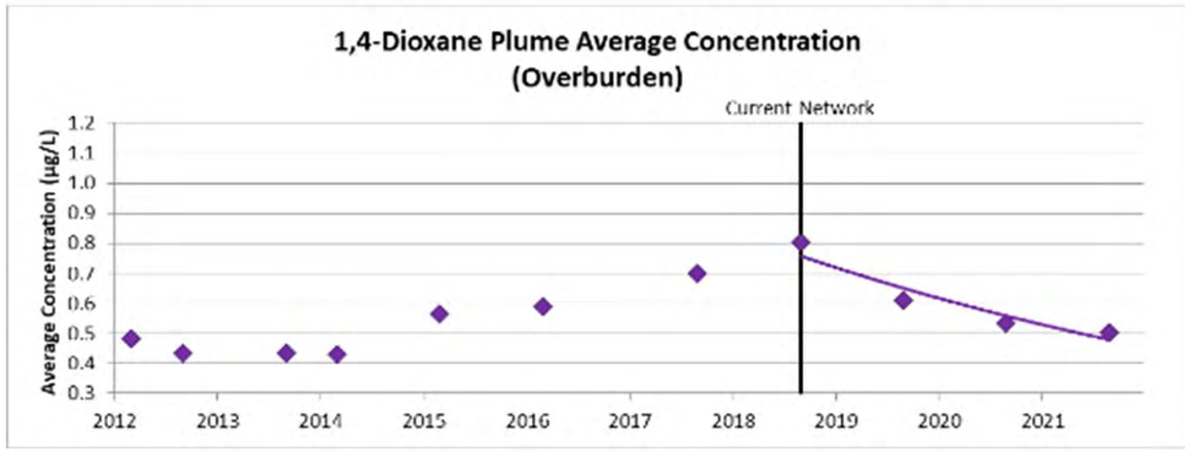
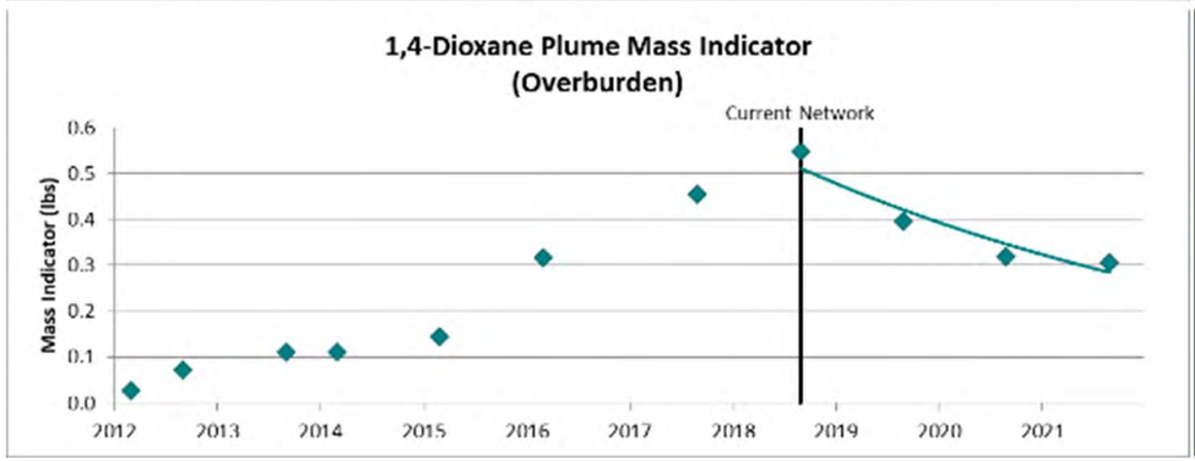


Sep-2018 to Sep-2021
No Trend/Decreasing Trend
Mann-Kendall: 83% Confidence
Regression: 92% Confidence



Sep-2018 to Sep-2021
Decreasing Trend
Mann-Kendall: 96% Confidence
Regression: 95% Confidence



Sep-2018 to Sep-2021
Decreasing Trend
Mann-Kendall: 96% Confidence
Regression: 95% Confidence

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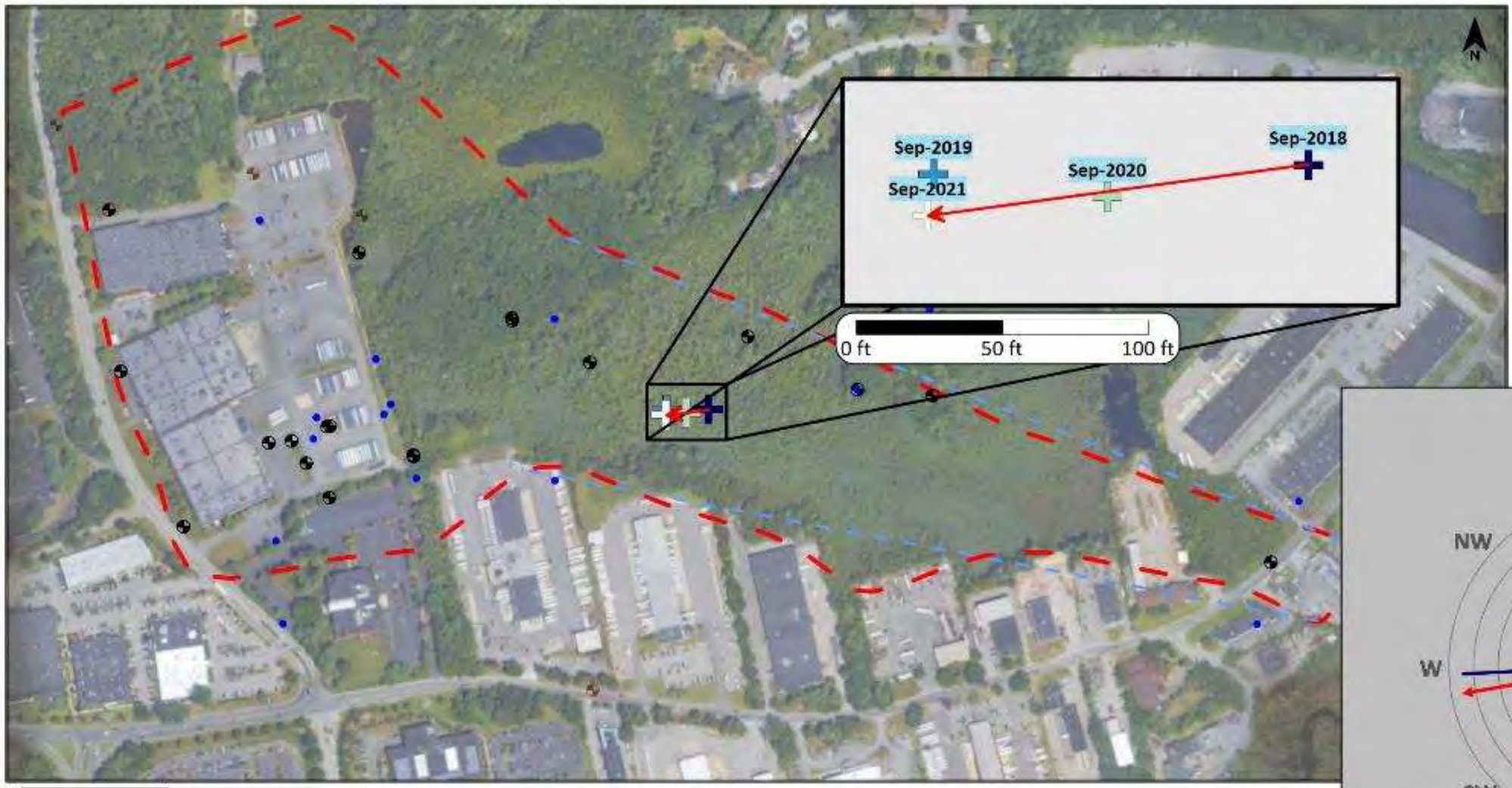
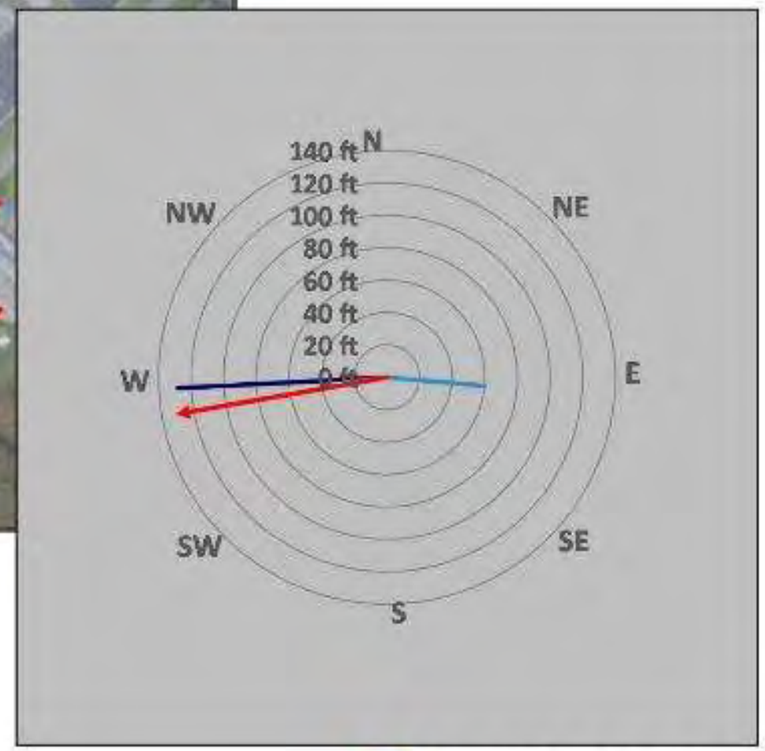
1,4-Dioxane Overburden Center of Mass





Center of Mass Scale

Sep-2018 → Sep-2021

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Point
- MCP Site Boundary
- Net COM Movement
- Control Fence

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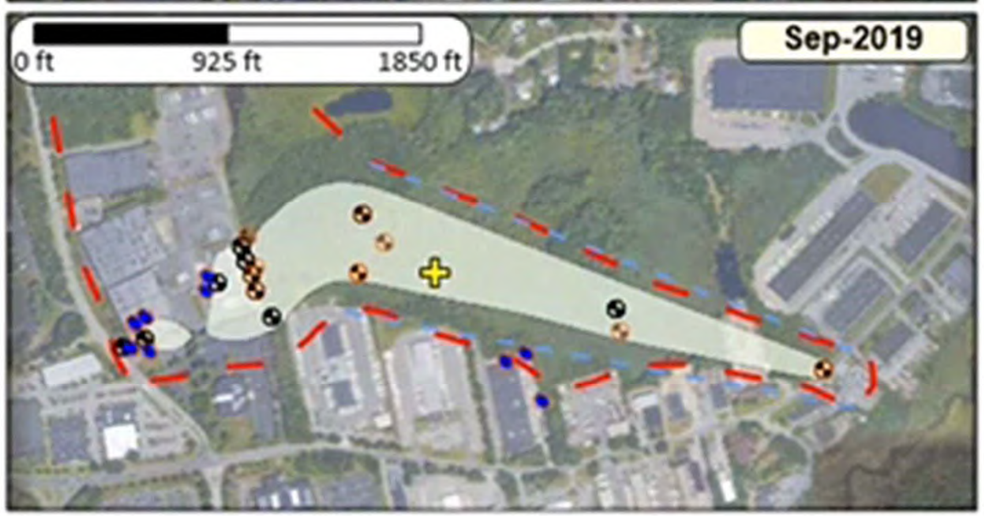


Concentration (µg/L)

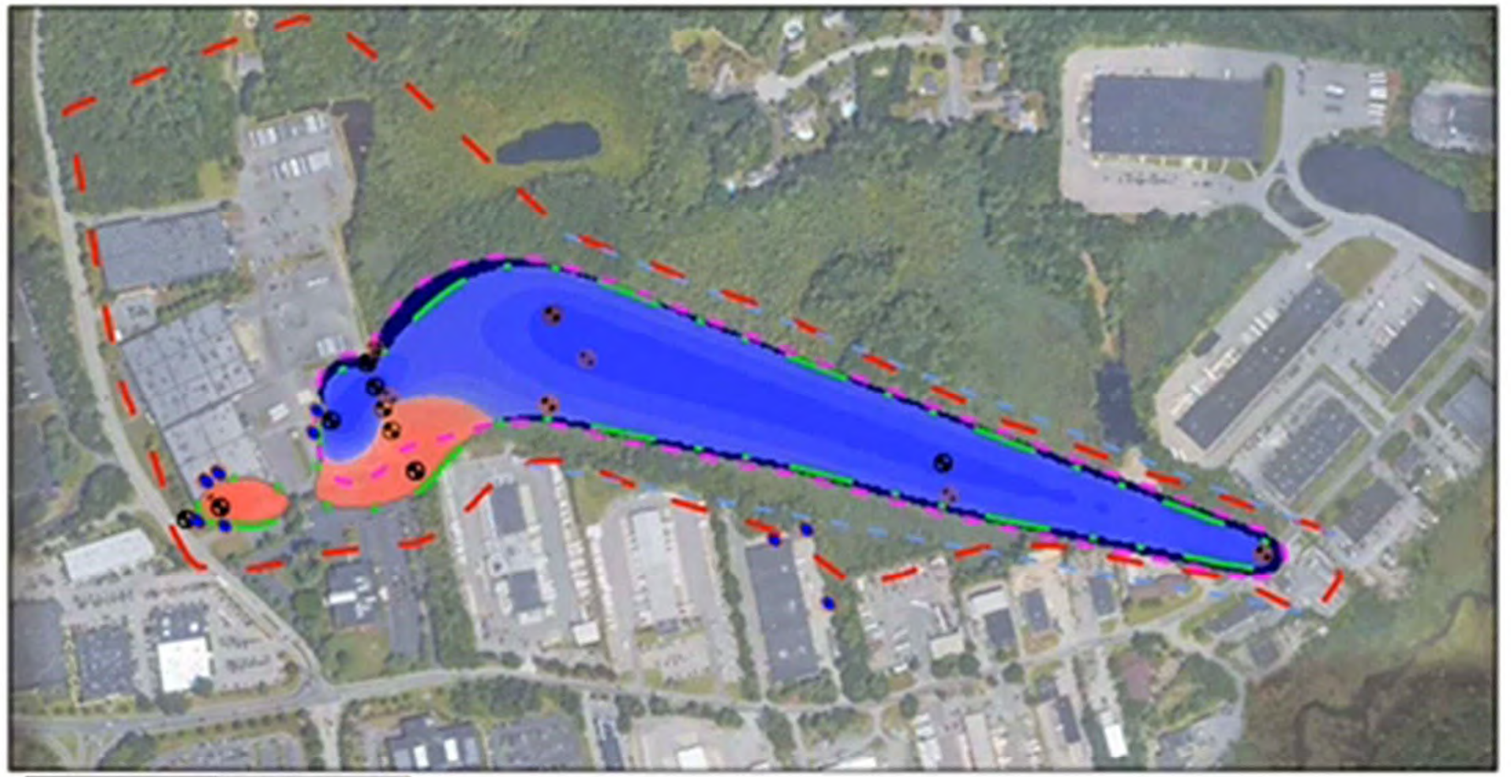
0.3 5 10 15 20 25 30 35 40 45

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Fence
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2018 Plume Boundary
- Sep-2019 Plume Boundary

1,4-Dioxane
Overburden

Plume Differences Sep-2018 vs Sep-2019



0 ft 600 ft 1200 ft

Spatial Change Indicator™

Decrease **Increase**

Plume Characteristics

Area: **5% Decrease**
Average Concentration: **24% Decrease**
Mass Indicator: **28% Decrease**
Mass Increase: **0.02 lbs Increase**
Mass Decrease: **0.17 lbs Decrease**

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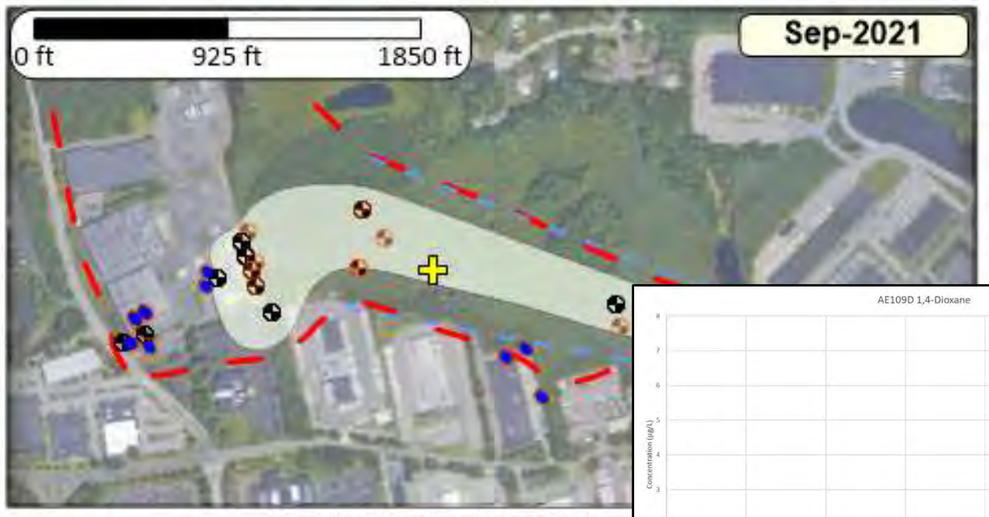
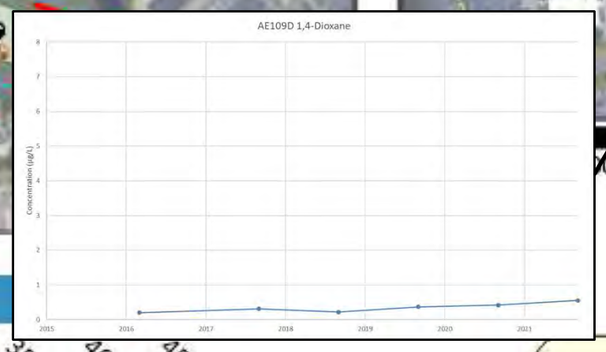
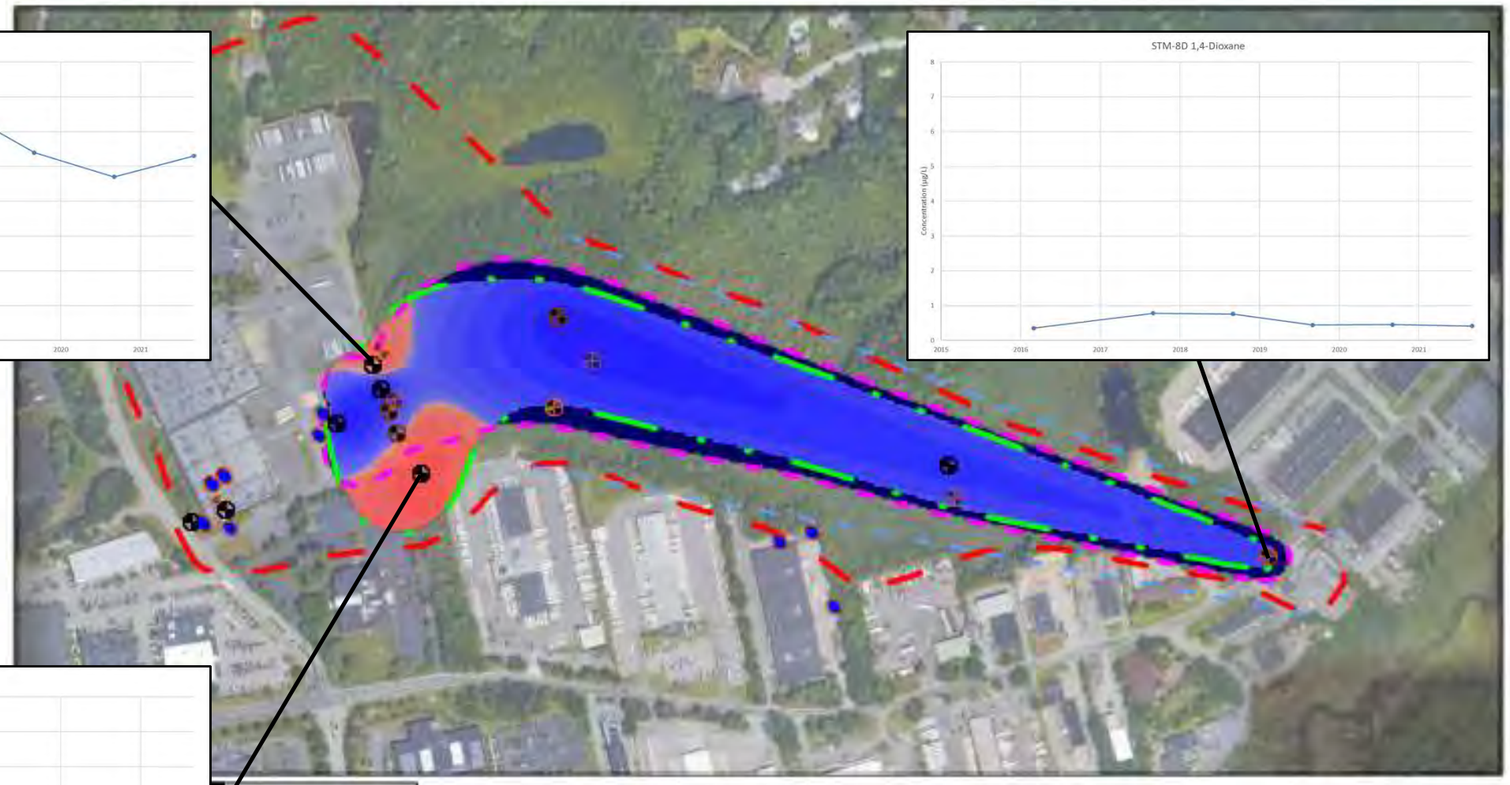
1,4-Dioxane
Overburden

Plume Differences Sep-2018 vs Sep-2021









Concentration (µg/L)

0.3 5 10 15 20 25 30 35 40 45

Spatial Change Indicator™

Decrease **Increase**

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Fence
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2018 Plume Boundary
- Sep-2021 Plume Boundary

Plume Characteristics

Area: **11% Decrease**
Average Concentration: **37% Decrease**
Mass Indicator: **44% Decrease**
Mass Increase: **0.02 lbs Increase**
Mass Decrease: **0.26 lbs Decrease**

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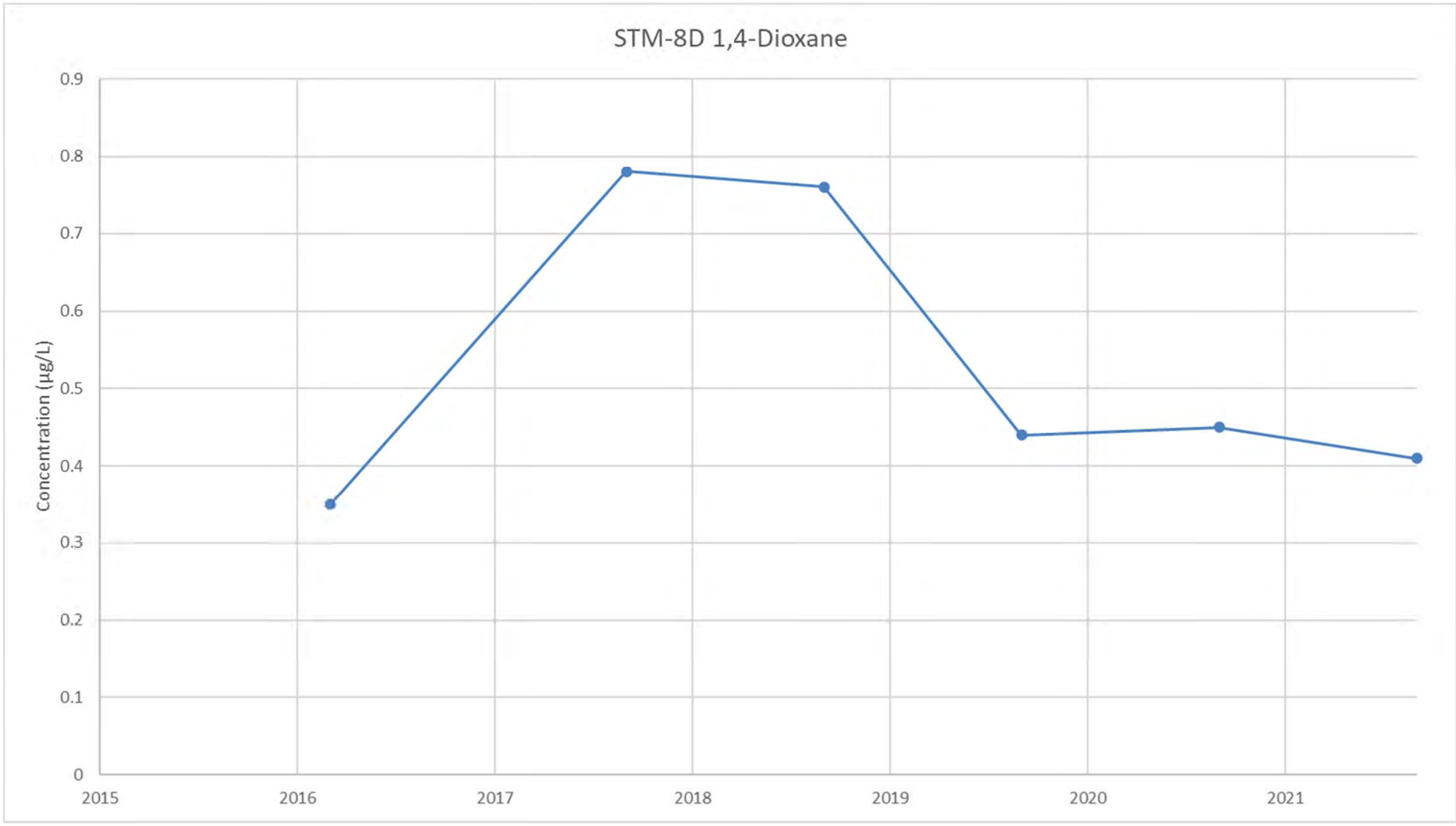
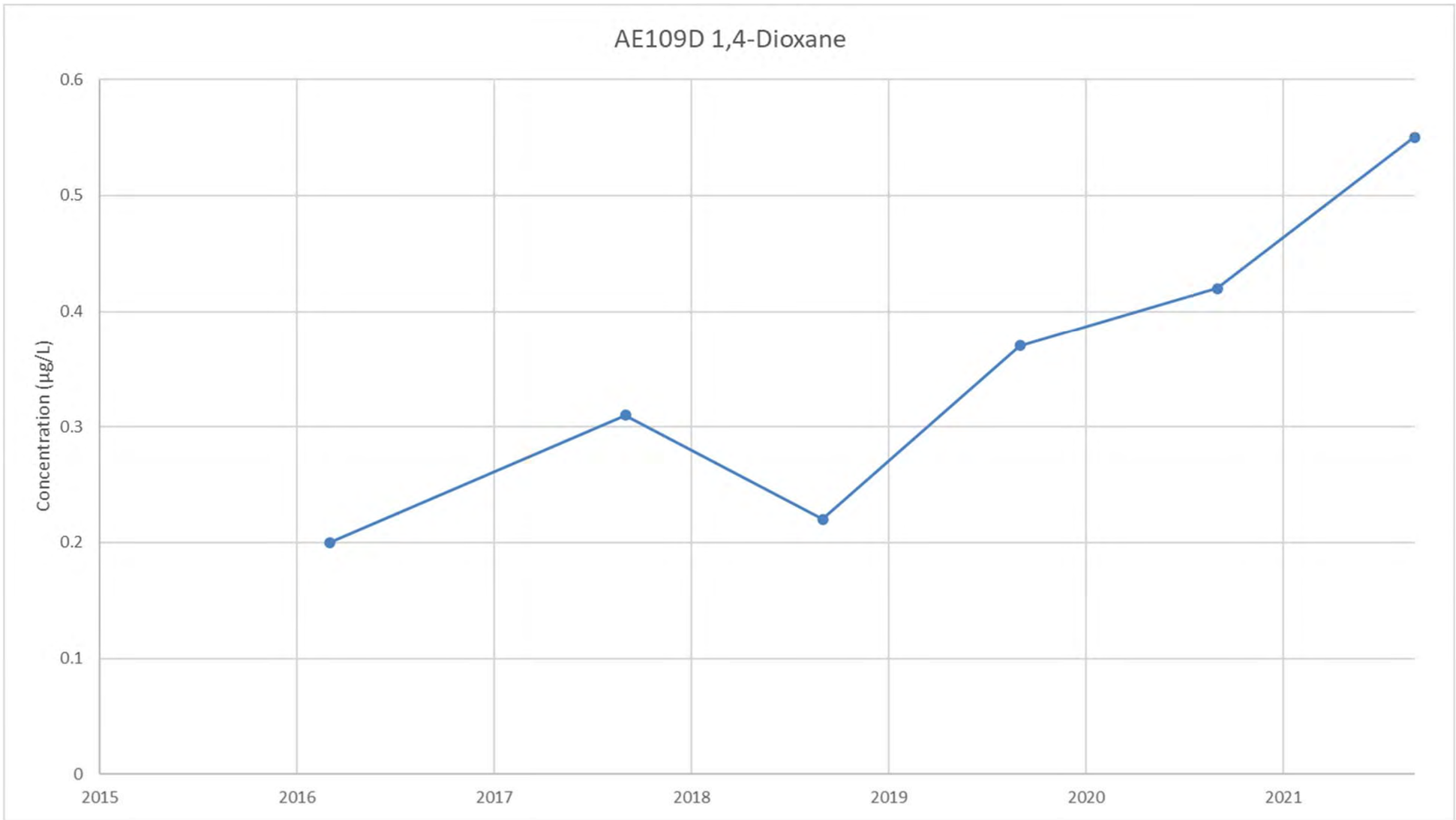
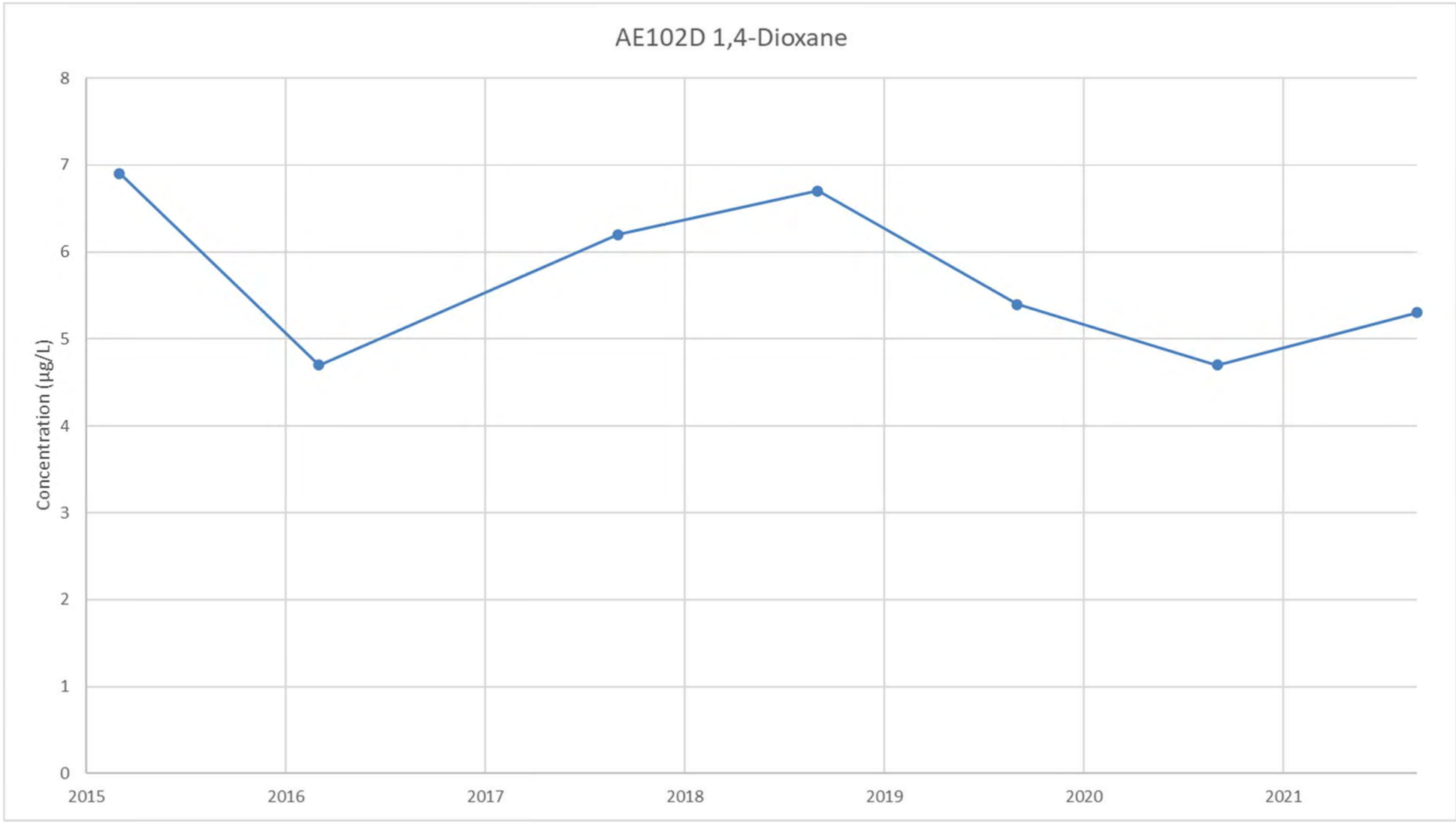
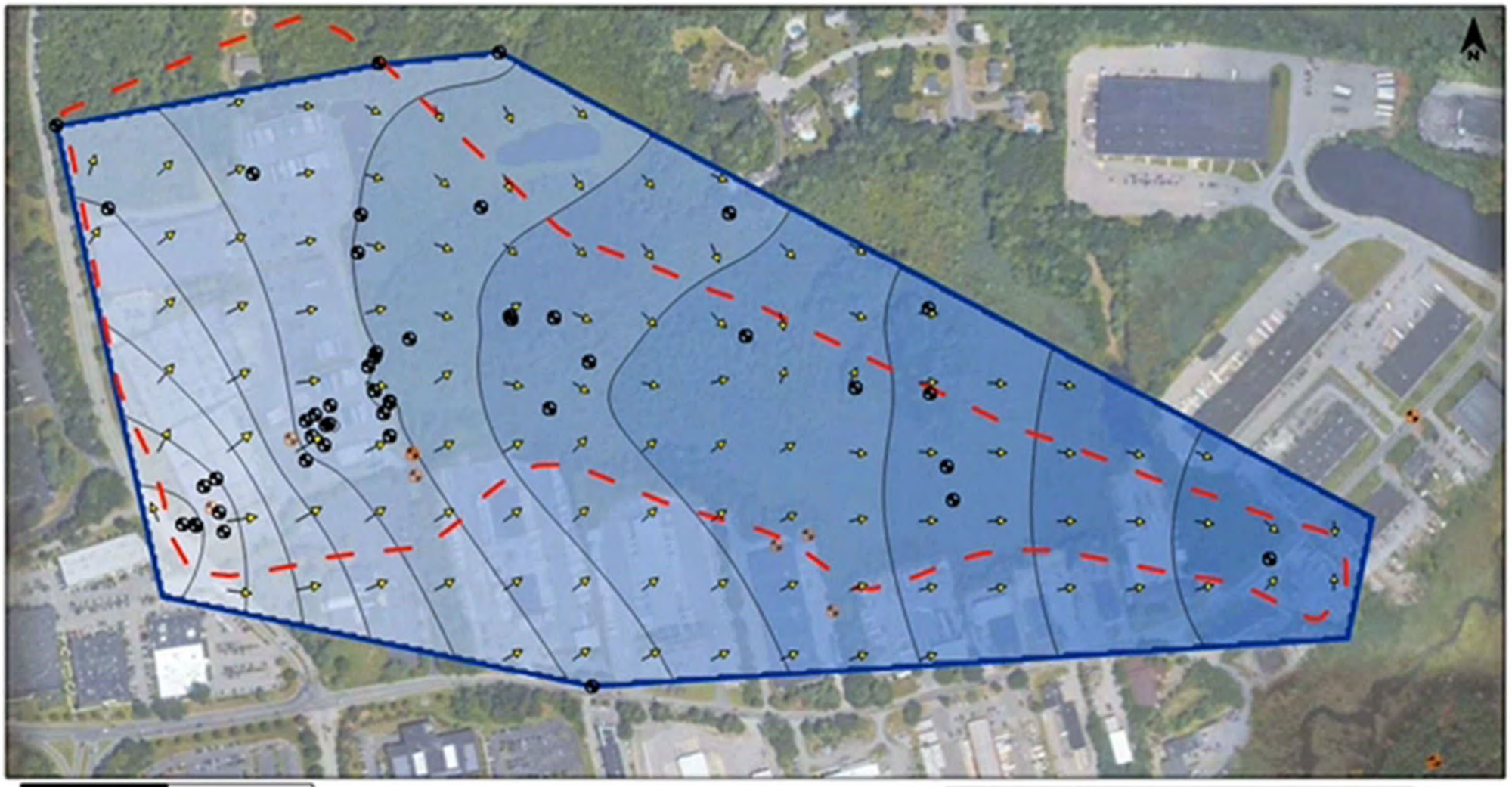

STM-8D 1,4-Dioxane
Concentration (µg/L)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2015
2016
2017
2018
2019
2020
2021

© WSP 2021


AE109D 1,4-Dioxane
Concentration (µg/L)
0.6
0.5
0.4
0.3
0.2
0.1
0
2015
2016
2017
2018
2019
2020
2021


AE102D 1,4-Dioxane
Concentration (µg/L)
8
7
6
5
4
3
2
1
0
2015
2016
2017
2018
2019
2020
2021



Groundwater Elevation
Overburden
Dec-2014

Elevation (ft.)

80.5
80
79.5
79
78.5
78
77.5
77
76.5
76
75.5
75
74.5
74
73.5
73
72.5
72
71.5
71
70.5
70

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well

MW-5 Not Gauged

MCP Site Boundary

Average Groundwater Elevation

76.40 ft

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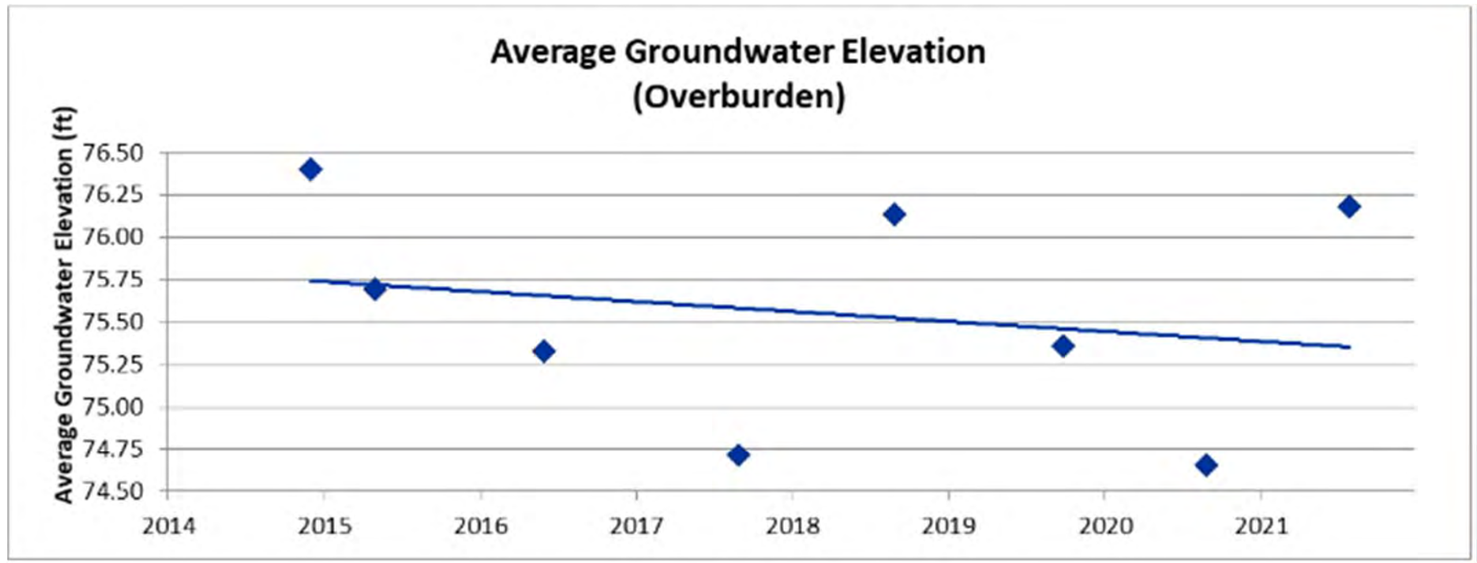
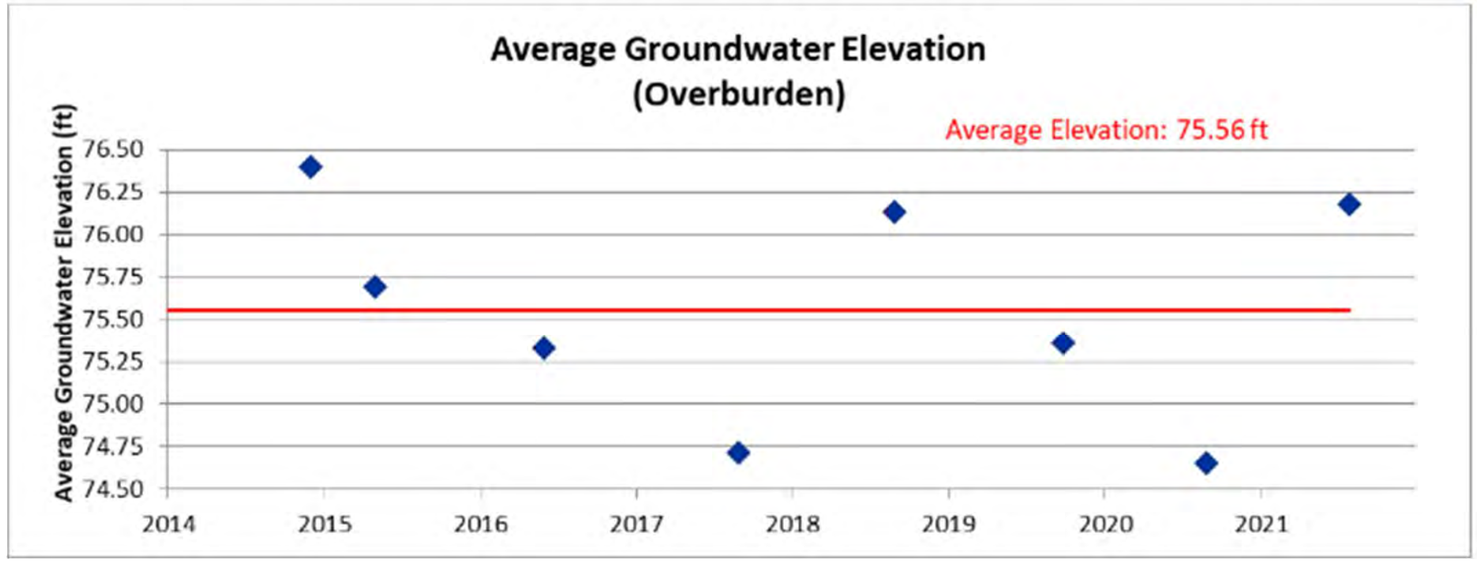
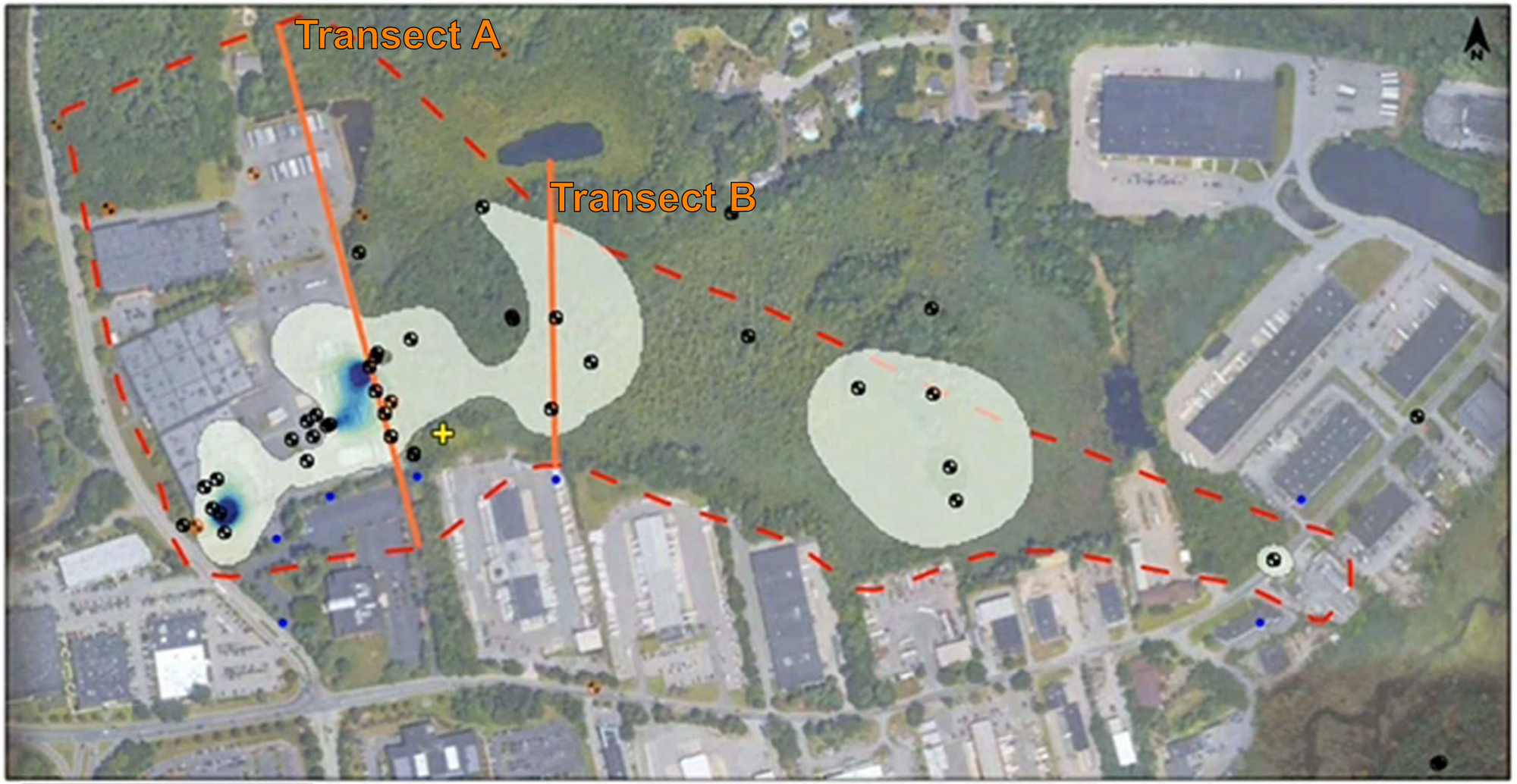


Dec-2014 to Aug-2021
No Trend
Mann-Kendall: 75% Confidence
Regression: 40% Confidence



© WSP 2021



Chloroethenes Overburden Sep-2014

Concentration (nmol/L)

4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Transect A

Average Concentration: **1,262 nmol/L**
Mass Flux: **19.15 mol/yr**

Transect B

Average Concentration: **157 nmol/L**
Mass Flux: **3.40 mol/yr**

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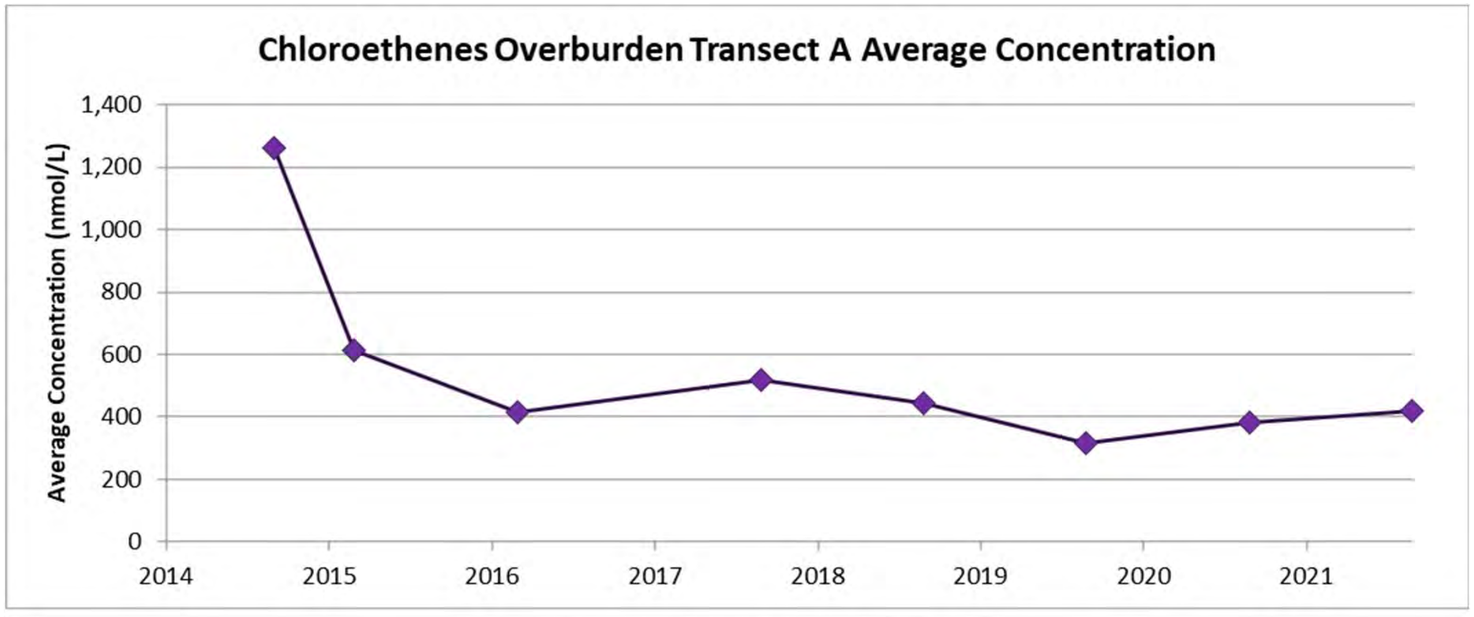
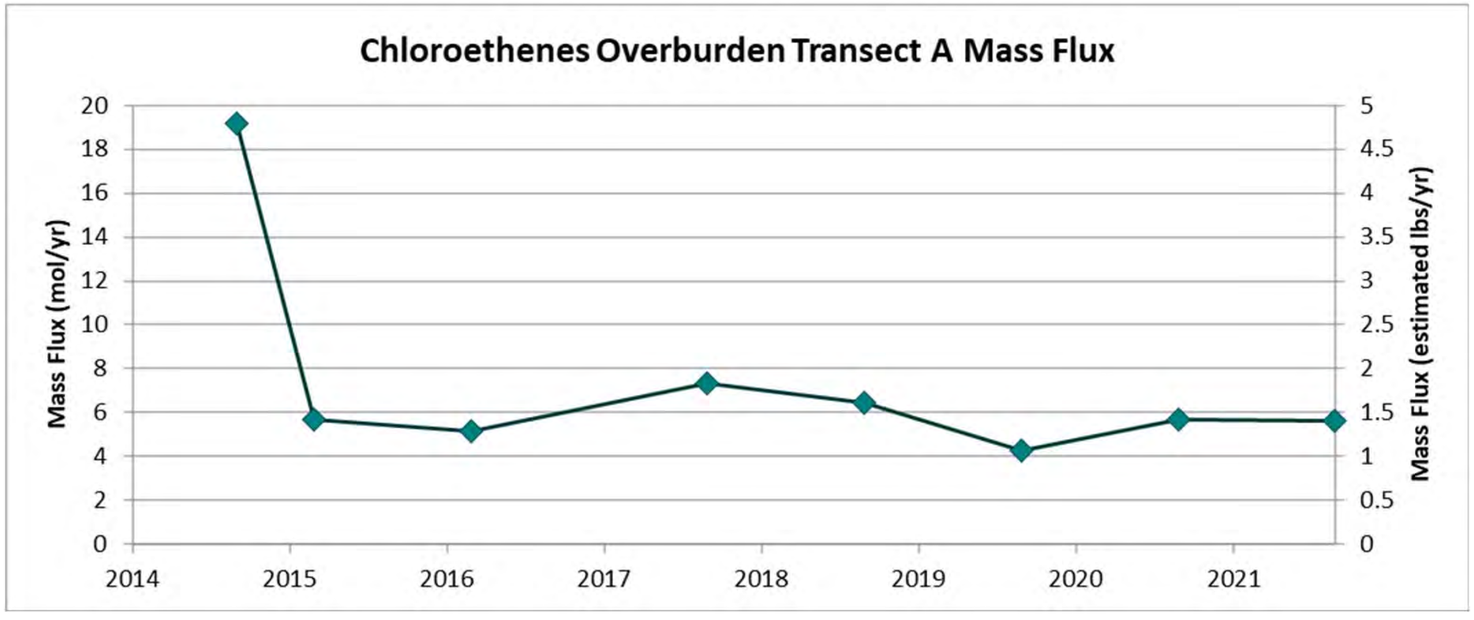

Chloroethenes Overburden Transect A Average Concentration
Average Concentration (nmol/L)
1,400
1,200
1,000
800
600
400
200
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Overburden Transect A Mass Flux
Mass Flux (mol/yr)
20
18
16
14
12
10
8
6
4
2
0
Mass Flux (estimated lbs/yr)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
2014
2015
2016
2017
2018
2019
2020
2021

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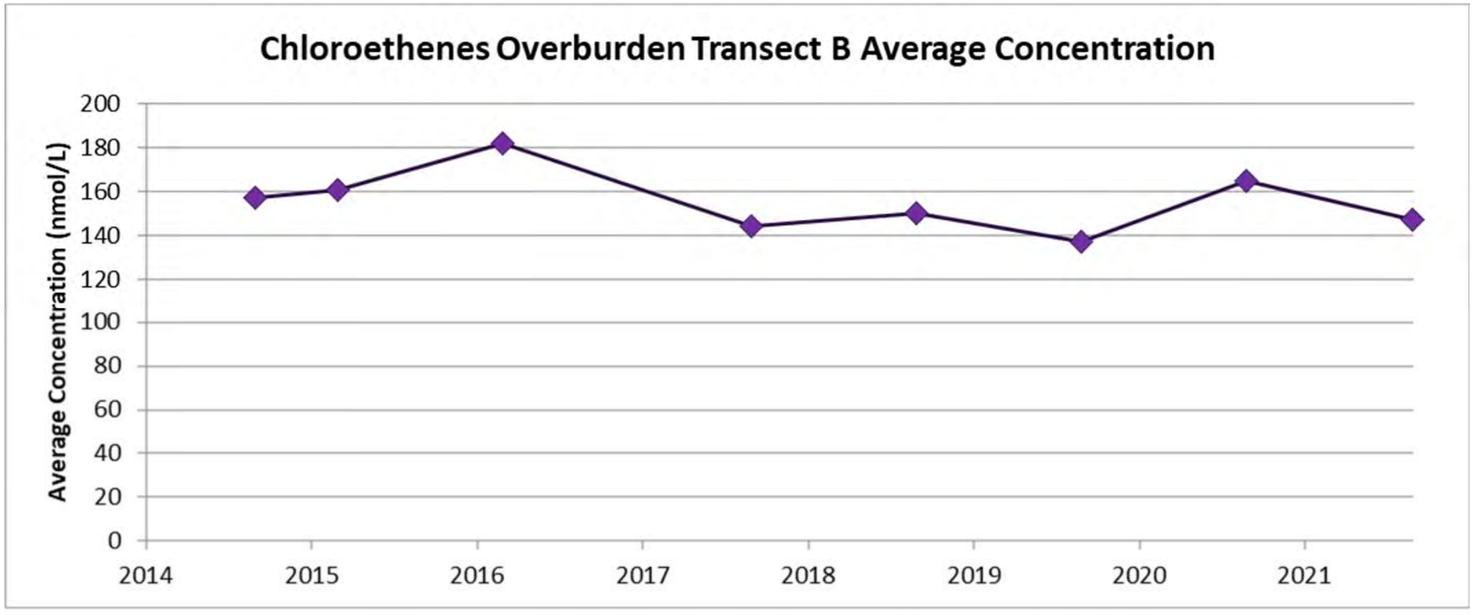
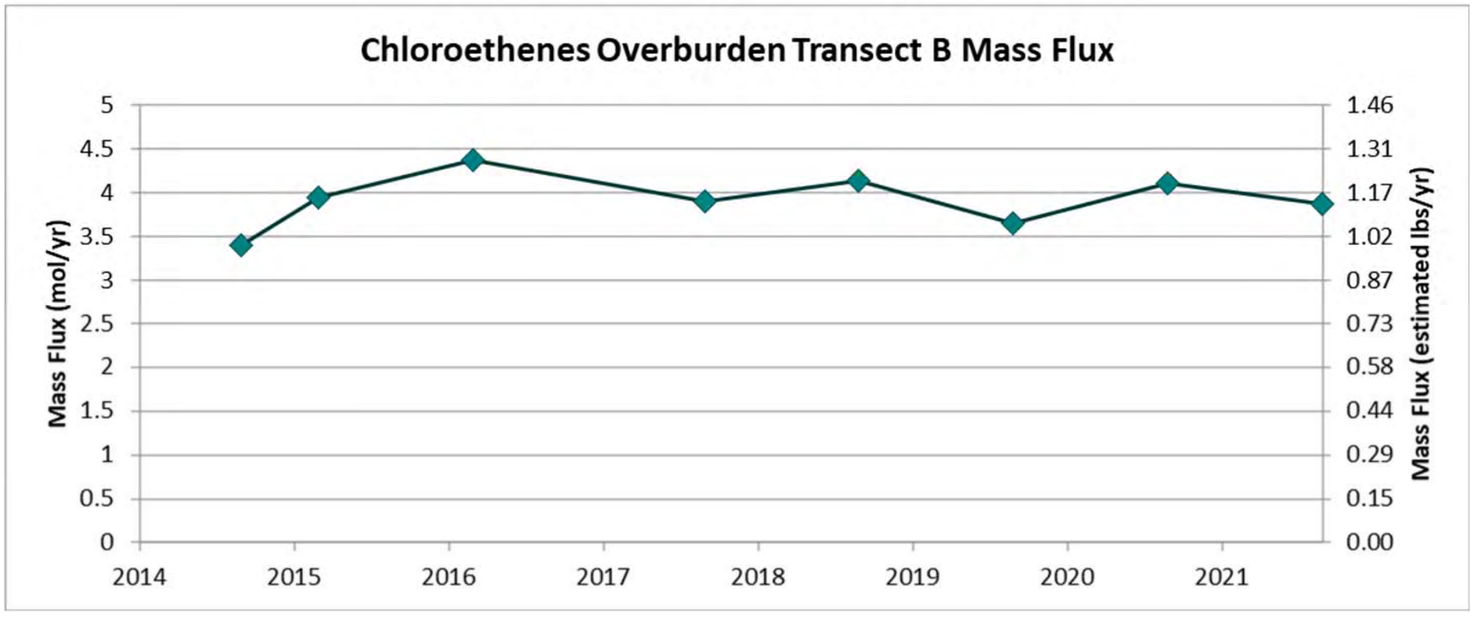

Chloroethenes Overburden Transect B Average Concentration
Average Concentration (nmol/L)
200
180
160
140
120
100
80
60
40
20
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Overburden Transect B Mass Flux
Mass Flux (mol/yr)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Mass Flux (estimated lbs/yr)
1.46
1.31
1.17
1.02
0.87
0.73
0.58
0.44
0.29
0.15
0.00
2014
2015
2016
2017
2018
2019
2020
2021

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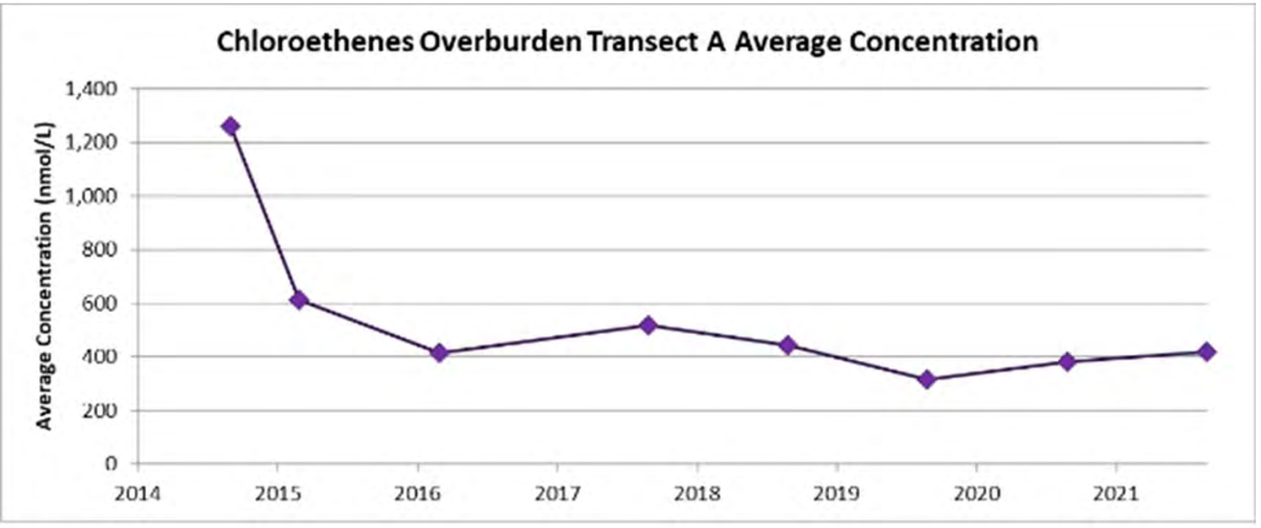
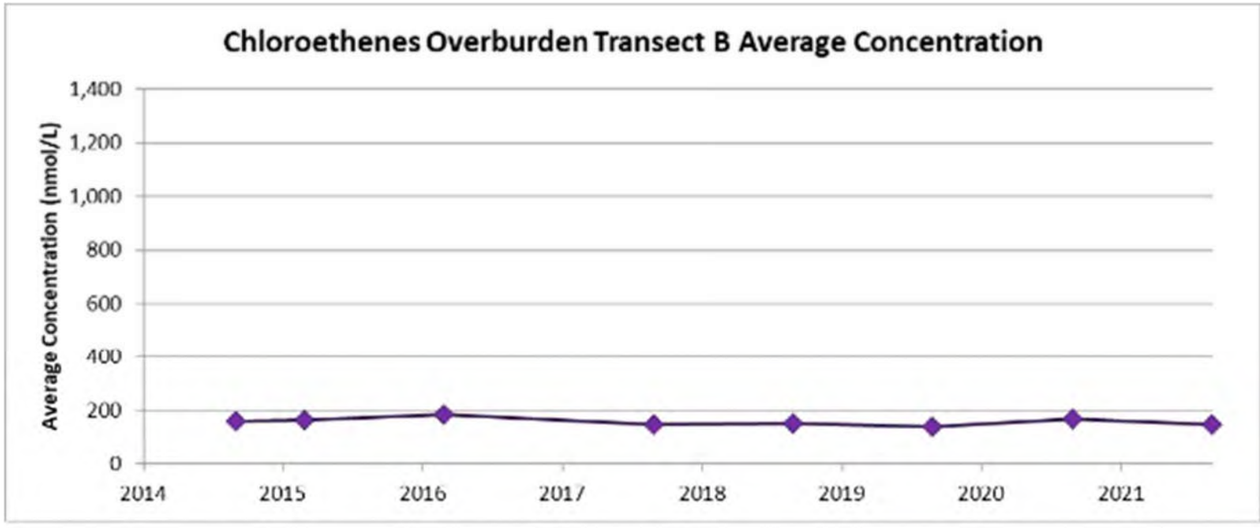
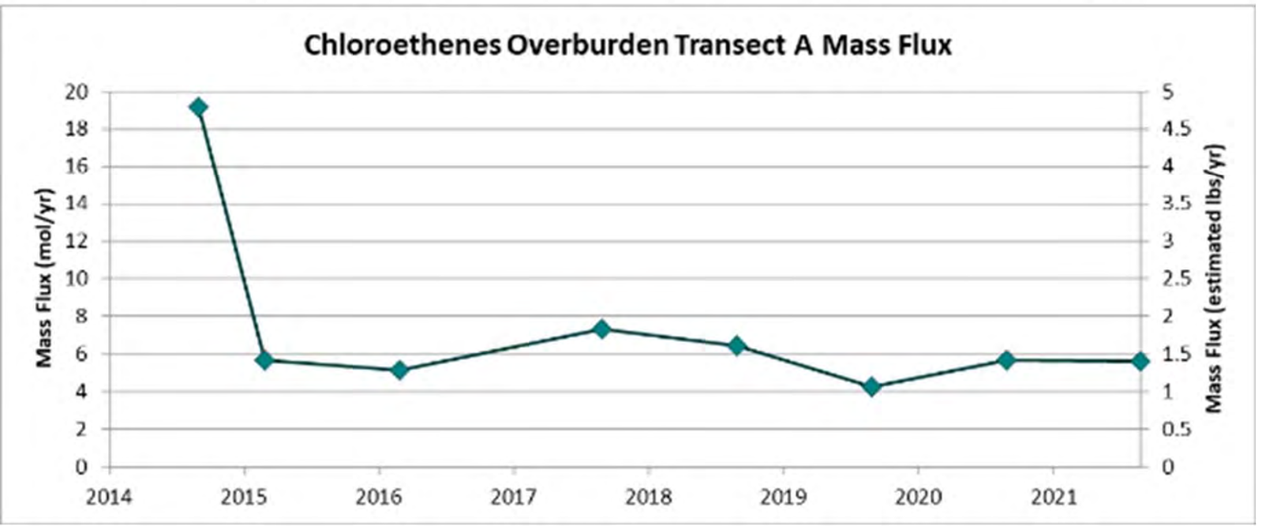
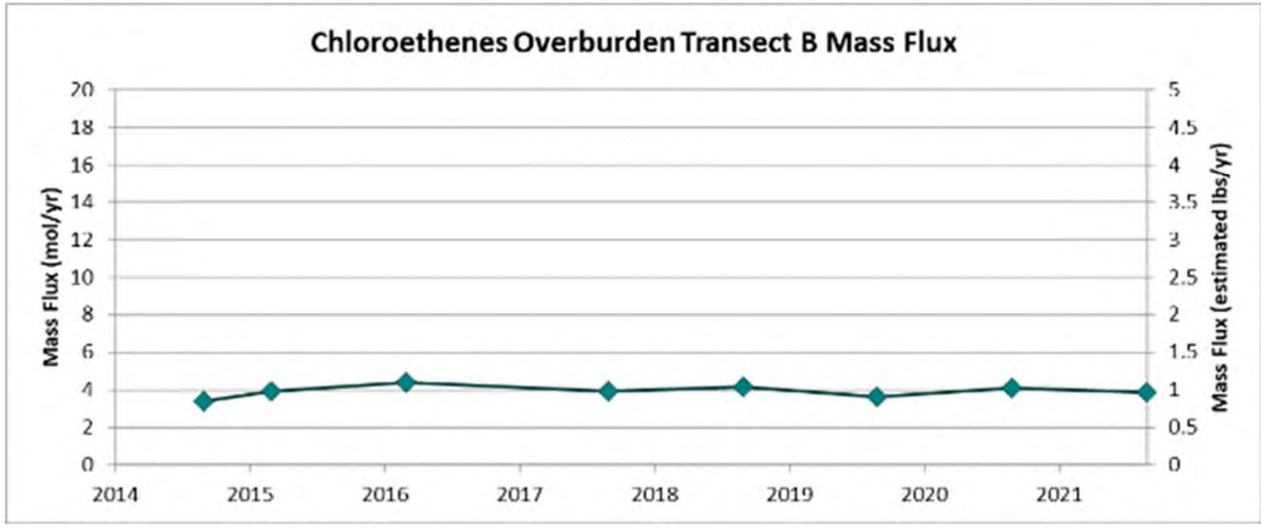

Chloroethenes Overburden Transect A Average Concentration
Average Concentration (nmol/L)
1,400
1,200
1,000
800
600
400
200
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Overburden Transect B Average Concentration
Average Concentration (nmol/L)
1,400
1,200
1,000
800
600
400
200
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Overburden Transect A Mass Flux
Mass Flux (mol/yr)
Mass Flux (estimated lbs/yr)
20
18
16
14
12
10
8
6
4
2
0
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Overburden Transect B Mass Flux
Mass Flux (mol/yr)
Mass Flux (estimated lbs/yr)
20
18
16
14
12
10
8
6
4
2
0
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
2014
2015
2016
2017
2018
2019
2020
2021

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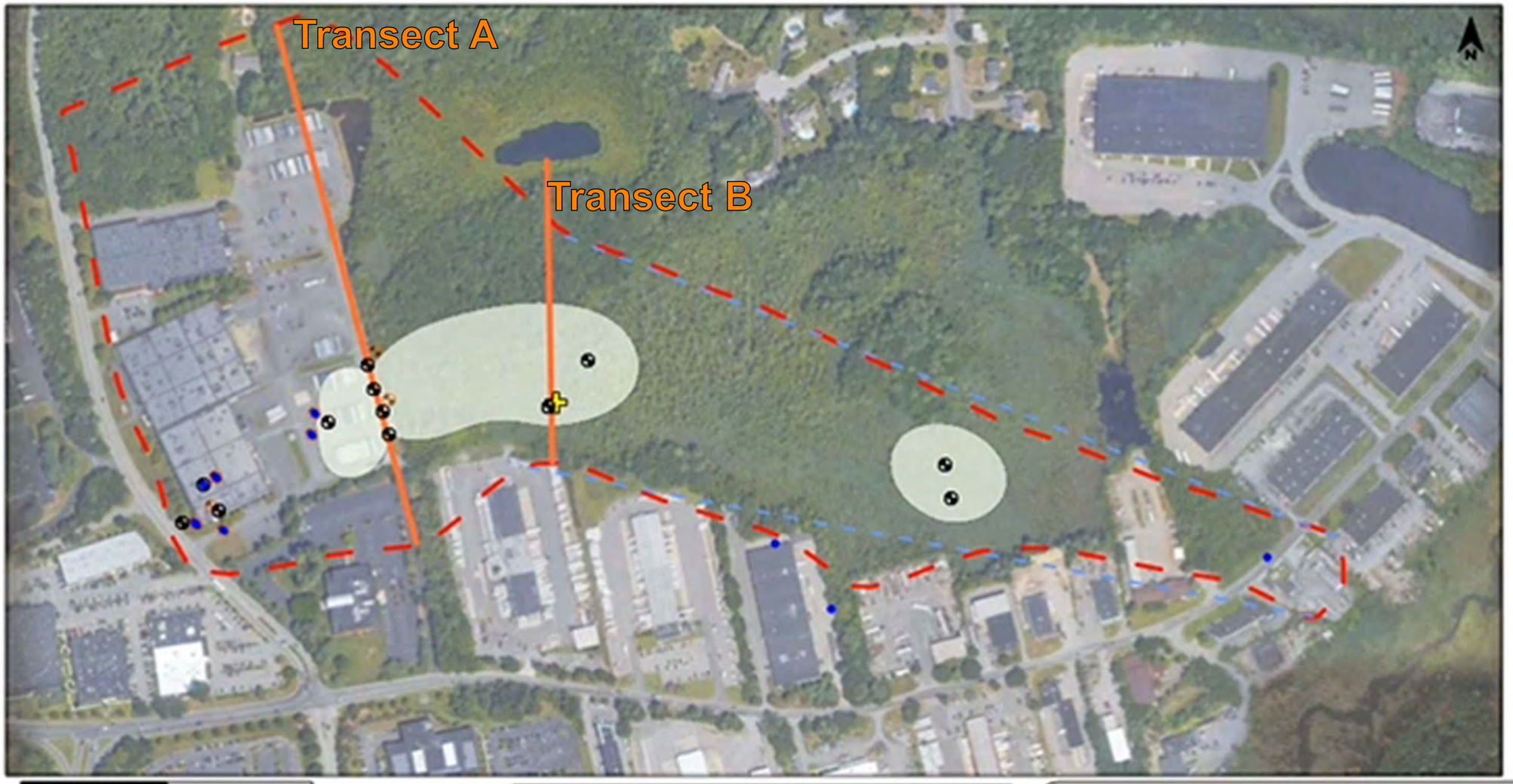

1,4-Dioxane
Overburden
Mar-2015

Concentration (µg/L)

45
40
35
30
25
20
15
10
5
0.3

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary
Control Fence

Transect A

Average Concentration: **1.76 µg/L**
Mass Flux: **0.029 lbs/yr**

Transect B

Average Concentration: **0.5 µg/L**
Mass Flux: **0.013 lbs/yr**

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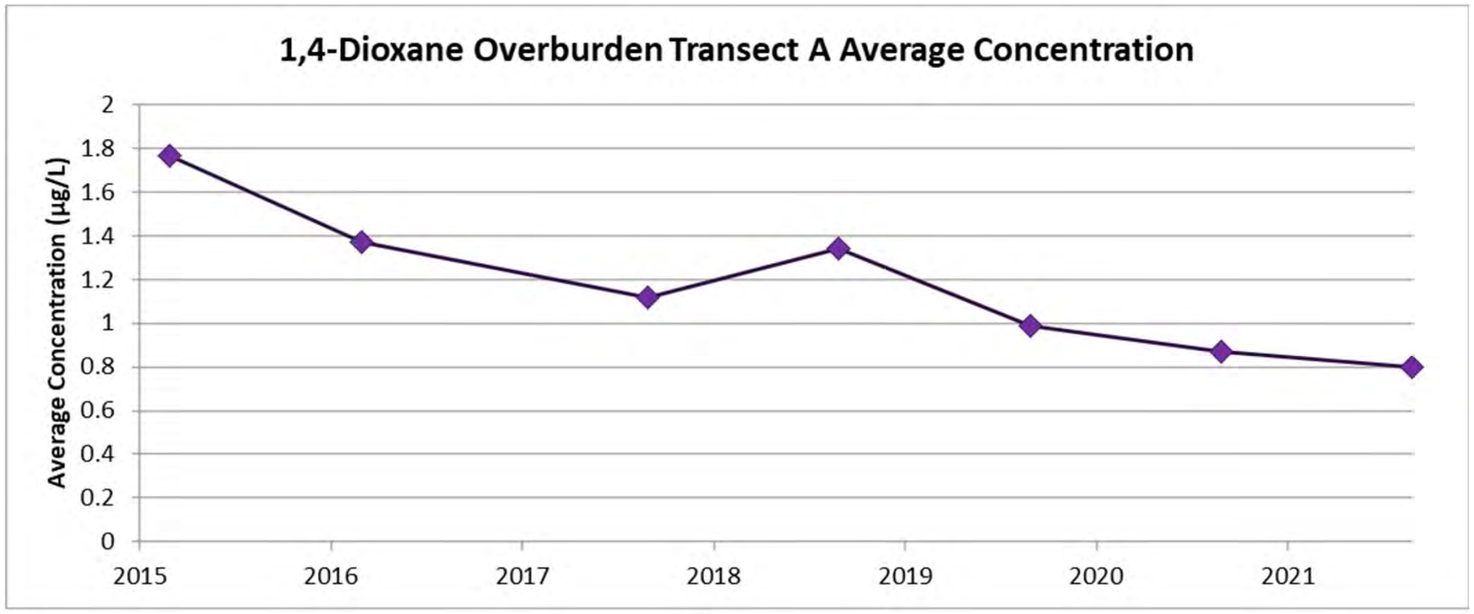
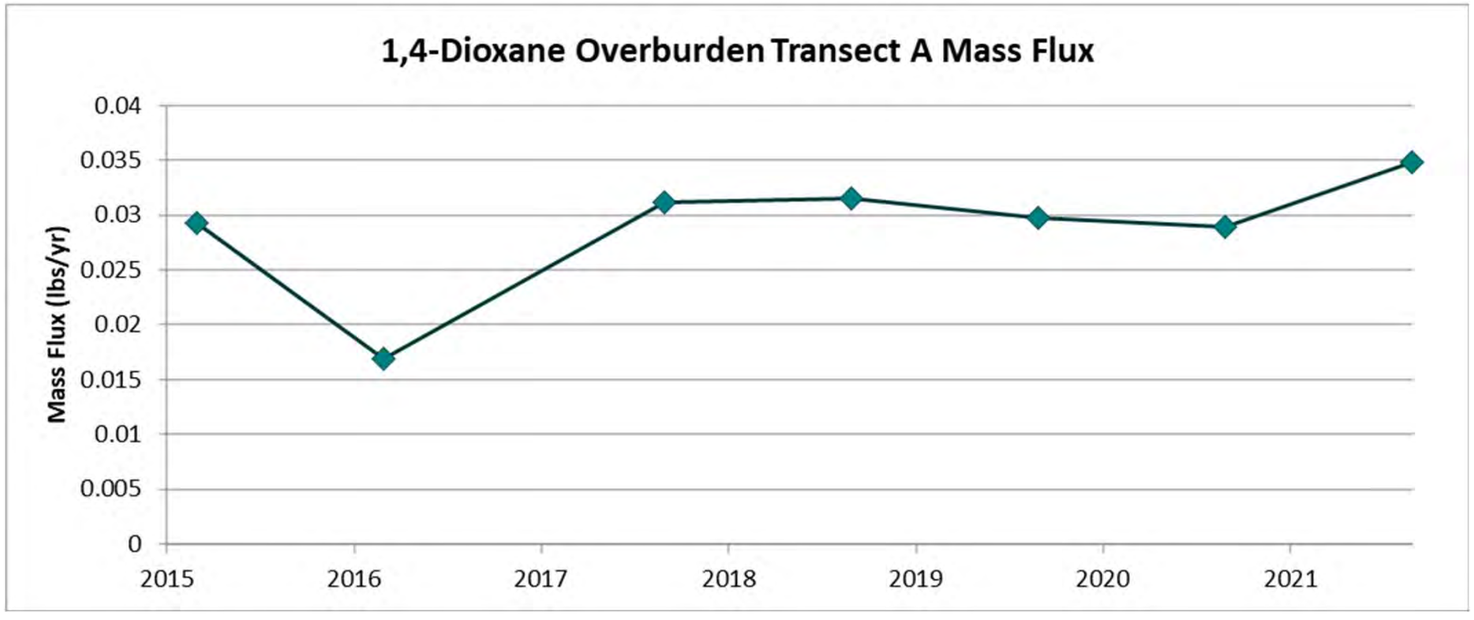

1,4-Dioxane Overburden Transect A Average Concentration
Average Concentration (µg/L)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Overburden Transect A Mass Flux
Mass Flux (lbs/yr)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
2015
2016
2017
2018
2019
2020
2021

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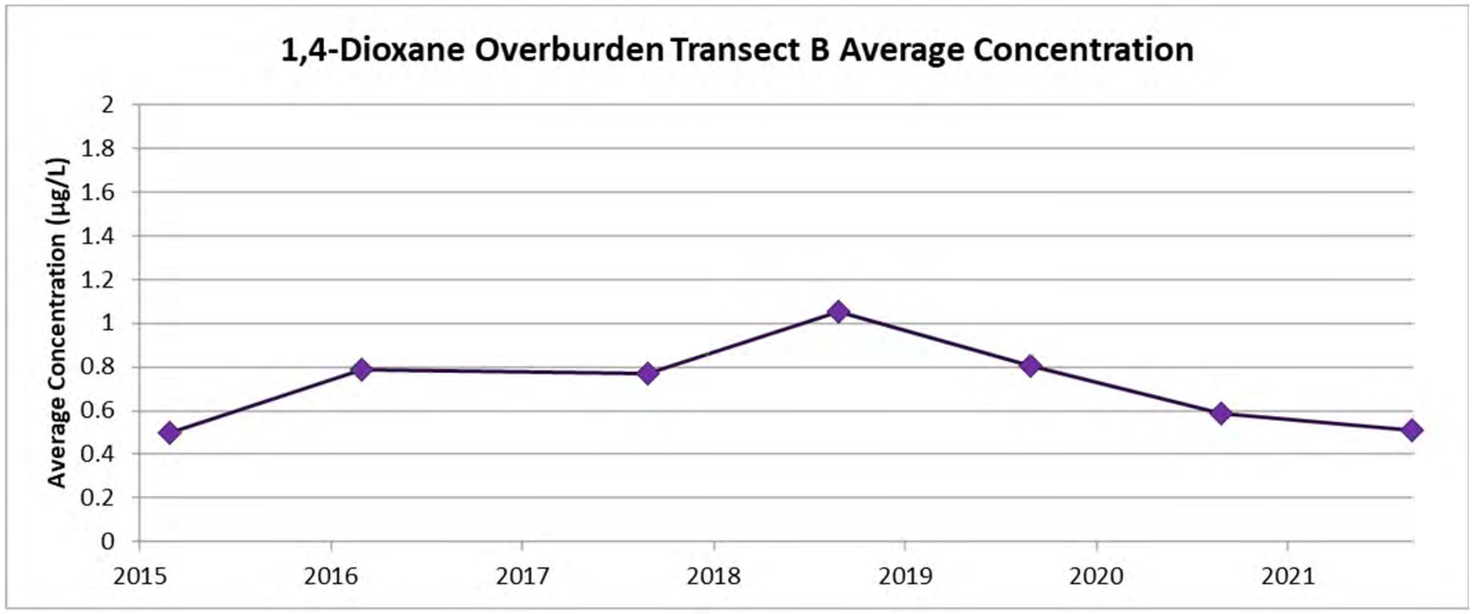
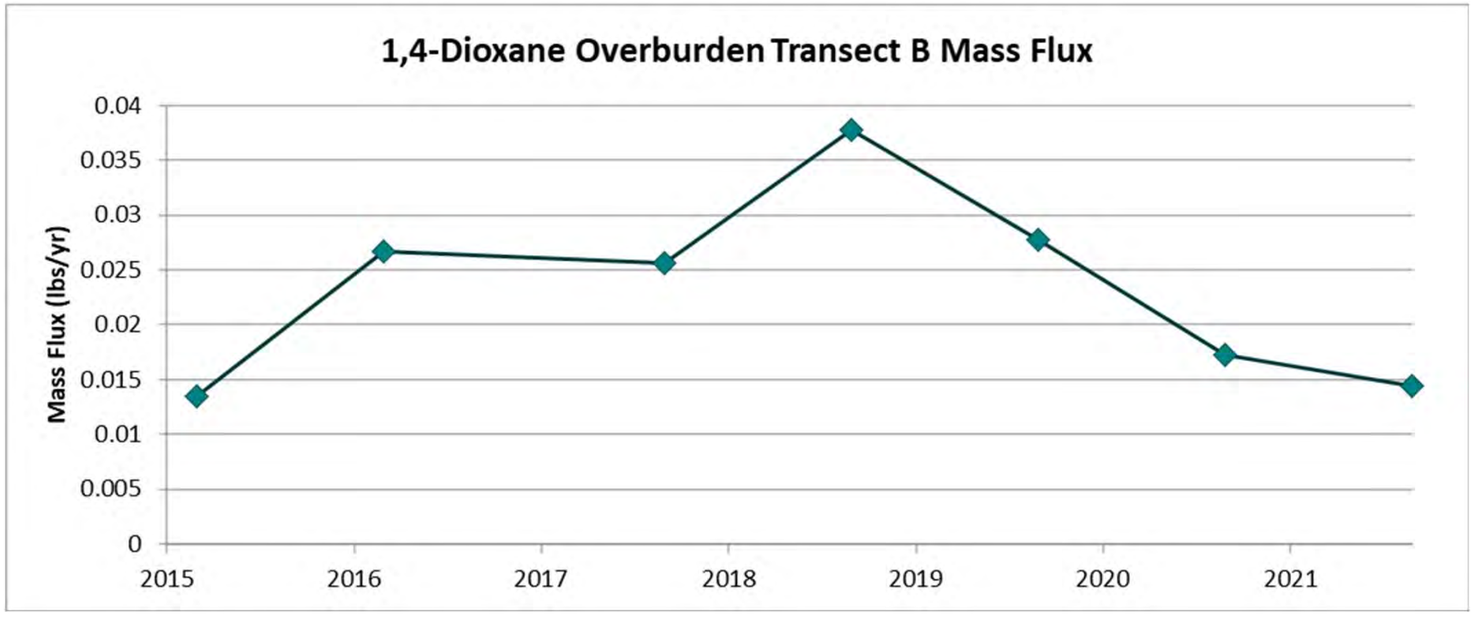

1,4-Dioxane Overburden Transect B Average Concentration
Average Concentration (µg/L)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Overburden Transect B Mass Flux
Mass Flux (lbs/yr)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
2015
2016
2017
2018
2019
2020
2021

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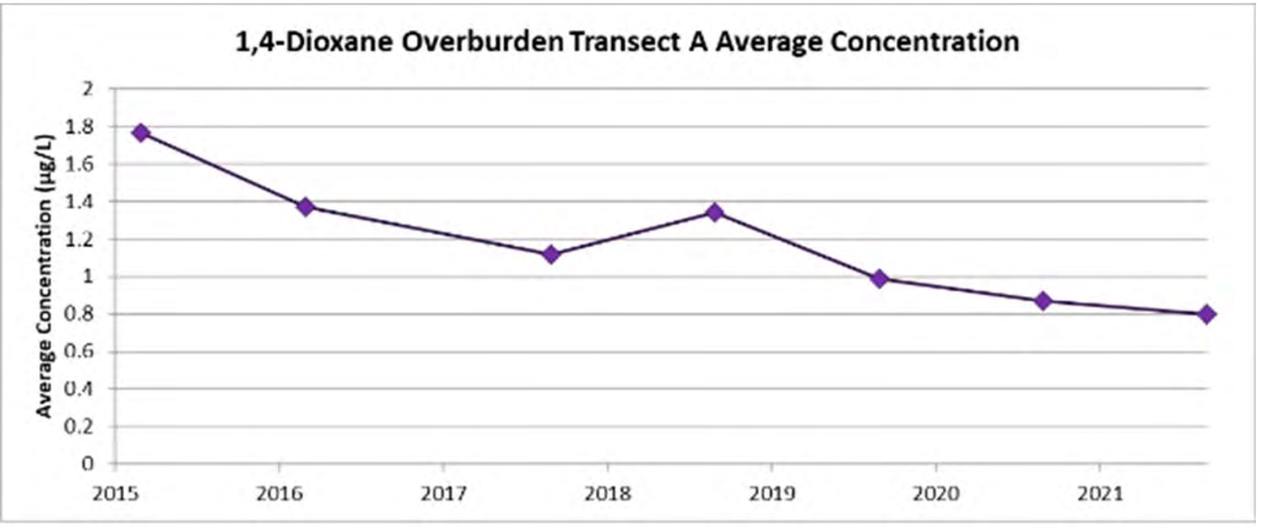
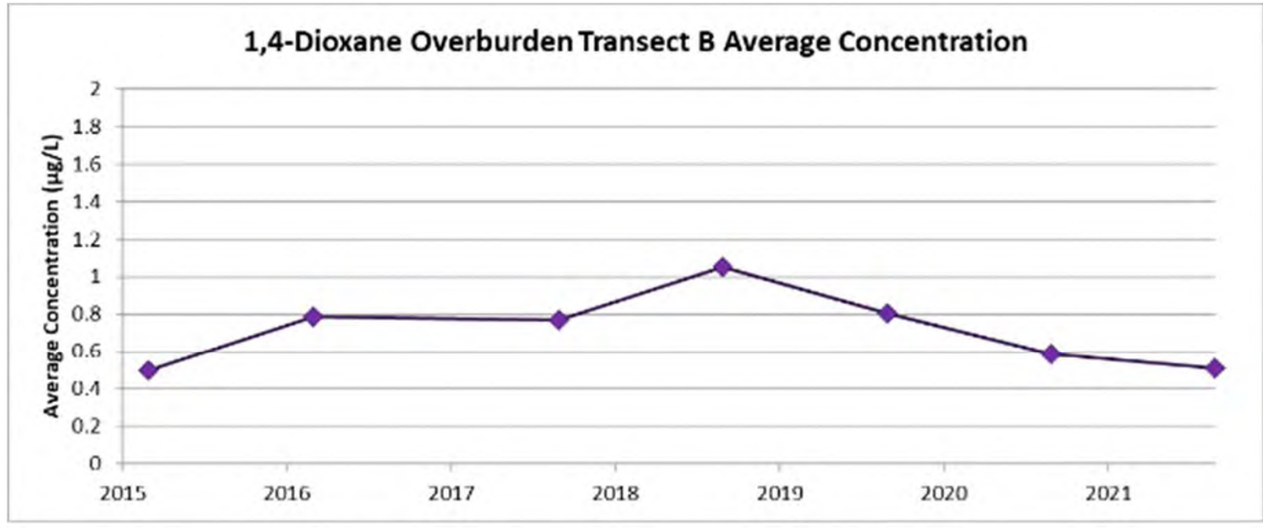
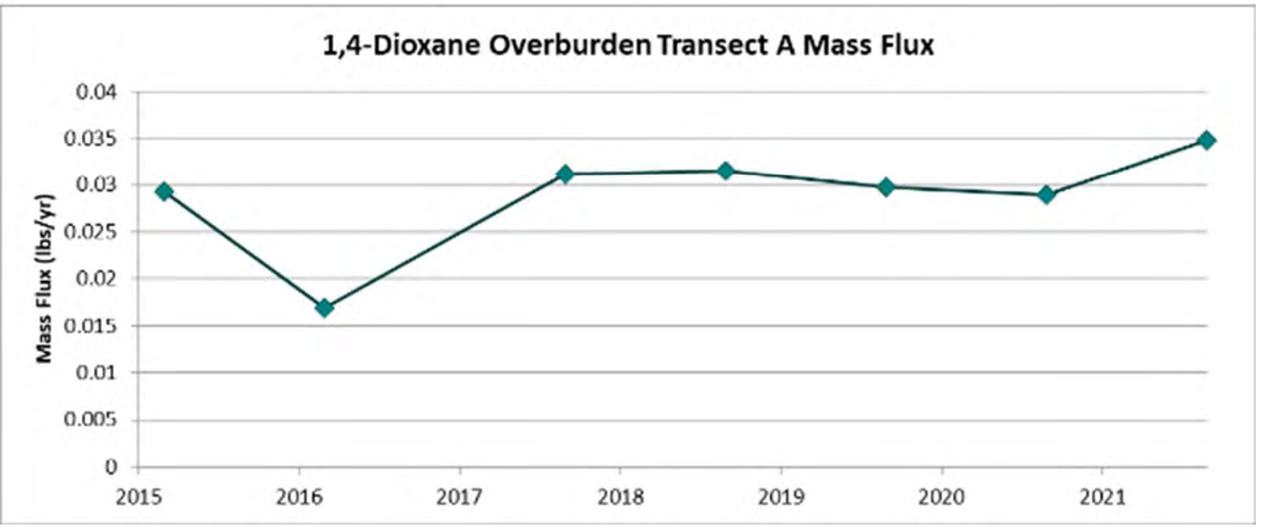
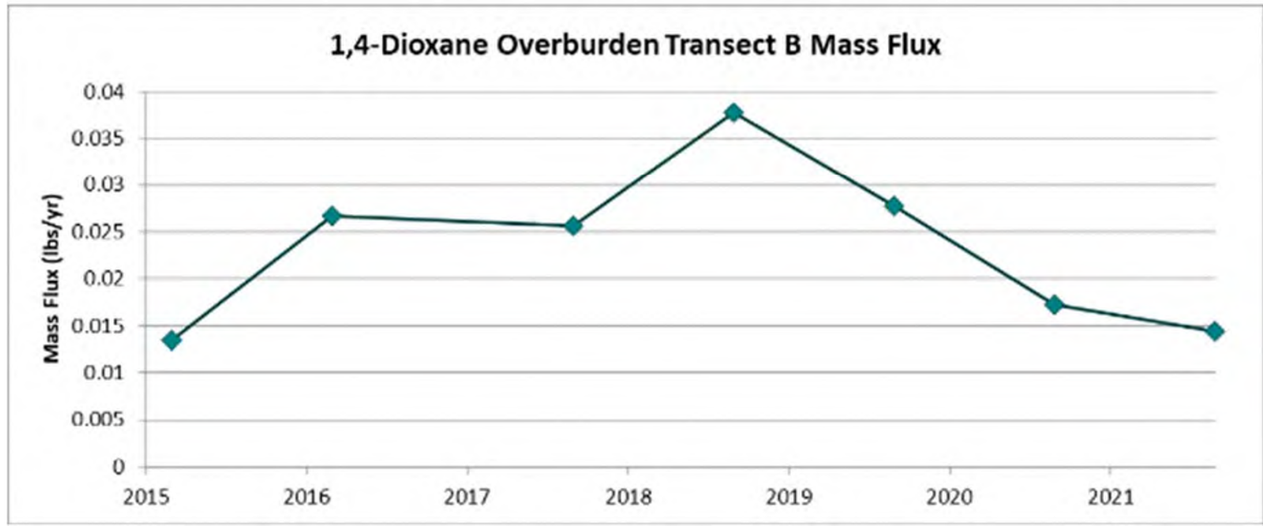
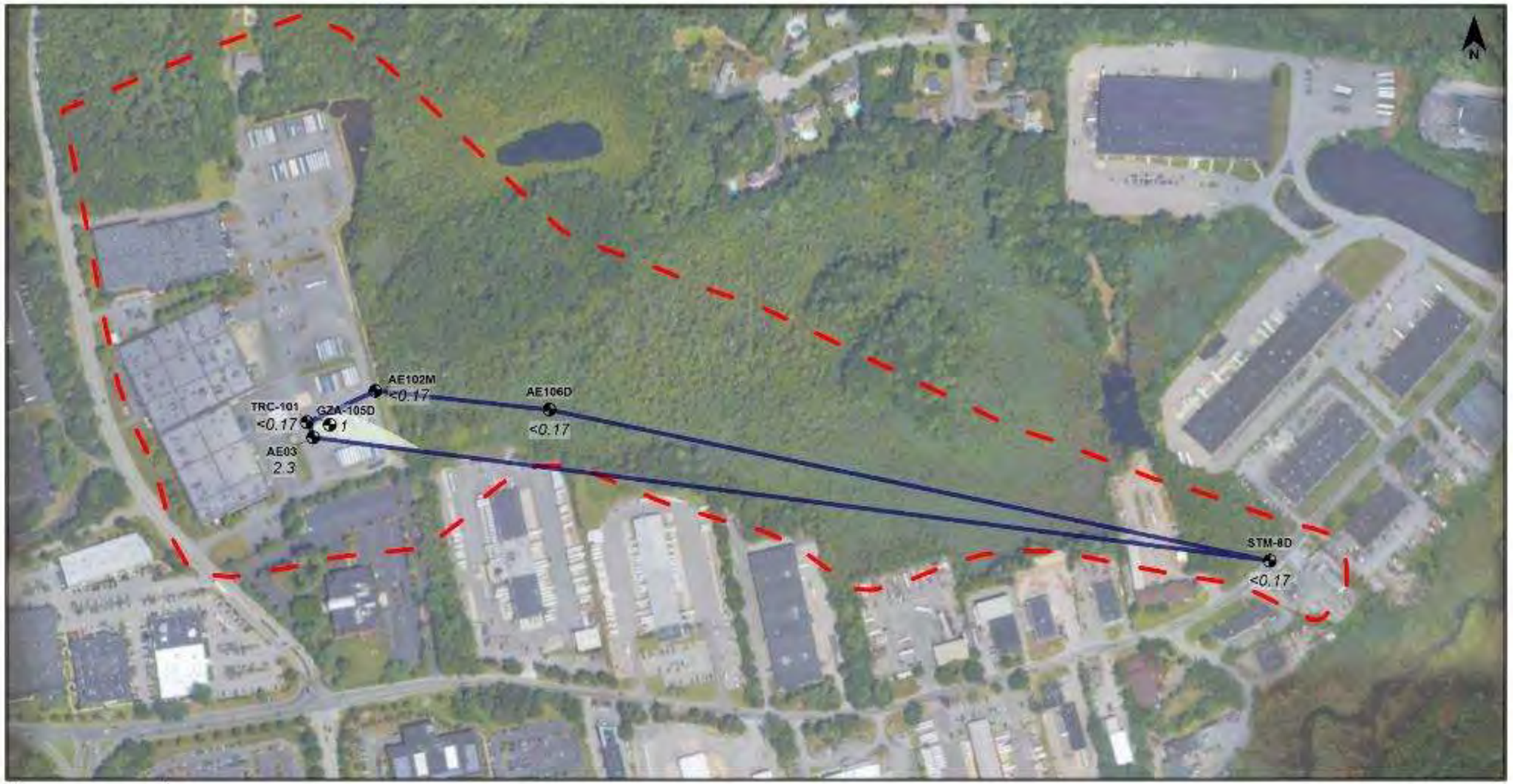

1,4-Dioxane Overburden Transect A Average Concentration
Average Concentration (µg/L)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Overburden Transect B Average Concentration
Average Concentration (µg/L)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Overburden Transect A Mass Flux
Mass Flux (lbs/yr)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Overburden Transect B Mass Flux
Mass Flux (lbs/yr)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
2015
2016
2017
2018
2019
2020
2021

© WSP 2021



0 ft 450 ft 900 ft

Ethane
Overburden
Sep-2021

Concentration (µg/L)

5
4.5
4
3.5
3
2.5
2
1.5
1
0.5

LEGEND

GZA-105D — Monitoring Well

1 — Concentration (µg/L)

MCP Site Boundary

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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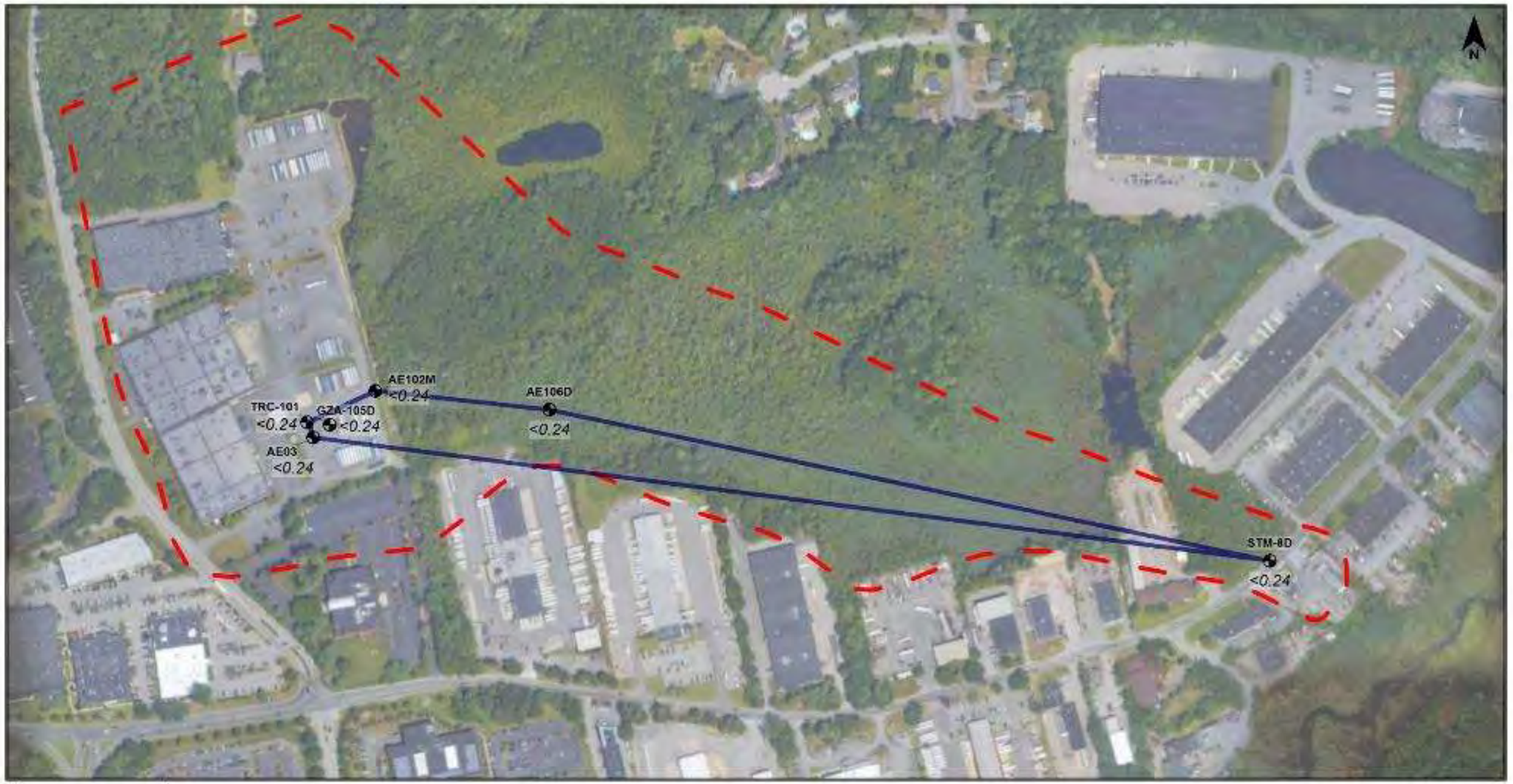

0 ft 450 ft 900 ft

Ethene
Overburden
Sep-2021

Concentration (µg/L)

5
4.5
4
3.5
3
2.5
2
1.5
1
0.5

LEGEND

GZA-105D — Monitoring Well

<0.24 — Concentration (µg/L)

MCP Site Boundary

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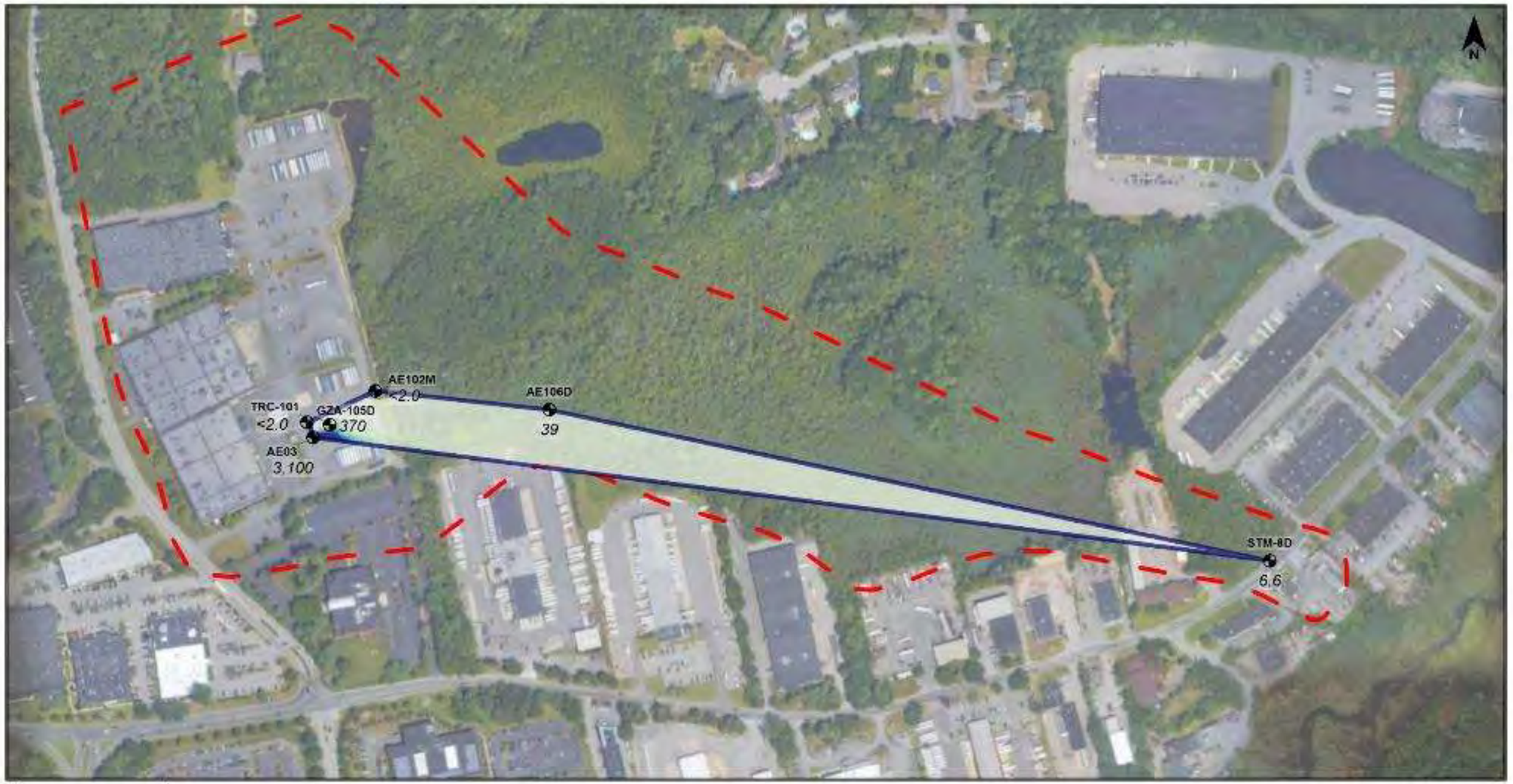

0 ft 450 ft 900 ft

Methane Overburden Sep-2021

Concentration (µg/L)

900
800
700
600
500
400
300
200
100
5

LEGEND

GZA-105D
370 Monitoring Well

Concentration (µg/L)

MCP Site Boundary

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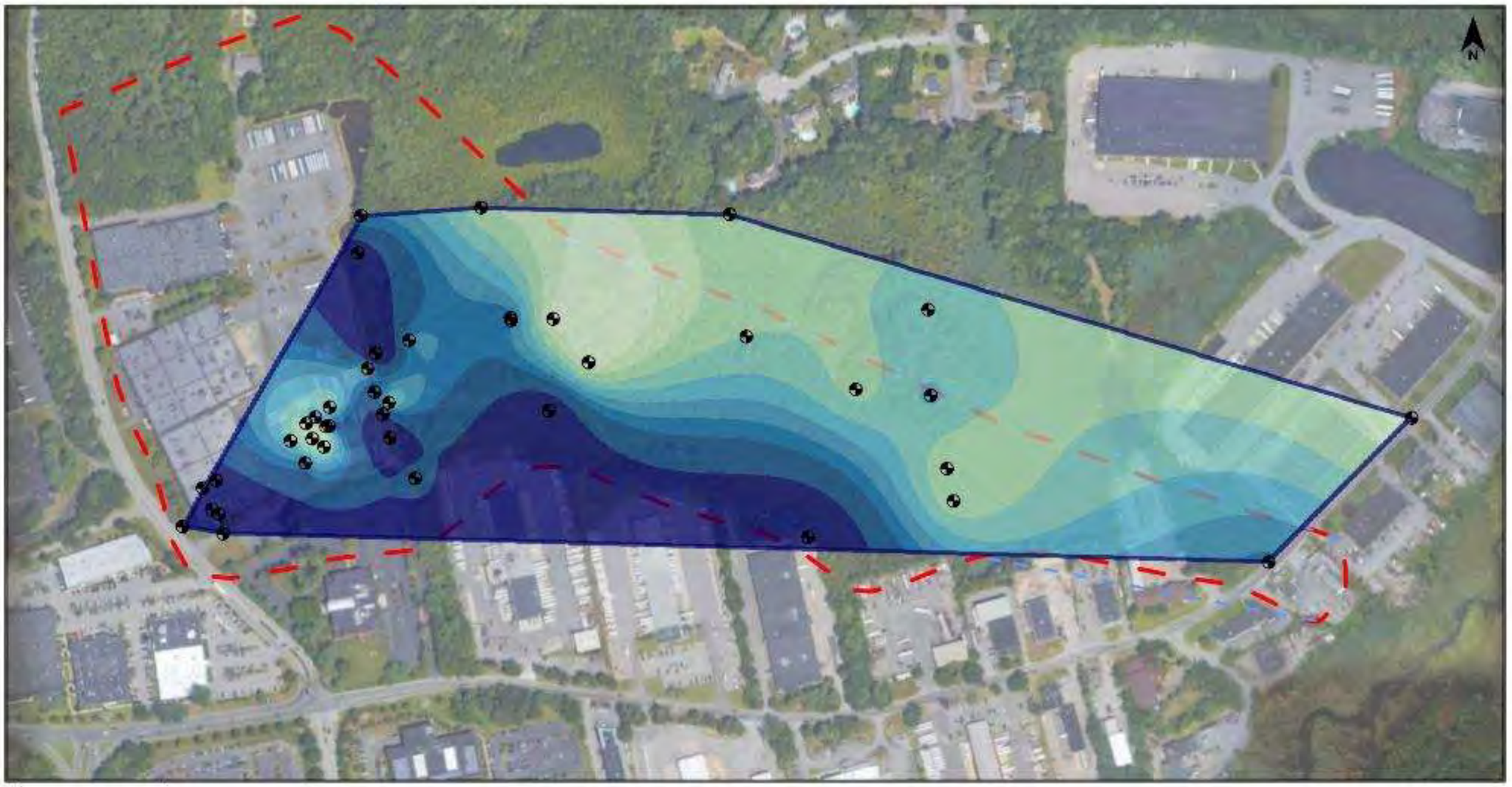

0 ft 450 ft 900 ft

ORP
Overburden
Sep-2021

ORP (mV)

100
50
25
0
-25
-50
-75
-100
-200
-250

LEGEND

MW-4 Monitoring Well — — MCP Site Boundary

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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PCE
Upper Bedrock
Sep-1989

Concentration (µg/L)

- 1,000
- 750
- 500
- 250
- 100
- 50
- 25
- 15
- 10
- 5

0 ft — 450 ft — 900 ft

LEGEND

- MW-4 — Monitoring Well
- MW-5 — Hanging Well
- Well not used in analysis
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **6.5 acres**
Plume Average Concentration: **55.3 µg/L**
Plume Mass Indicator: **0.46 lbs**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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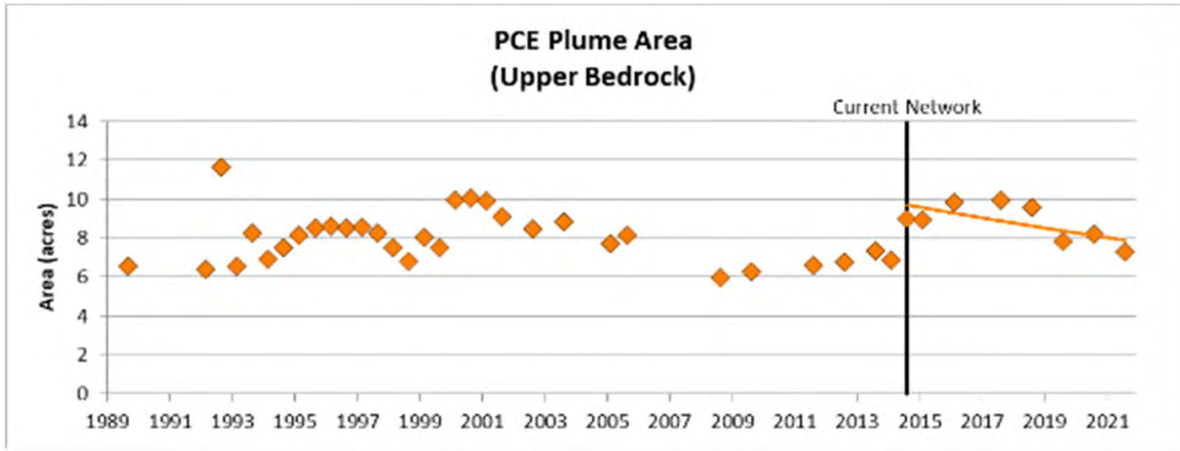
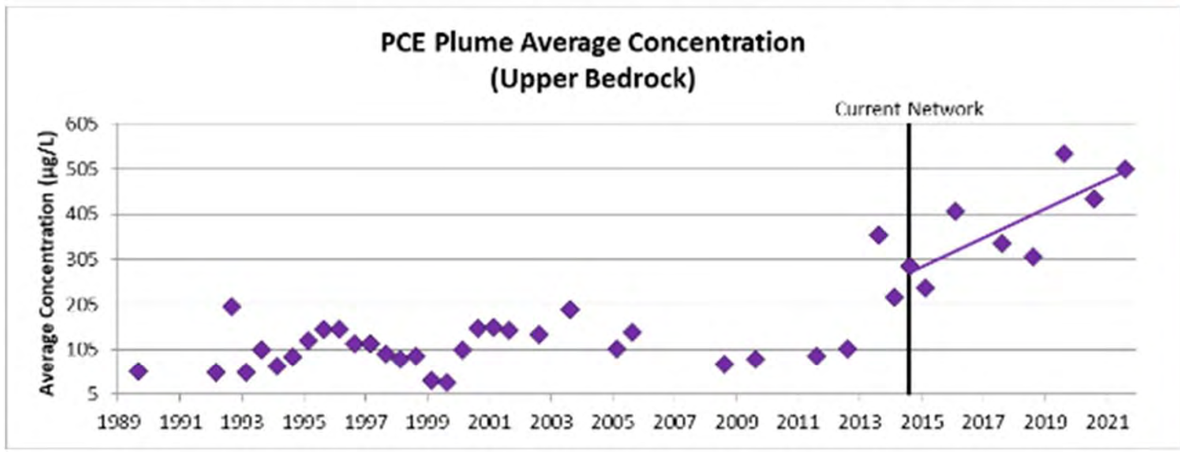
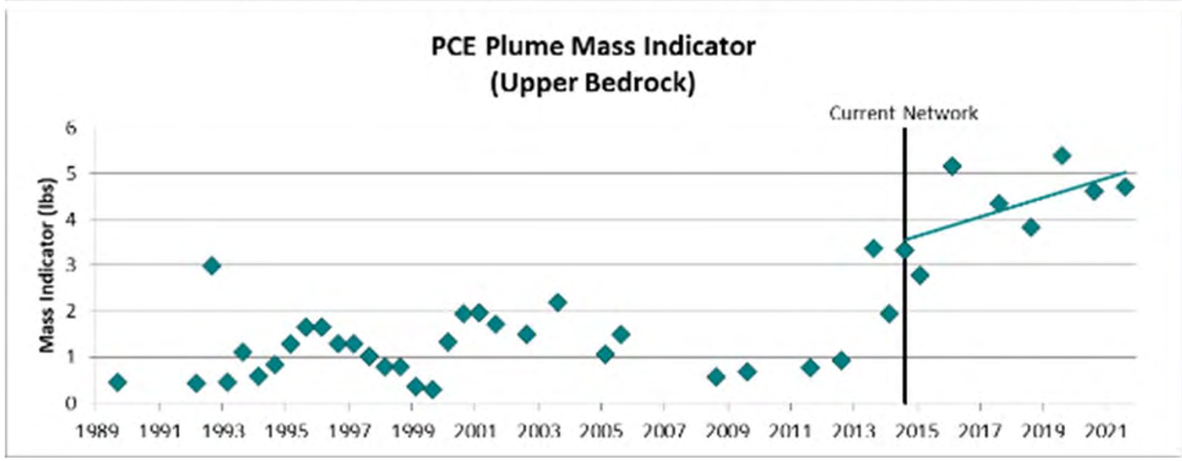


Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: 91% Confidence
Regression: 93% Confidence



Sep-2014 to Sep-2021
Increasing Trend
Mann-Kendall: 97% Confidence
Regression: 98% Confidence



Sep-2014 to Sep-2021
No Trend/Increasing Trend
Mann-Kendall: 91% Confidence
Regression: 89% Confidence

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TCE
Upper Bedrock
Sep-1989

Concentration (µg/L)

1,000
750
500
250
100
50
25
15
10
5

0 ft 450 ft 900 ft

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Well not used in analysis
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **7.7 acres**
Plume Average Concentration: **148 µg/L**
Plume Mass Indicator: **1.5 lbs**

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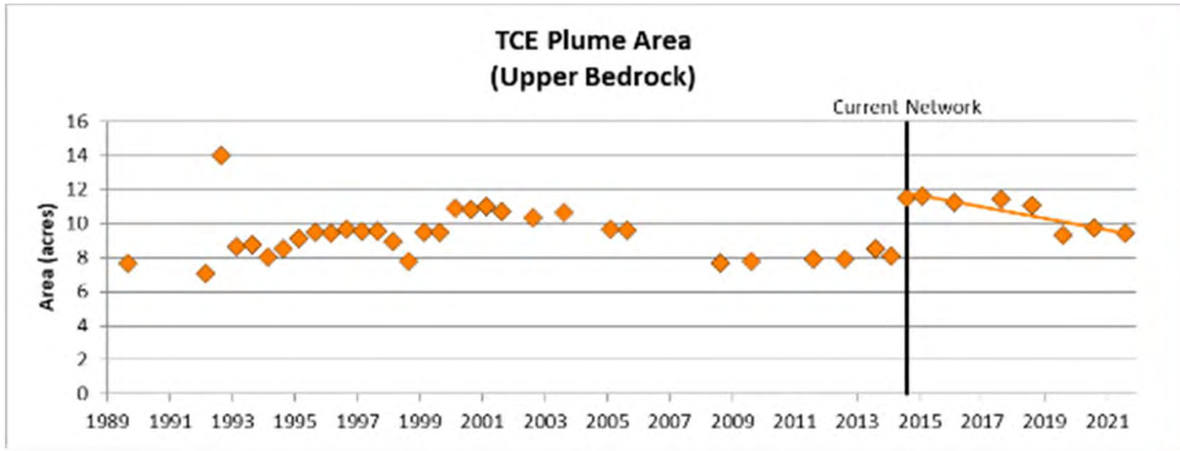
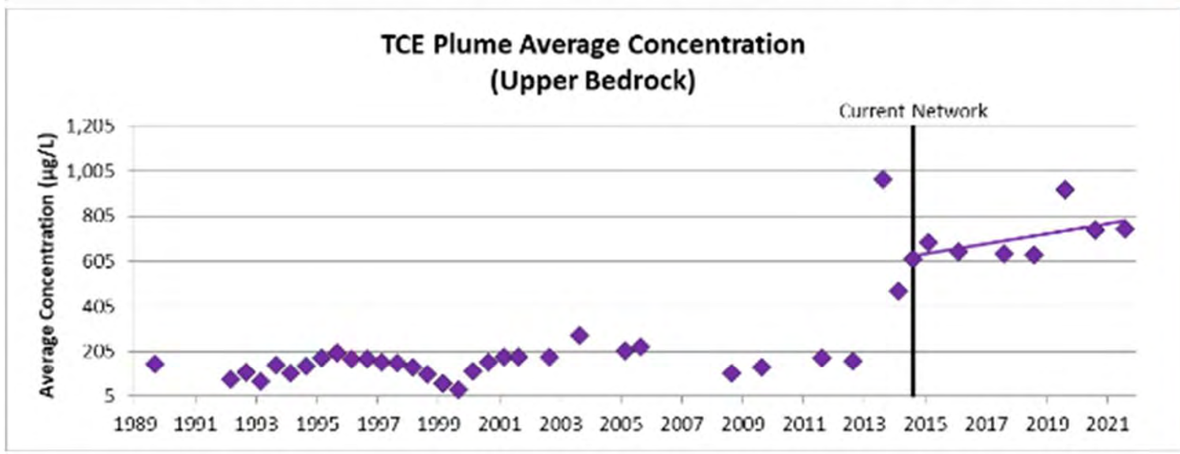
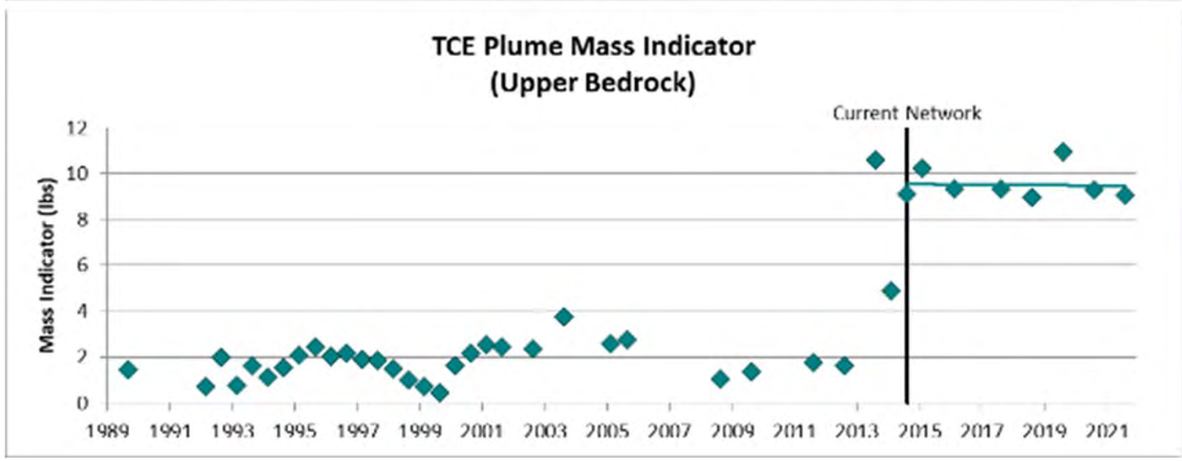


Sep-2014 to Sep-2021
Decreasing Trend
Mann-Kendall: 99% Confidence
Regression: >99% Confidence



Sep-2014 to Sep-2021
No Trend/Increasing Trend
Mann-Kendall: 91% Confidence
Regression: 87% Confidence



Sep-2014 to Sep-2021
No Trend
Mann-Kendall: 64% Confidence
Regression: 8% Confidence

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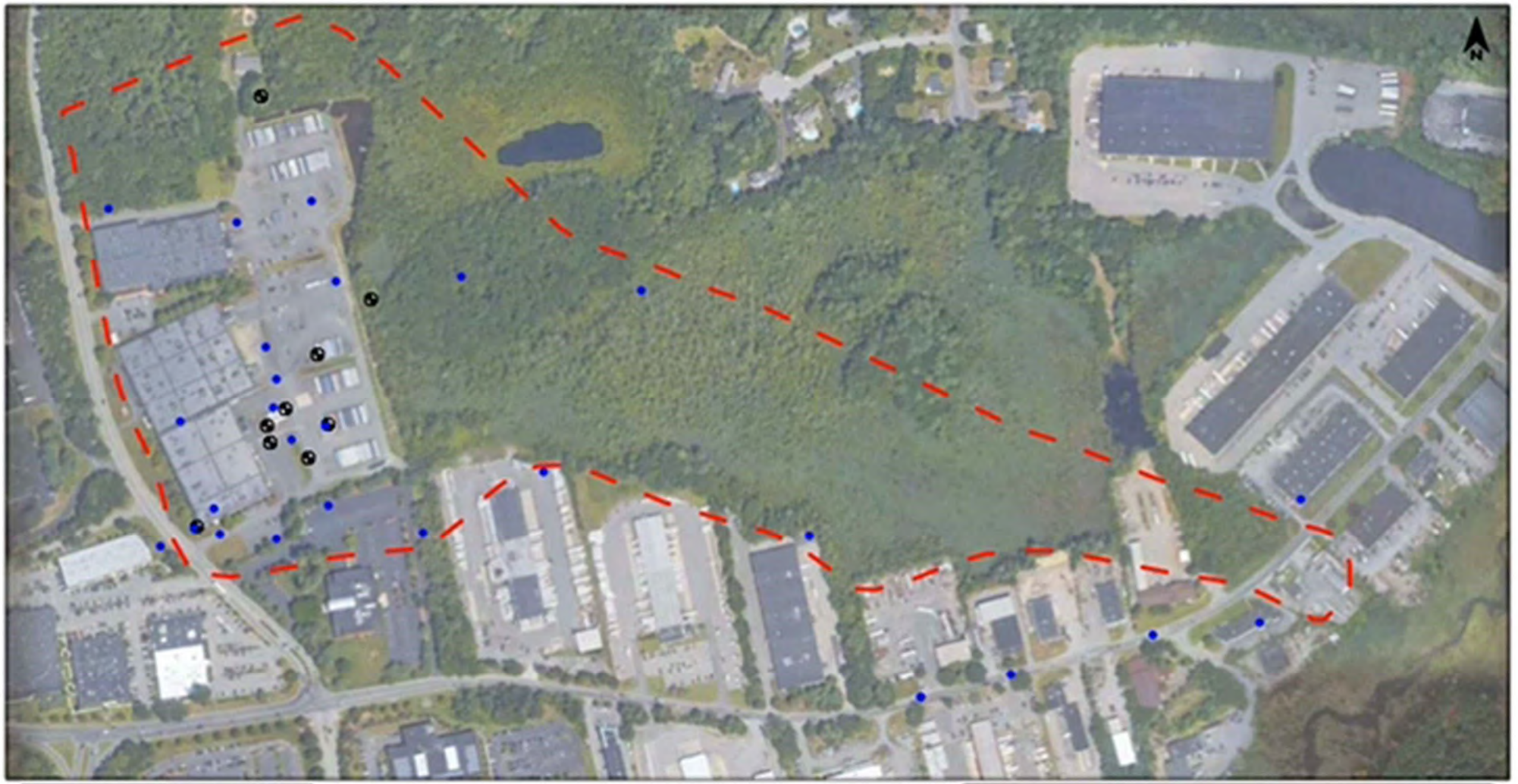

0 ft 450 ft 900 ft

Cis-1,2-DCE
Upper Bedrock
Sep-1989

Concentration (µg/L)

1,000
750
500
250
100
MCL 70
25
15
10
5

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Well not used in analysis
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **0.000 acres**
Plume Average Concentration: **< 5.0 µg/L**
Plume Mass Indicator: **0.000 lbs**

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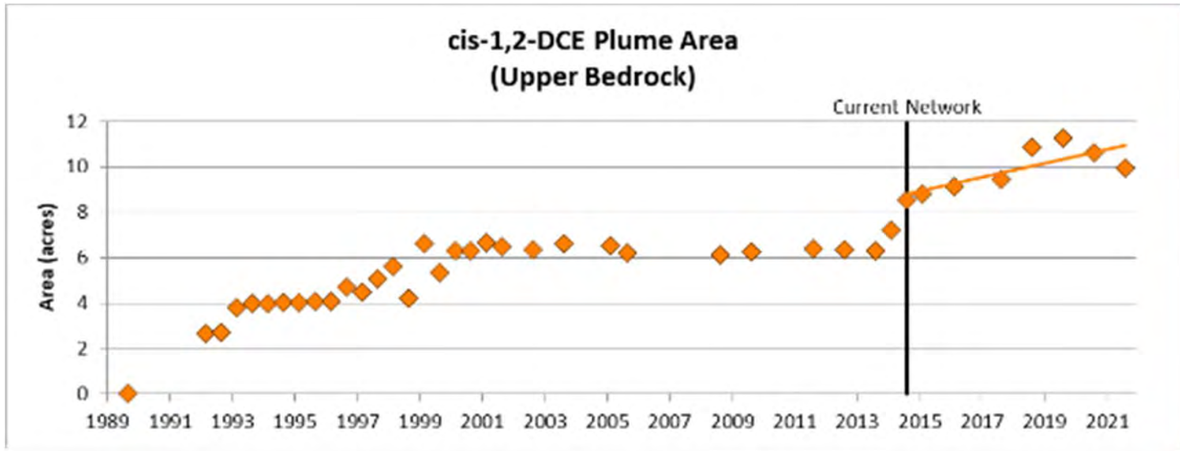
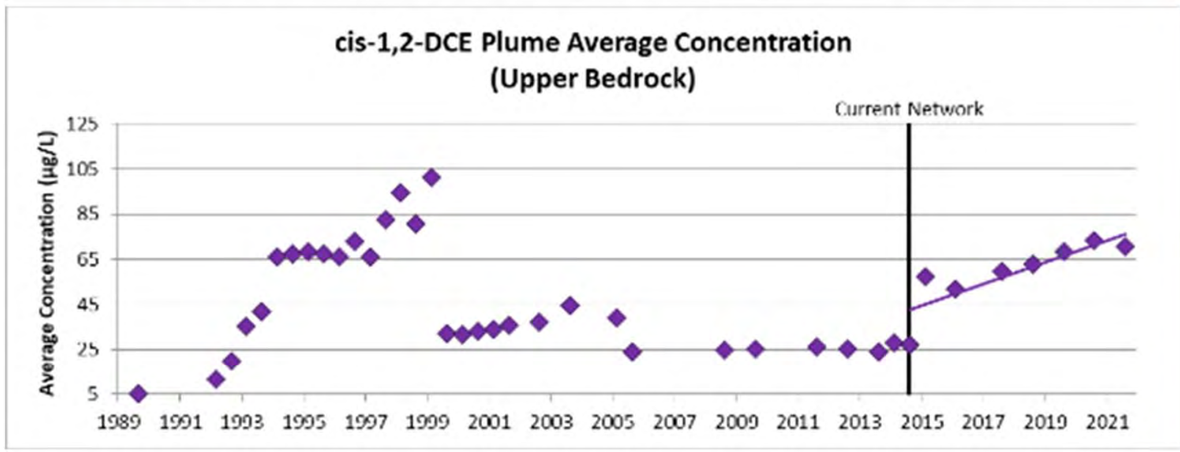
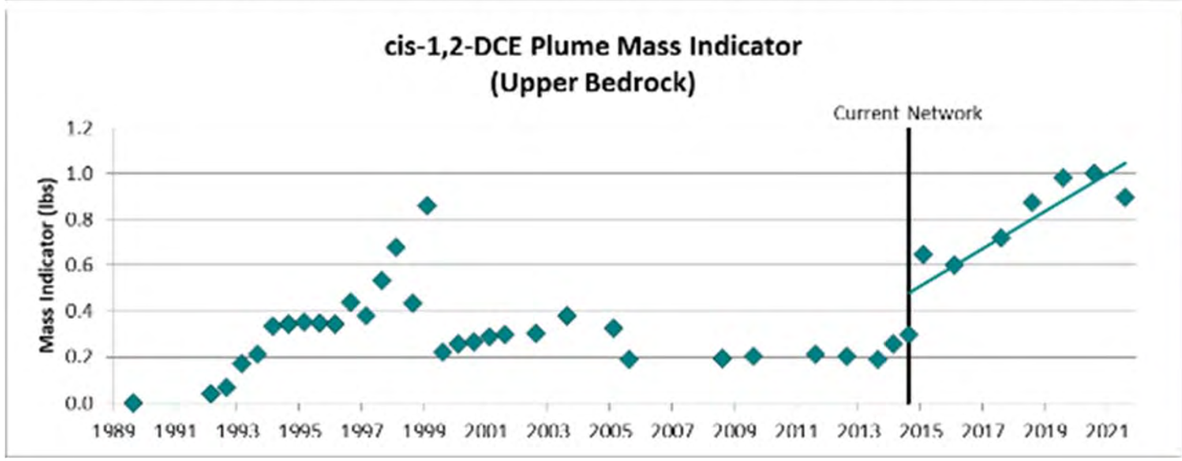


Sep-2014 to Sep-2021
Increasing Trend
Mann-Kendall: 98% Confidence
Regression: 98% Confidence



Sep-2014 to Sep-2021
Increasing Trend
Mann-Kendall: >99% Confidence
Regression: 99% Confidence



Sep-2014 to Sep-2021
Increasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence

© WSP 2021



Vinyl Chloride
Upper Bedrock
Sep-1989

Concentration (µg/L)

- 1,000
- 750
- 500
- 250
- 100
- 50
- 25
- 15
- 10
- 2

0 ft — 450 ft — 900 ft

LEGEND

- MW-4 — Monitoring Well
- MW-5 — Hanging Well
- Well not used in analysis
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **4.0 acres**
Plume Average Concentration: **46.2 µg/L**
Plume Mass Indicator: **0.23 lbs**

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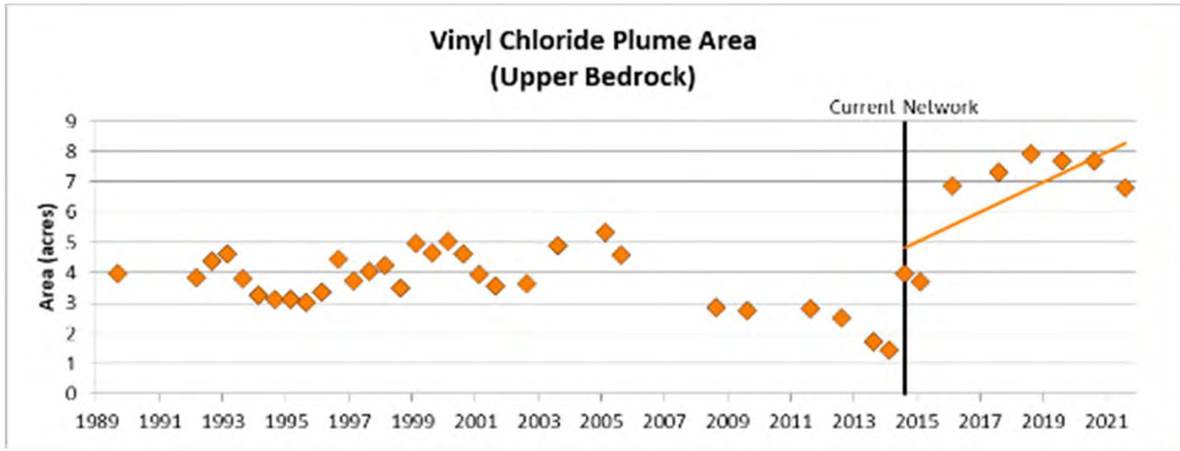
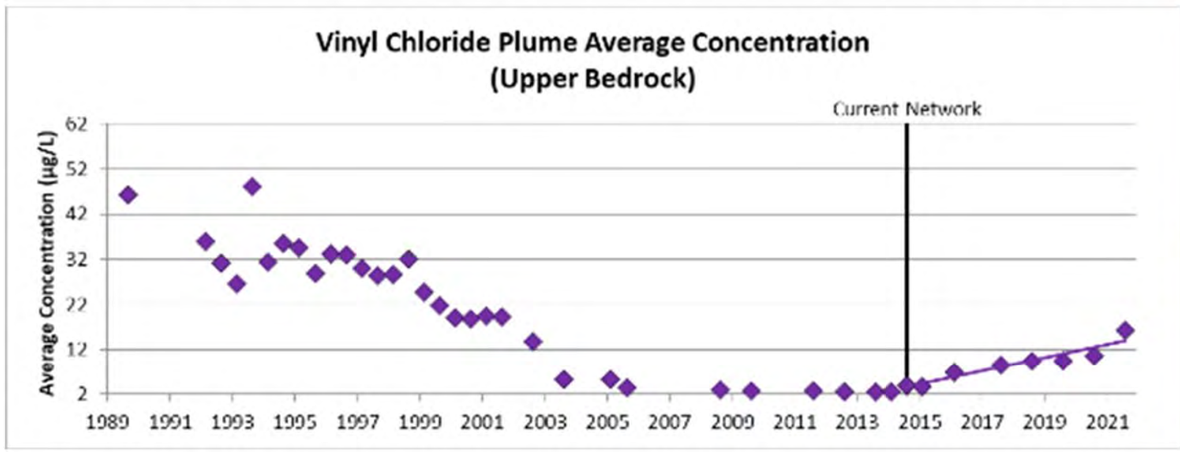
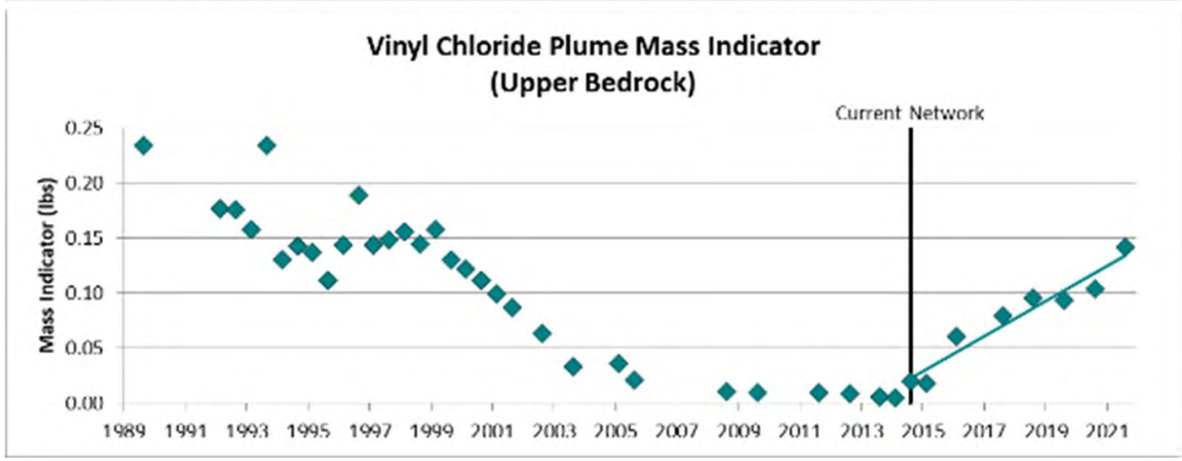


Sep-2014 to Sep-2021
Increasing Trend
Mann-Kendall: 91% Confidence
Regression: 97% Confidence



Sep-2014 to Sep-2021
Increasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence



Sep-2014 to Sep-2021
Increasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence

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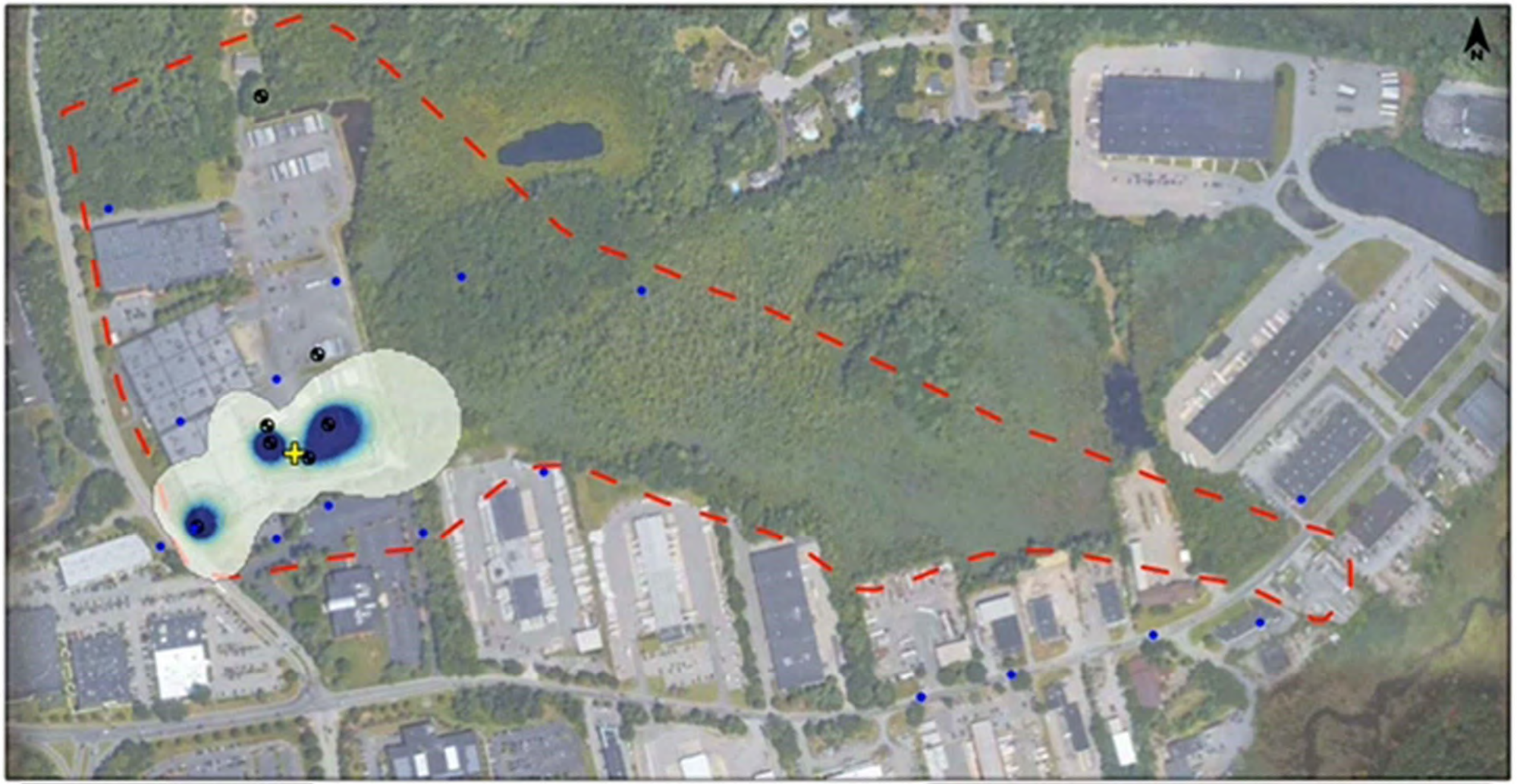

0 ft 450 ft 900 ft

Chloroethenes
Upper Bedrock
Sep-1989

Concentration (nmol/L)

4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Well not used in analysis
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **8.3 acres**
Plume Average Concentration: **1,654 nmol/L**
Plume Mass Indicator: **7.98 moles**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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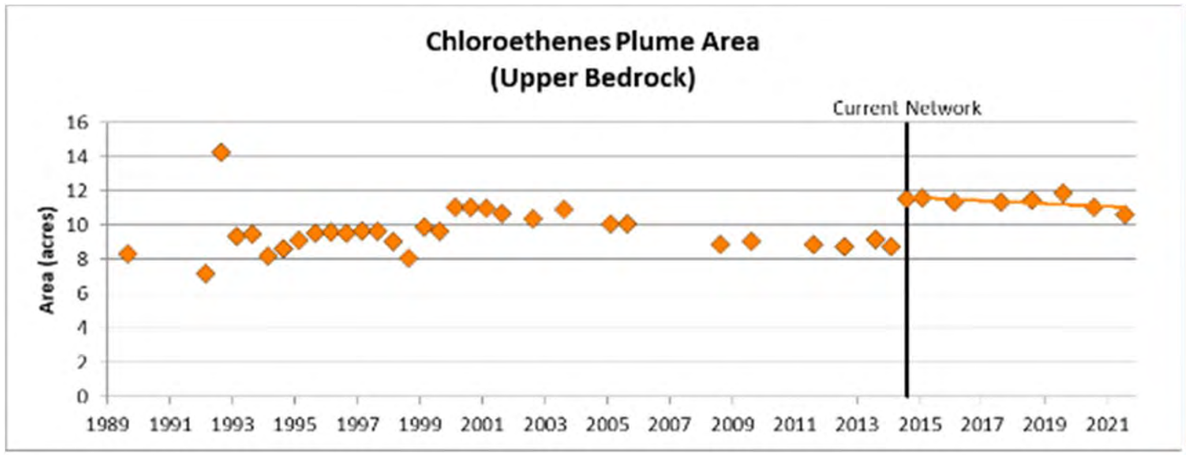
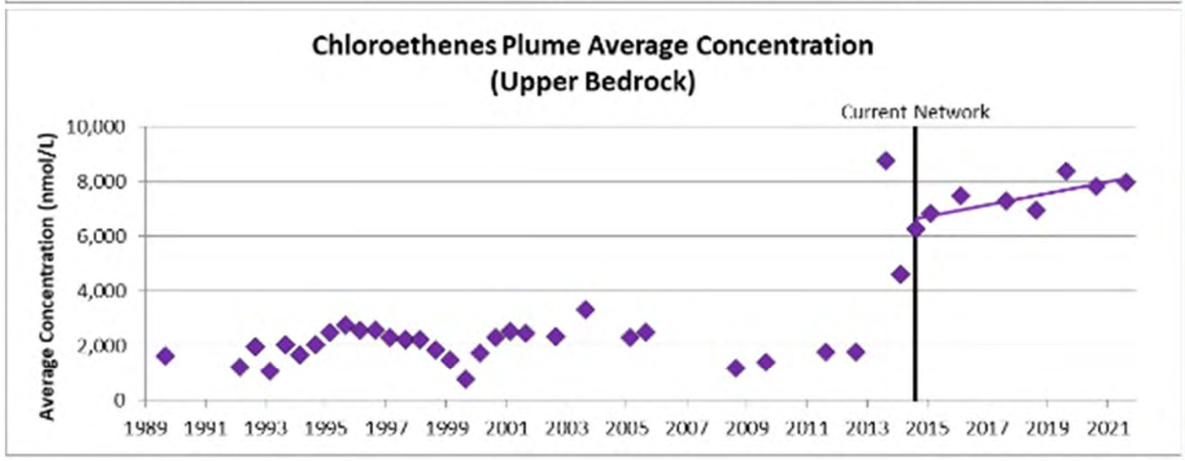
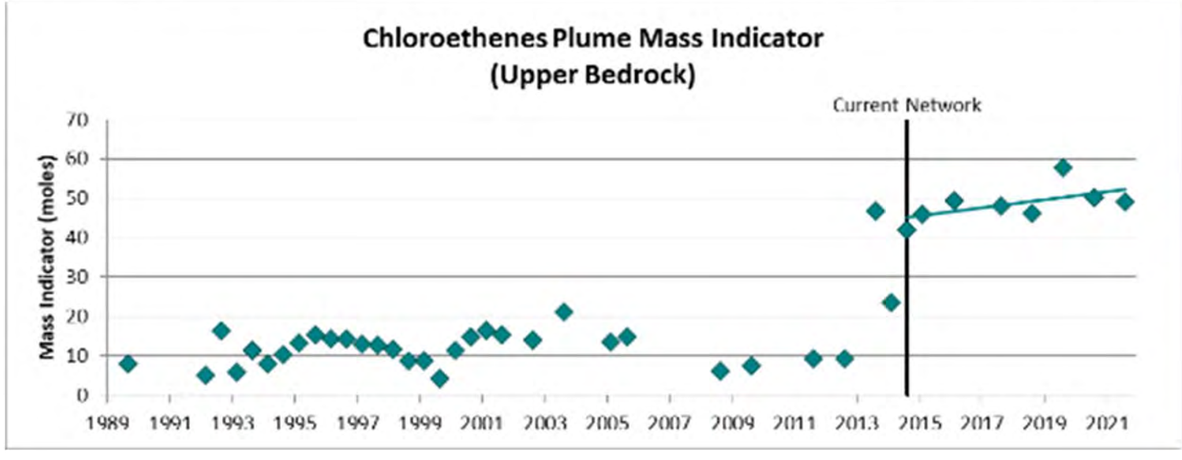


Sep-2014 to Sep-2021
No Trend/Decreasing Trend
Mann-Kendall: 91% Confidence
Regression: 87% Confidence



Sep-2014 to Sep-2021
Increasing Trend
Mann-Kendall: 98% Confidence
Regression: 98% Confidence



Sep-2014 to Sep-2021
No Trend/Increasing Trend
Mann-Kendall: 95% Confidence
Regression: 87% Confidence

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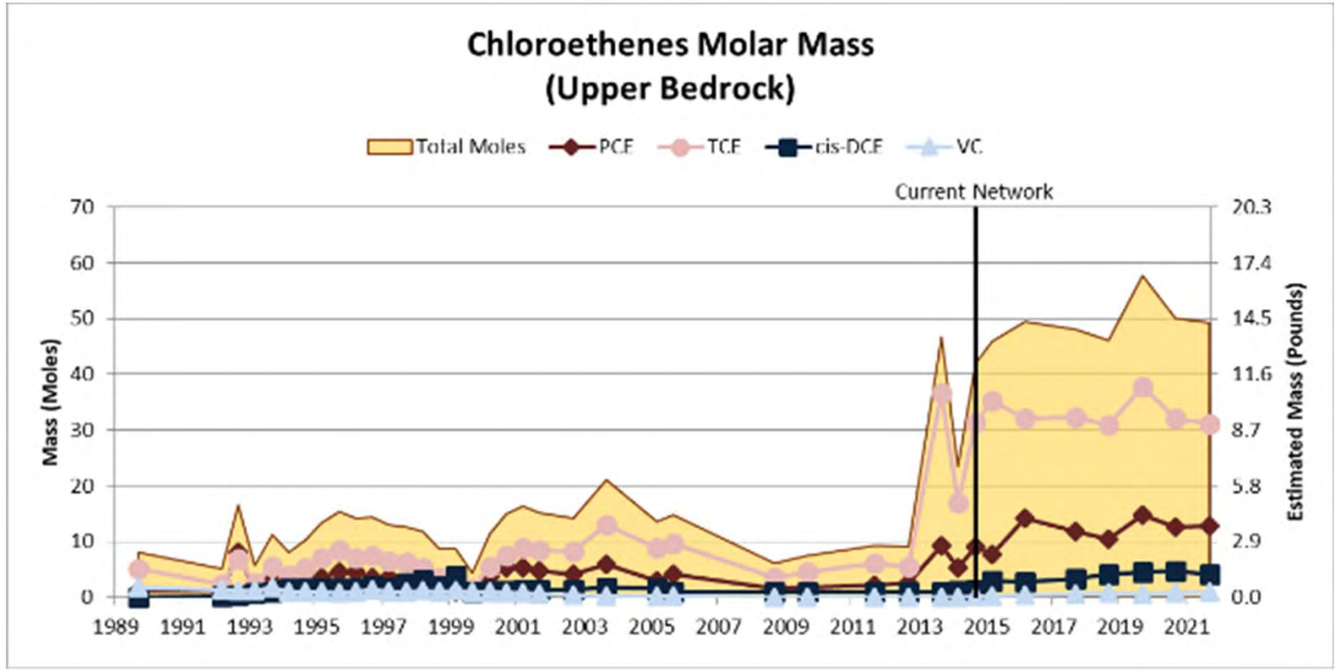
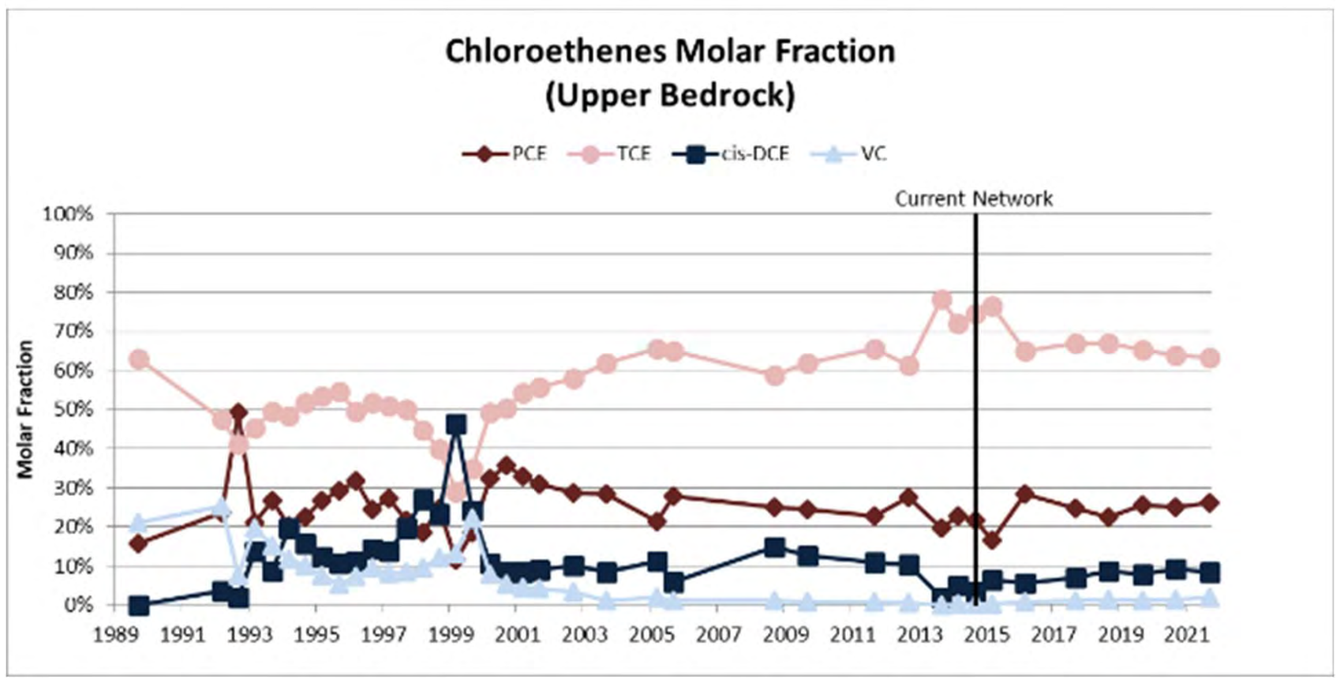
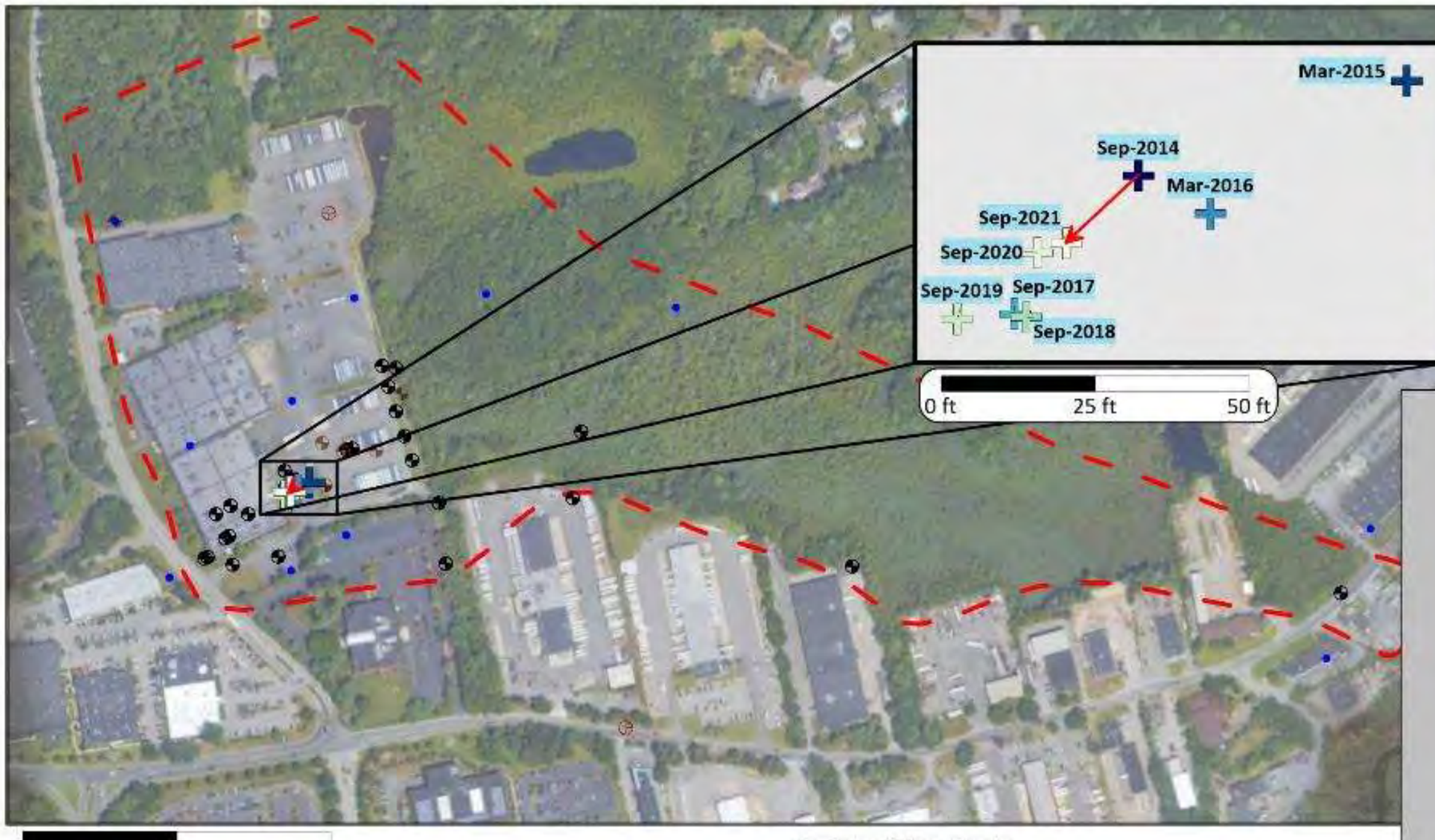
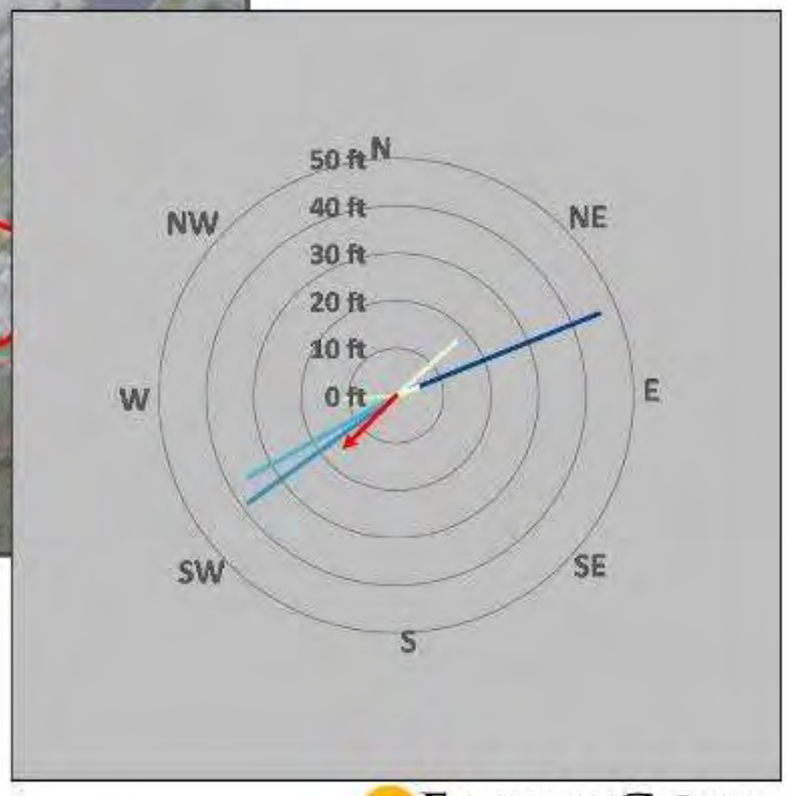

Chloroethenes Molar Mass
(Upper Bedrock)
Total Moles
PCE
TCE
cis-DCE
VC
Current Network
Mass (Moles)
Estimated Mass (Pounds)
70
60
50
40
30
20
10
0
20.3
17.4
14.5
11.6
8.7
5.8
2.9
0.0
1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2021


Chloroethenes Molar Fraction
(Upper Bedrock)
PCE
TCE
cis-DCE
VC
Current Network
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2021

© WSP 2021

Chloroethenes
Upper Bedrock
Center of Mass





Center of Mass Scale



Sep-2014 → Sep-2021

LEGEND

- MW-4 — Monitoring Well
- MW-5 — Hanging Well
- Well not used in analysis
- Control Point
- MCP Site Boundary
- Net COM Movement

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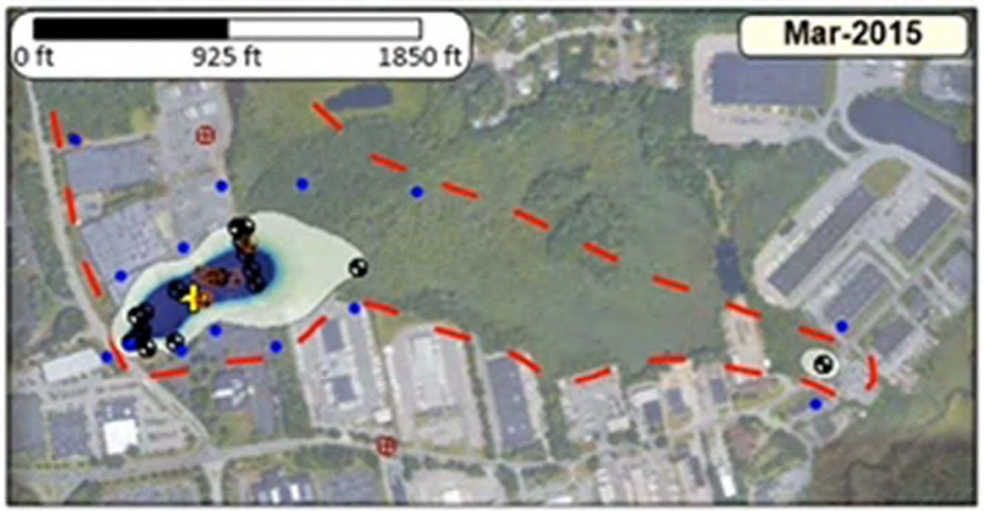


Concentration (nmol/L)

0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500

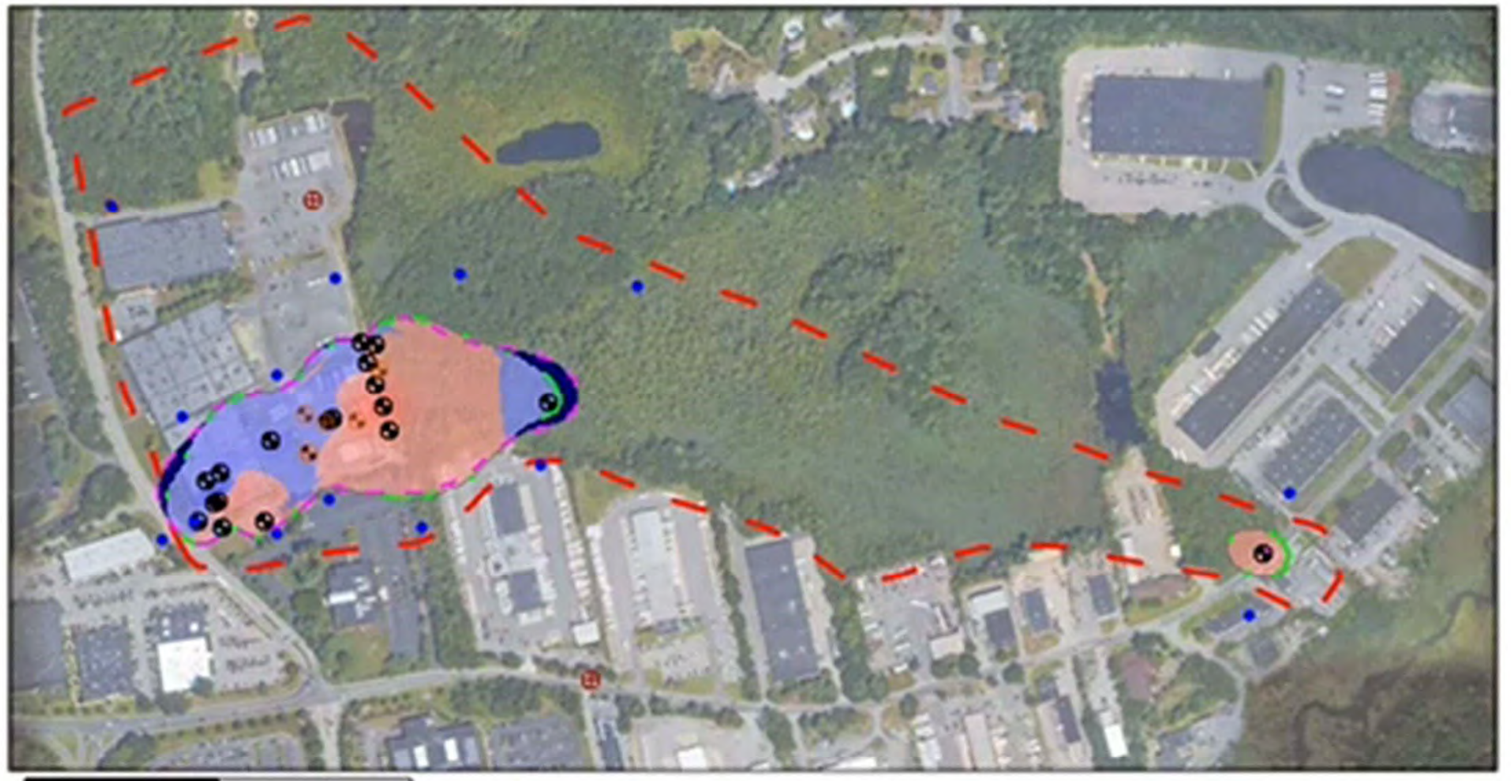
LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Well not used in analysis
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2014 Plume Boundary
- Mar-2015 Plume Boundary

Chloroethenes
Upper Bedrock

Plume Differences Sep-2014 vs Mar-2015

N



0 ft 600 ft 1200 ft

Spatial Change Indicator™

Decrease — Increase

Plume Characteristics

Area: **0% Increase**
Average Concentration: **9% Increase**
Mass Indicator: **10% Increase**
Mass Increase: **6.89 moles Increase**
Mass Decrease: **2.85 moles Decrease**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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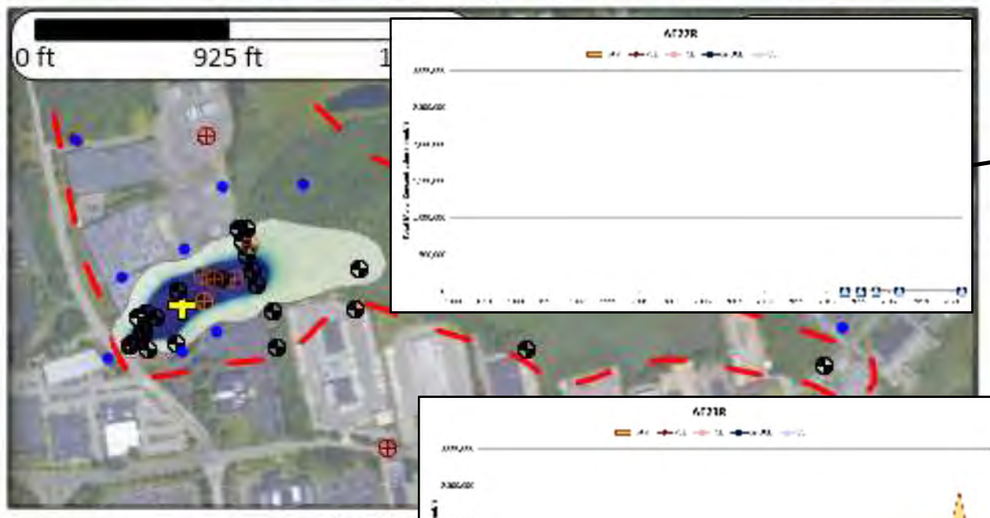
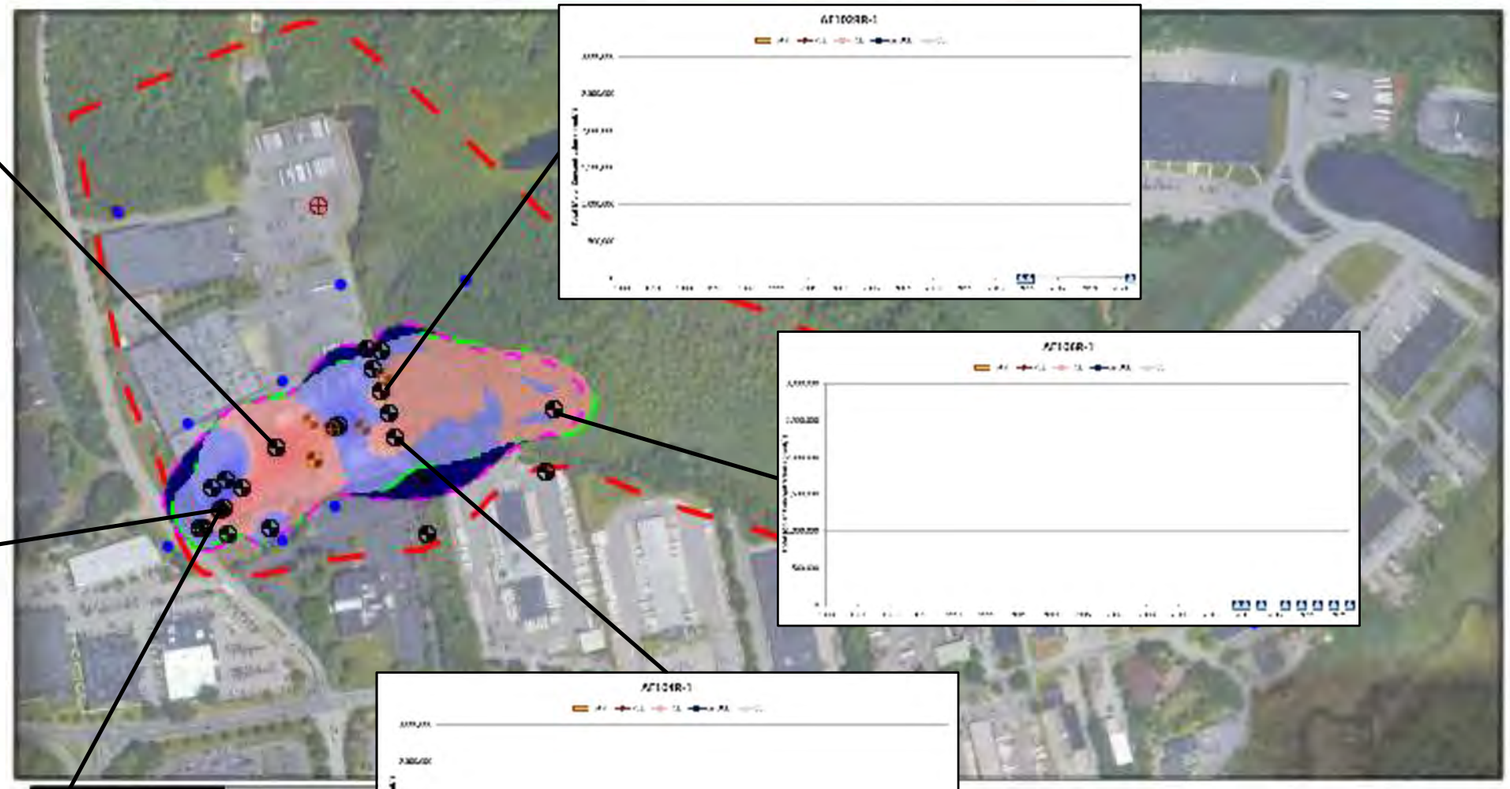
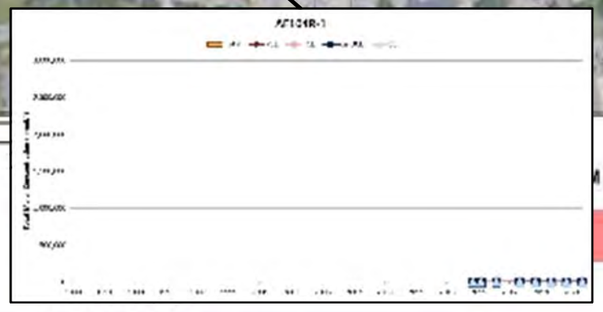
Chloroethenes
Upper Bedrock

Plume Differences Sep-2014 vs Sep-2021









Concentration

0 500 1,000 1,500 2,000

Increase

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Well not used in analysis
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2014 Plume Boundary
- Sep-2021 Plume Boundary

Plume Characteristics

Area: **8% Decrease**
Average Concentration: **27% Increase**
Mass Indicator: **17% Increase**
Mass Increase: **12.1 moles Increase**
Mass Decrease: **4.85 moles Decrease**

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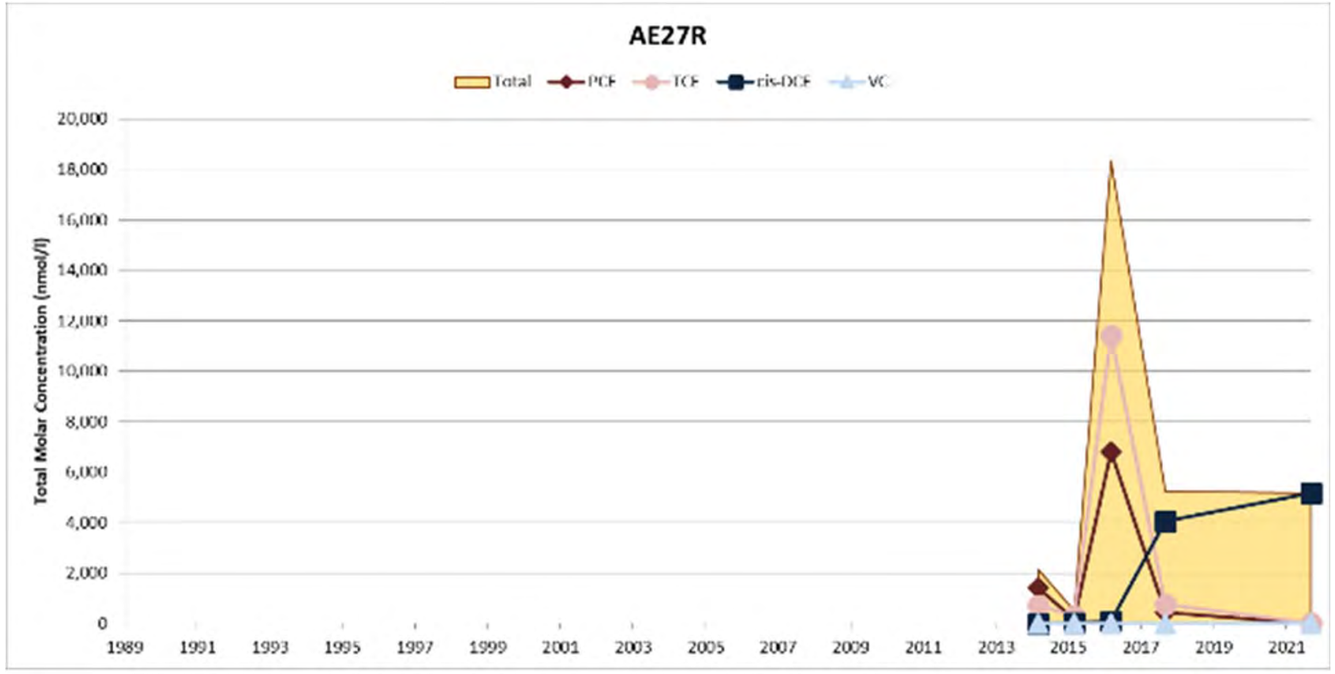
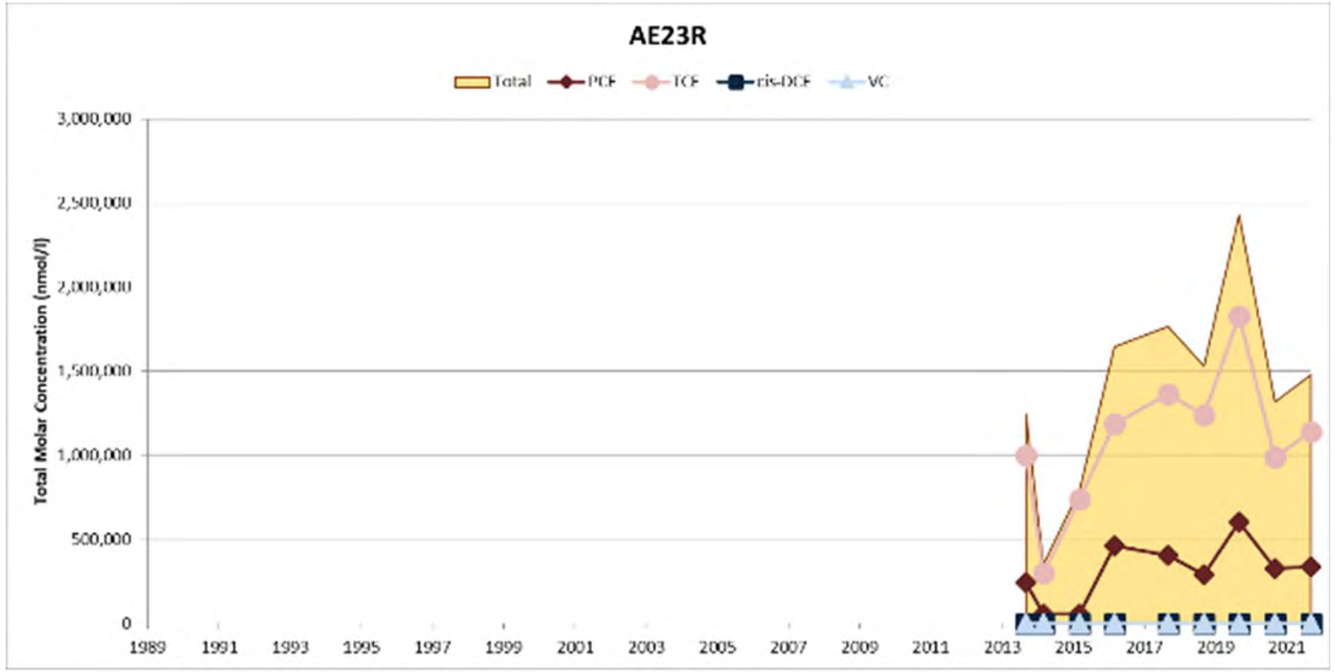

AE27R
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021


AE27R
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

© WSP 2021


AE23R
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021


AE23R
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

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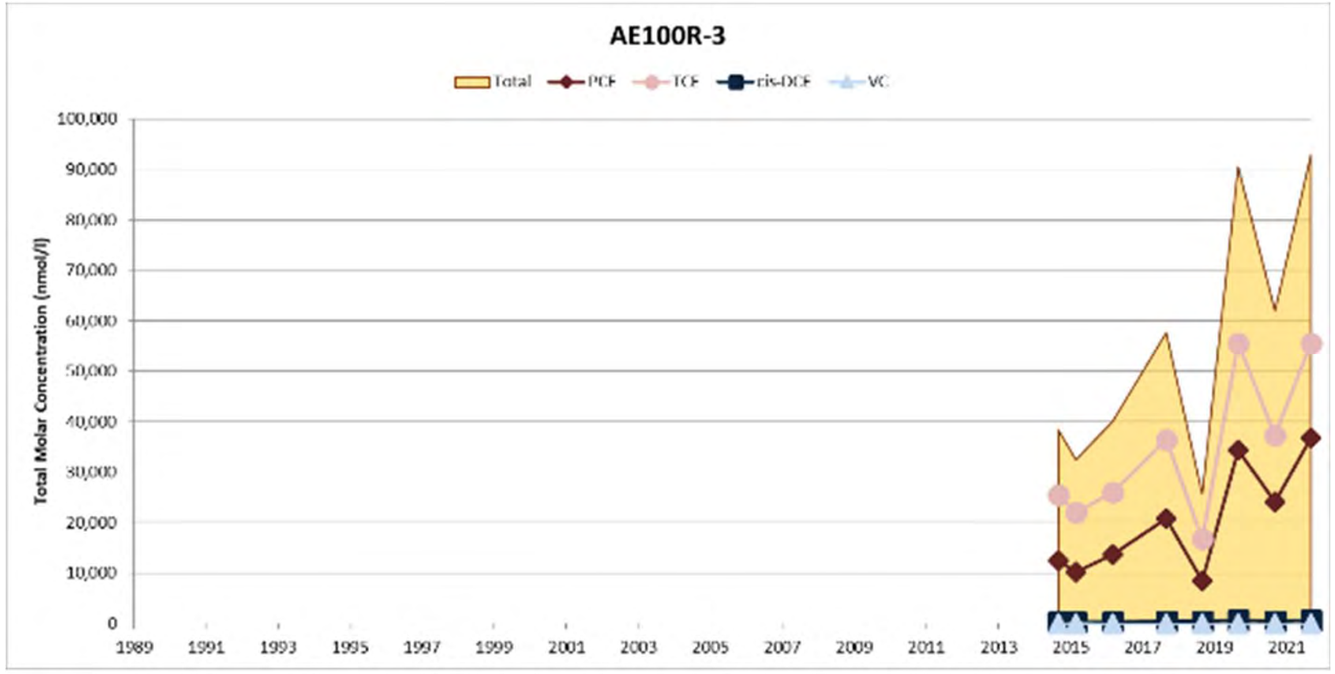
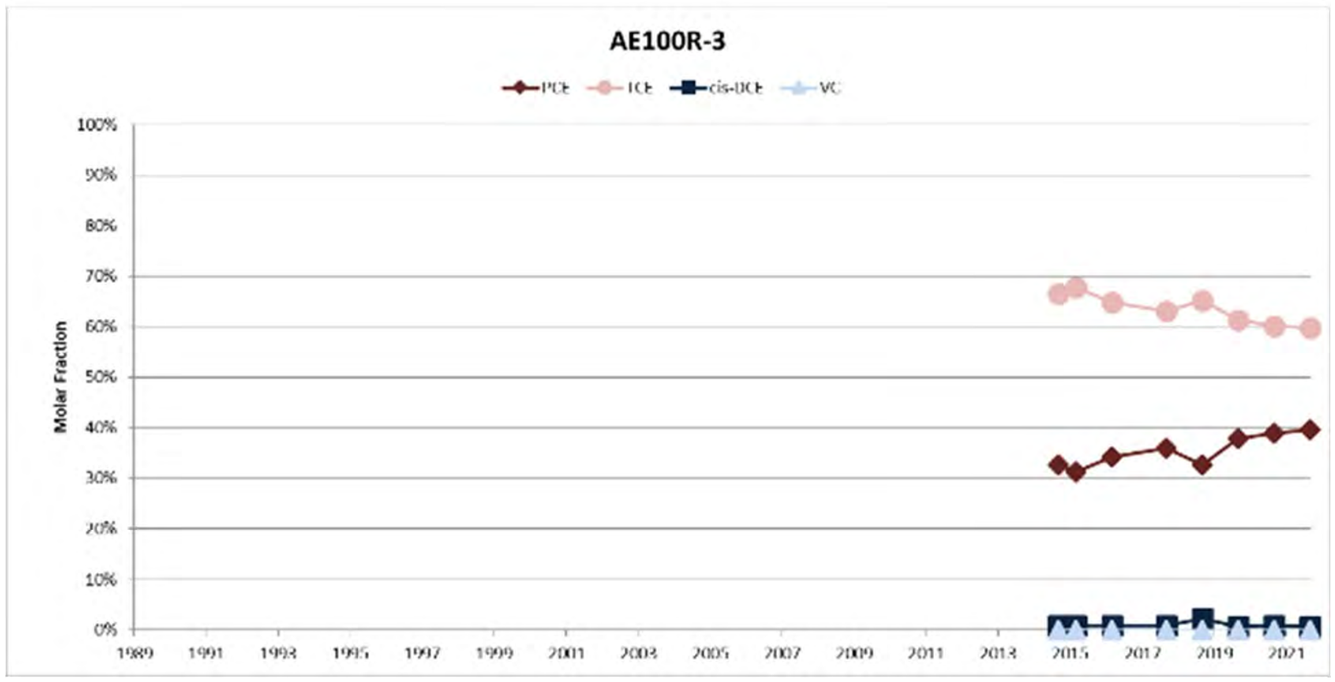

AE100R-3
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021


AE100R-3
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

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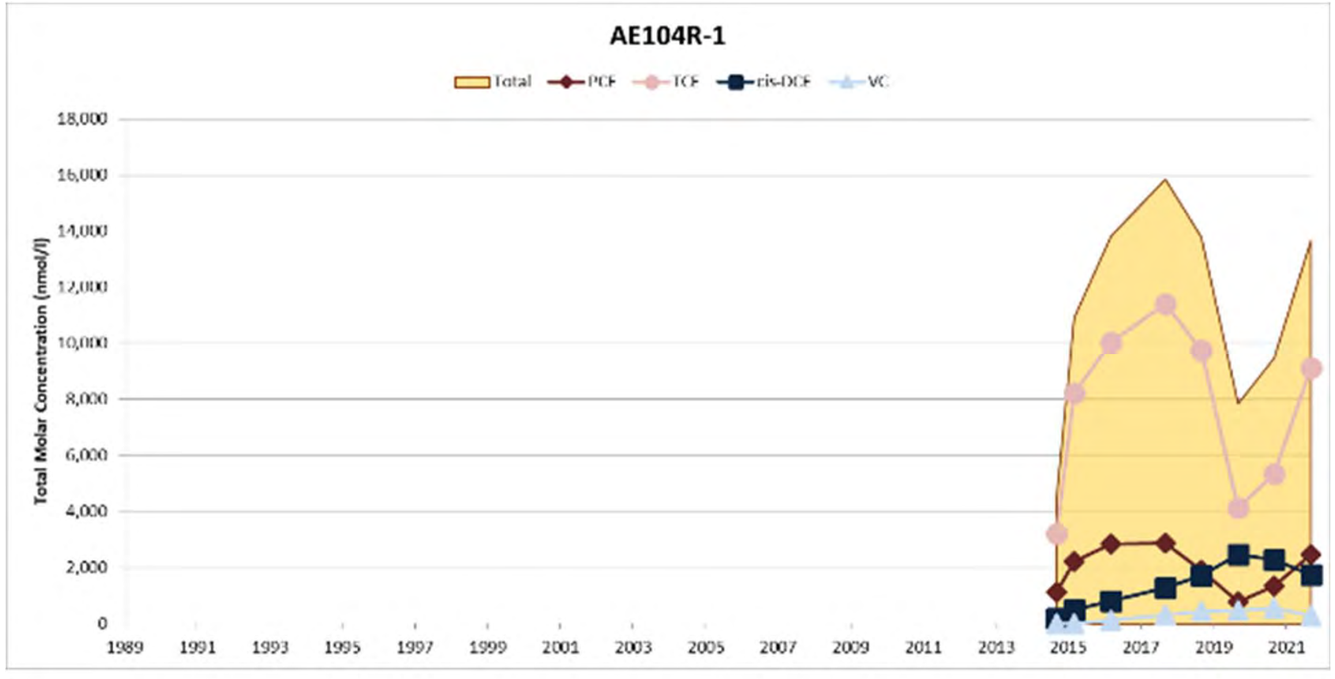
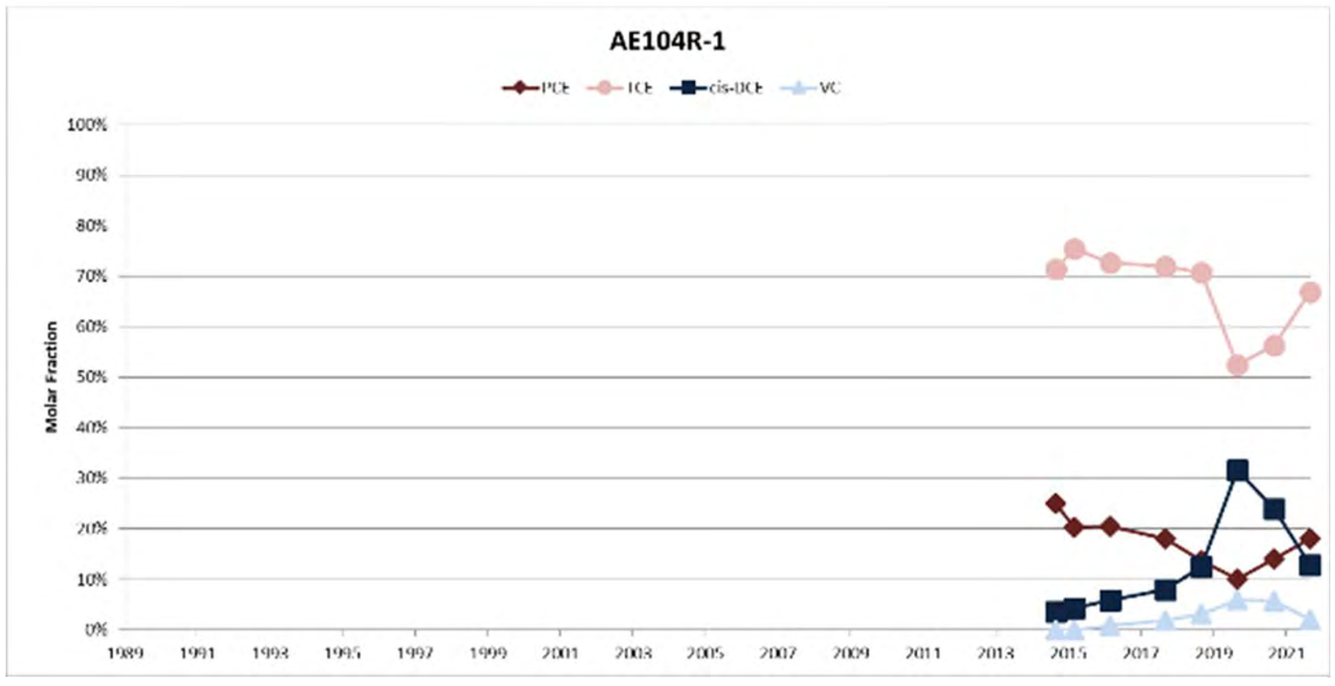
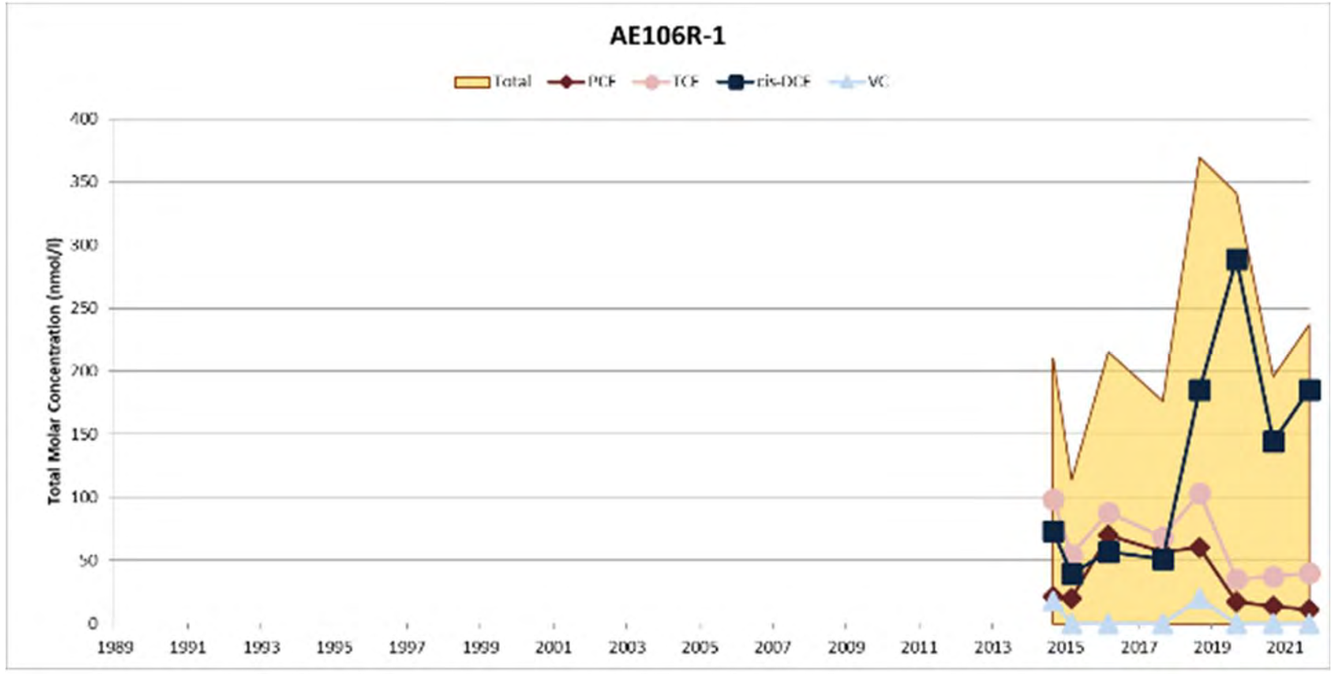
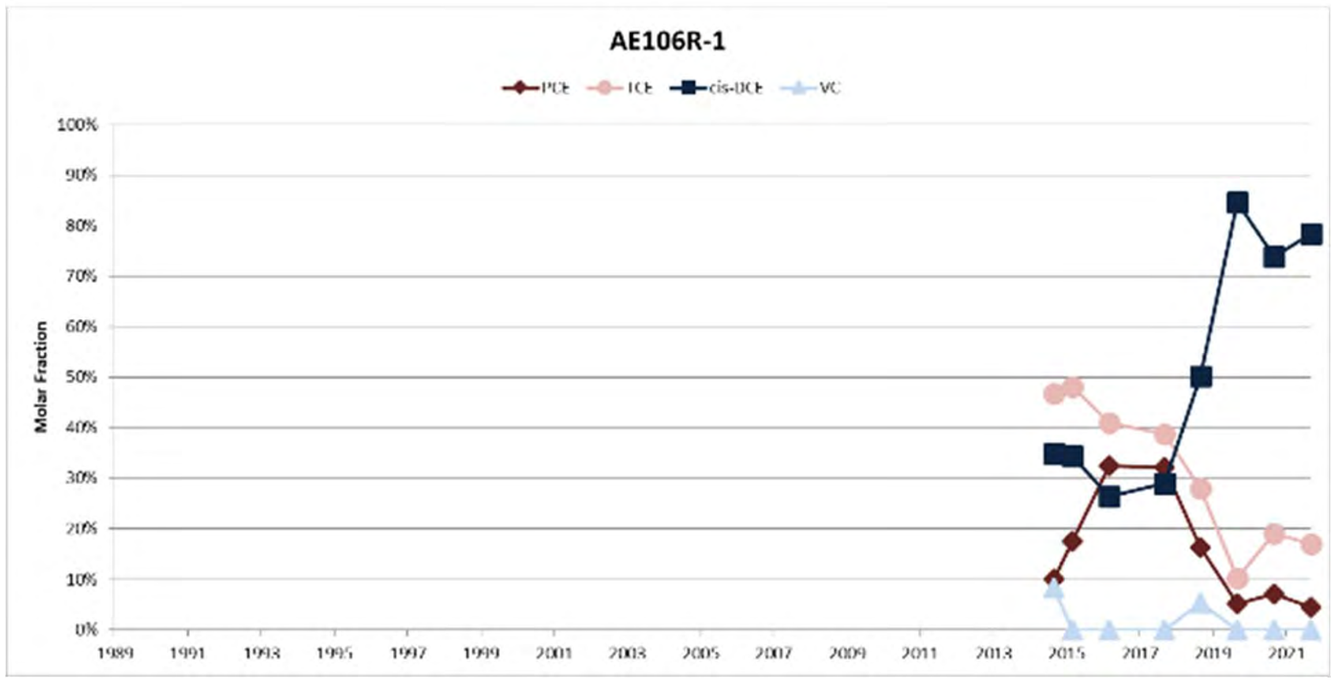

AE104R-1
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

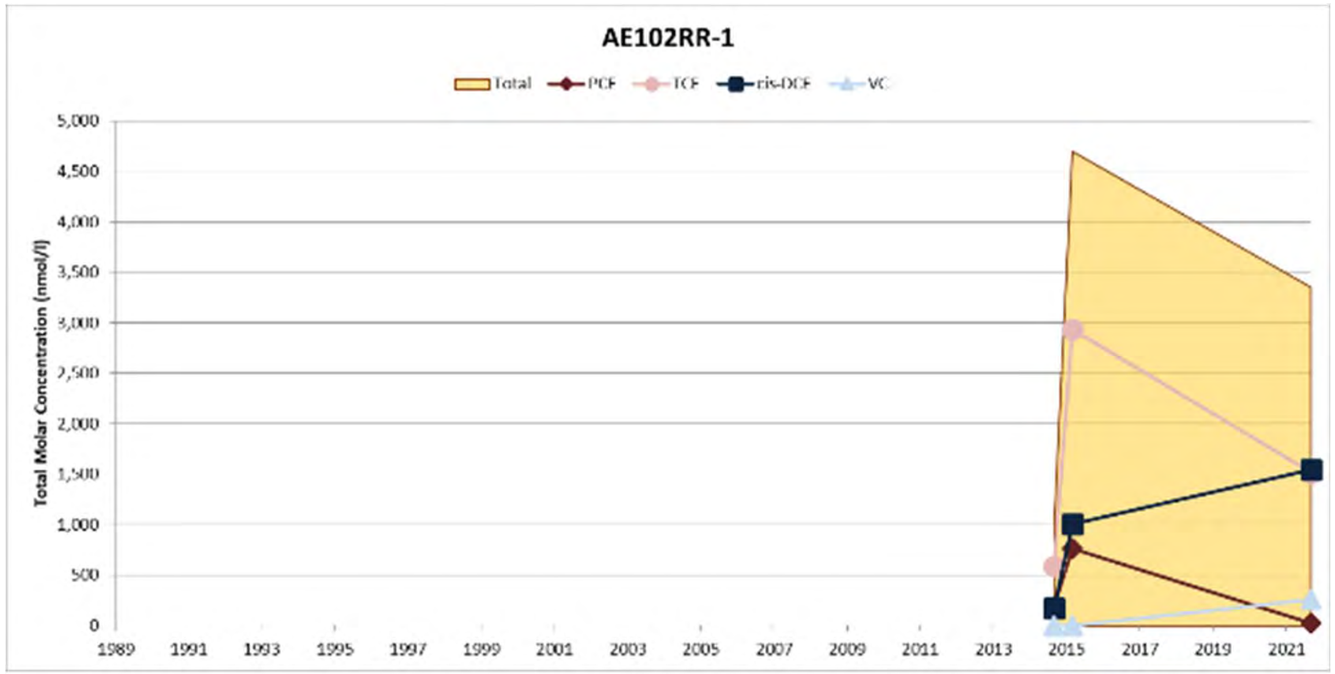

AE104R-1
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

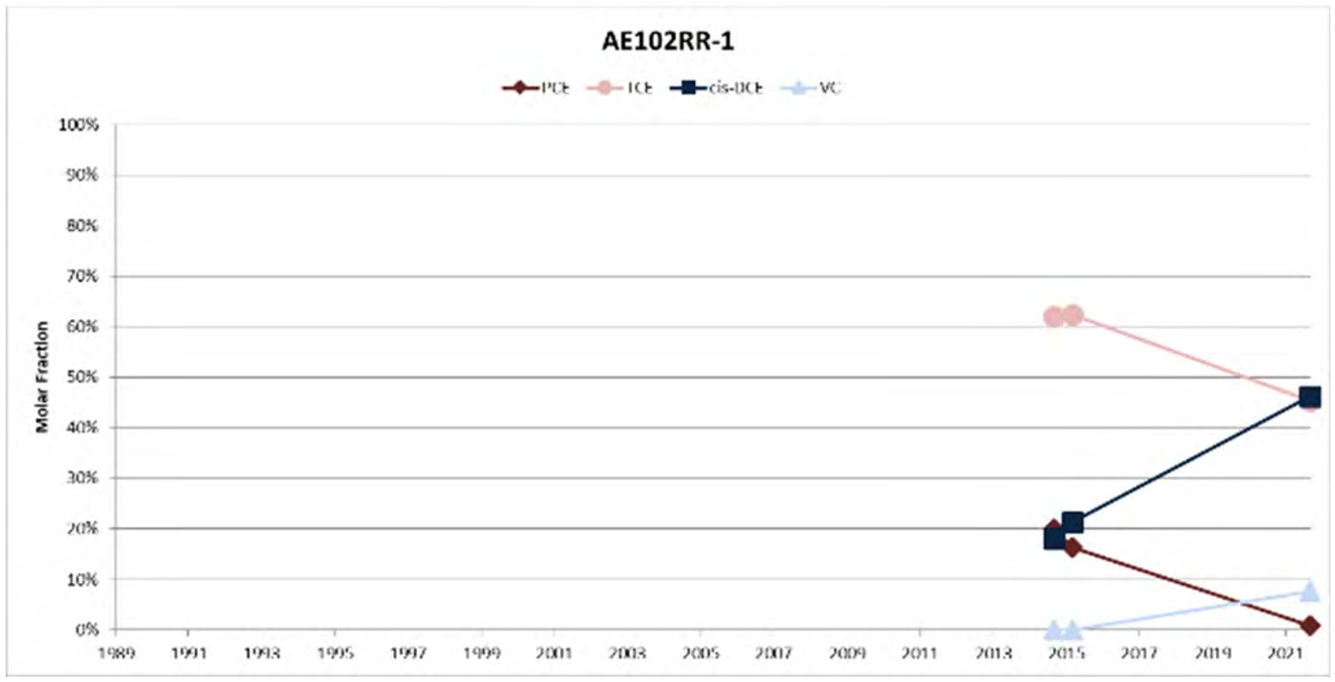
© WSP 2021


AE106R-1
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
400
350
300
250
200
150
100
50
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

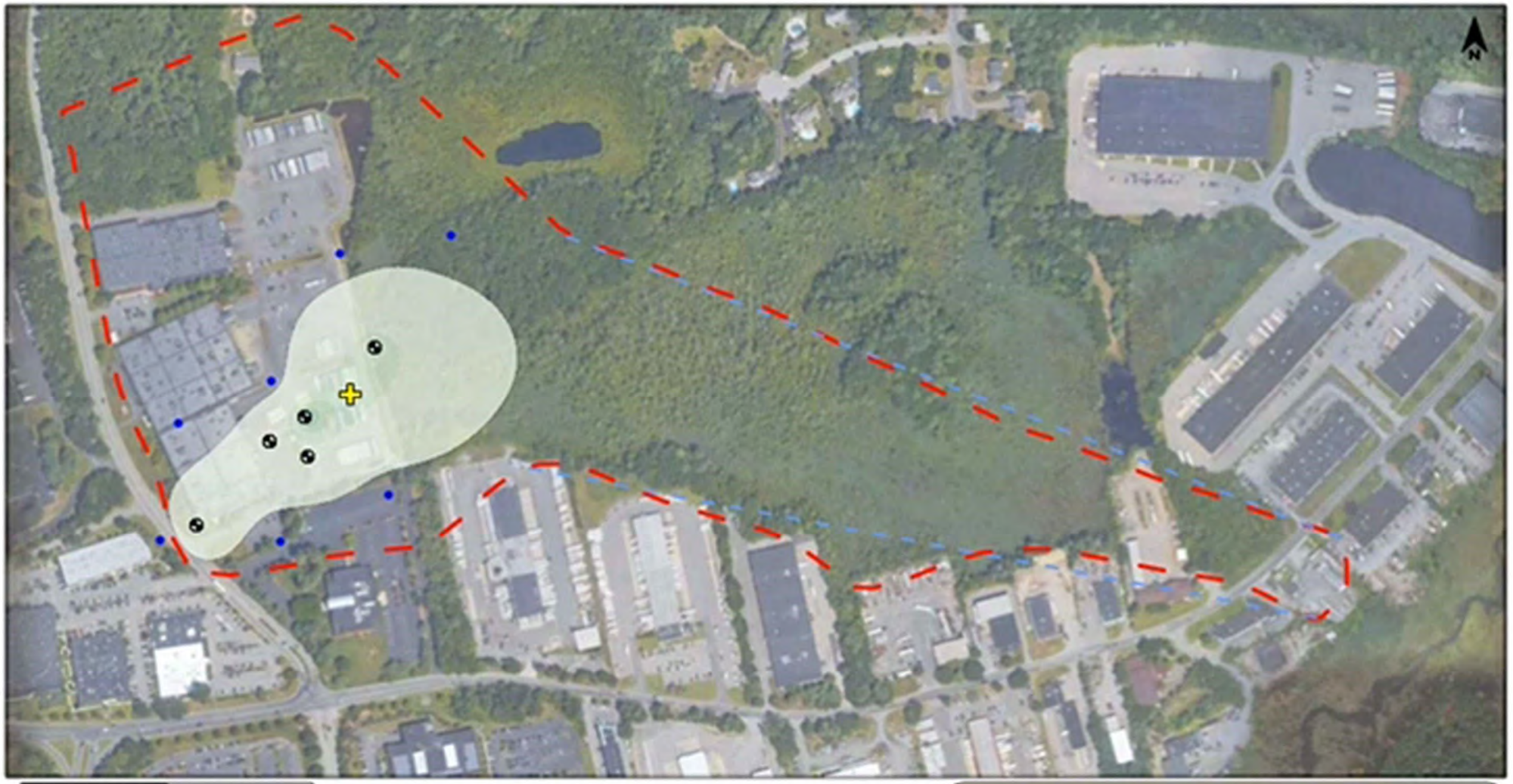

AE106R-1
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

© WSP 2021


AE102RR-1
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021


AE102RR-1
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

© WSP 2021



1,4-Dioxane
Upper Bedrock
Sep-2009

Concentration (µg/L)

45
40
35
30
25
20
15
10
5
0.3

0 ft 450 ft 900 ft

Plume Characteristics

Plume Area: **11.7 acres**
Plume Average Concentration: **2.0 µg/L**
Plume Mass Indicator: **0.029 lbs**

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Control Fence

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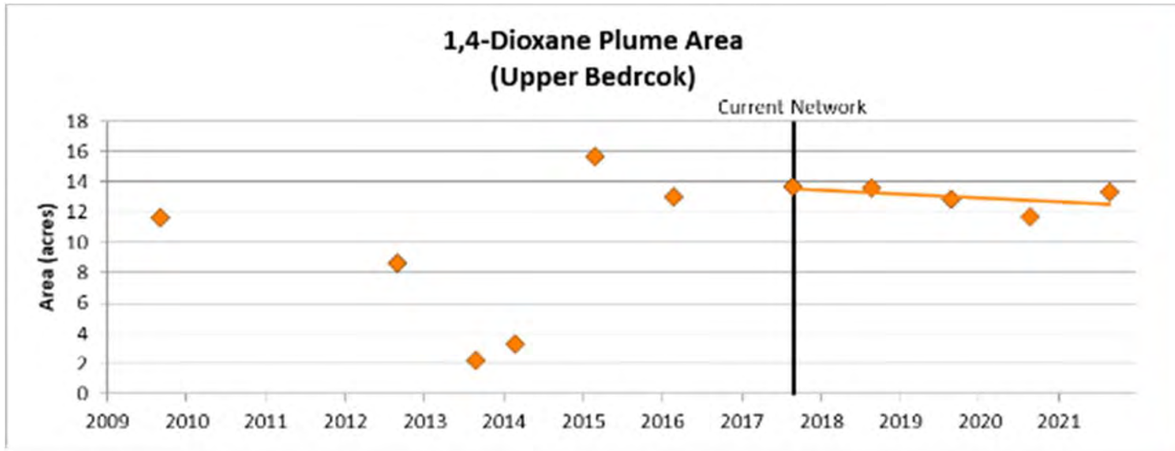
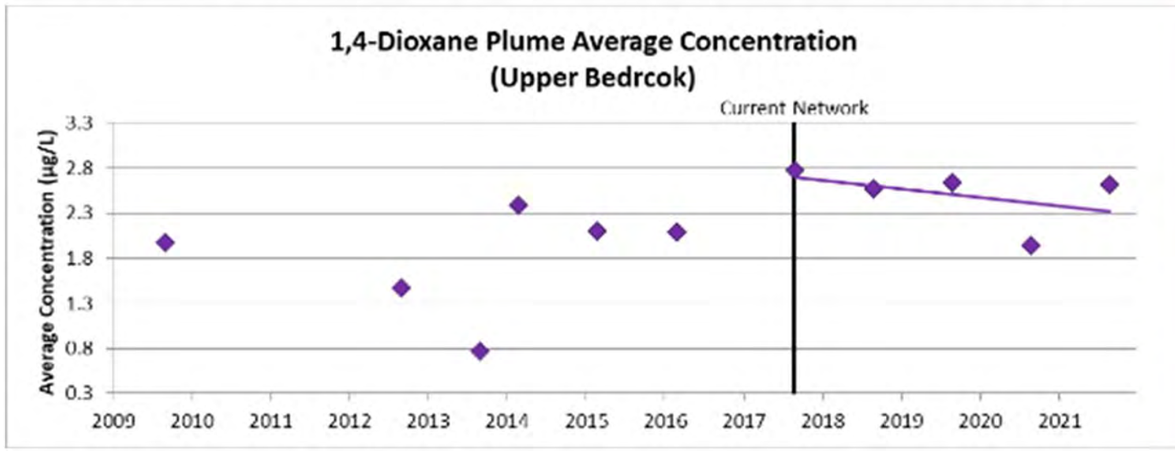
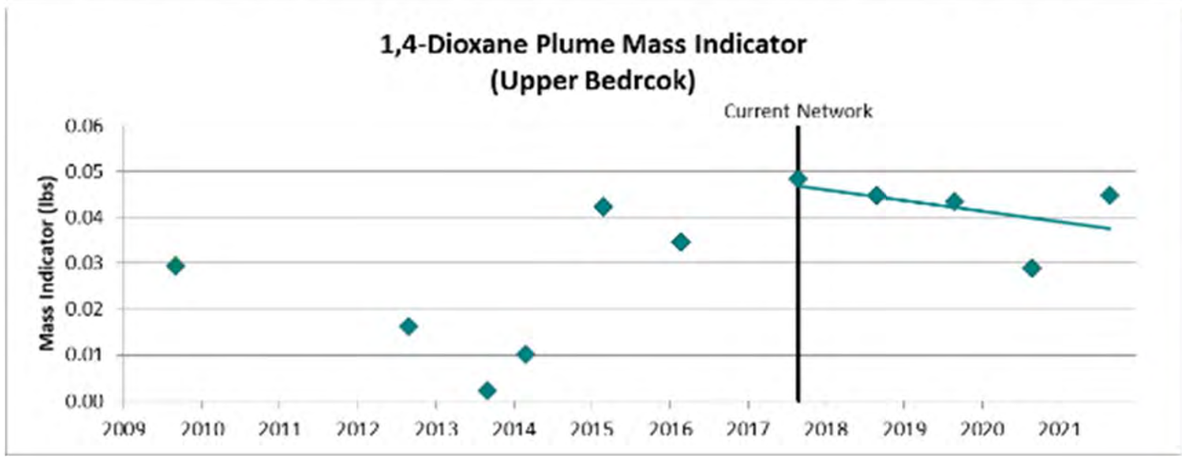


Sep-2017 to Sep-2021
No Trend
Mann-Kendall: 88% Confidence
Regression: 60% Confidence



Sep-2017 to Sep-2021
No Trend
Mann-Kendall: 76% Confidence
Regression: 56% Confidence



Sep-2017 to Sep-2021
No Trend
Mann-Kendall: 88% Confidence
Regression: 60% Confidence

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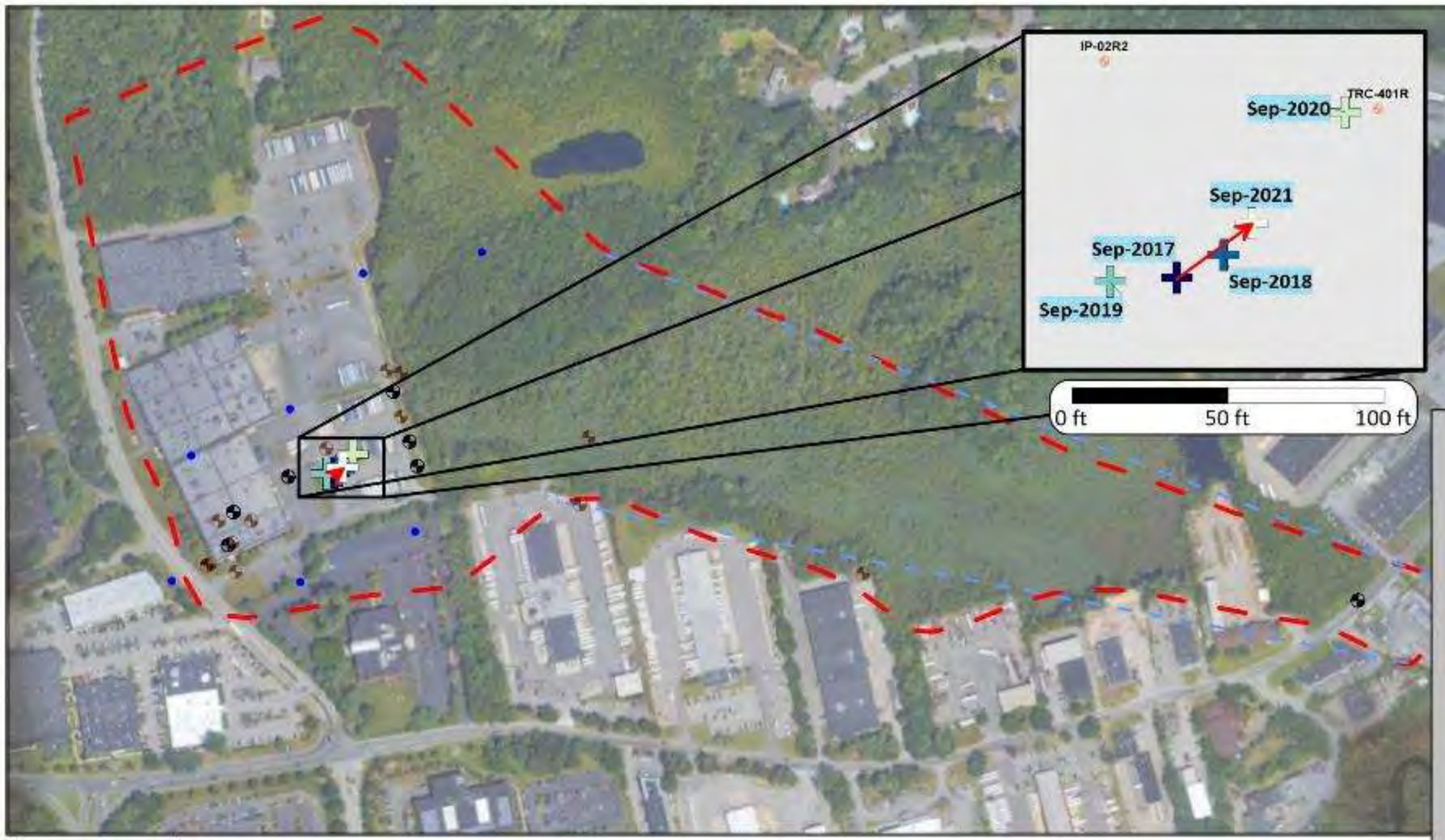
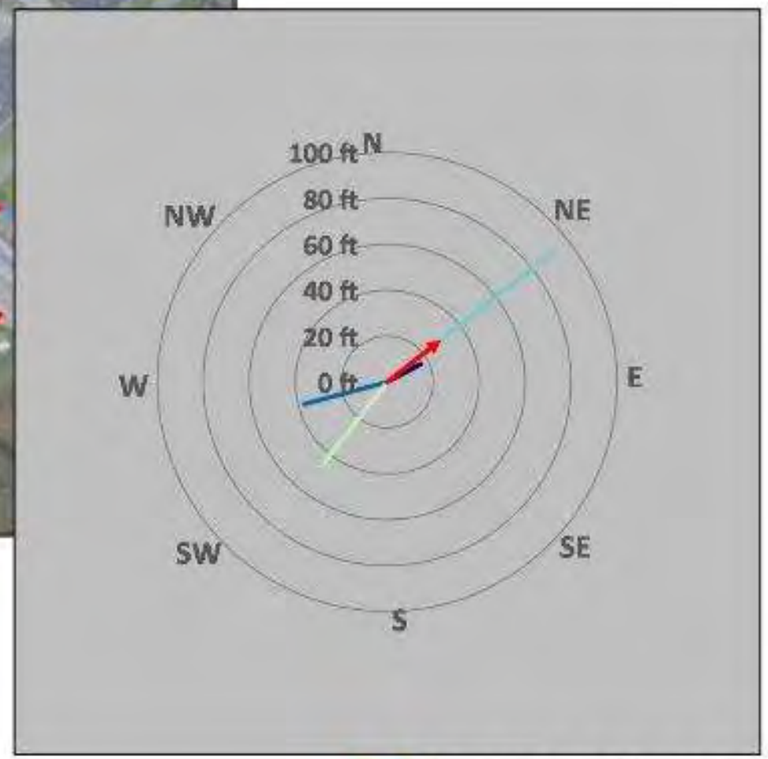
1,4-Dioxane
Upper Bedrock
Center of Mass





Center of Mass Scale

Sep-2017 → Sep-2021

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Point
- MCP Site Boundary
- Net COM Movement
- Control Fence

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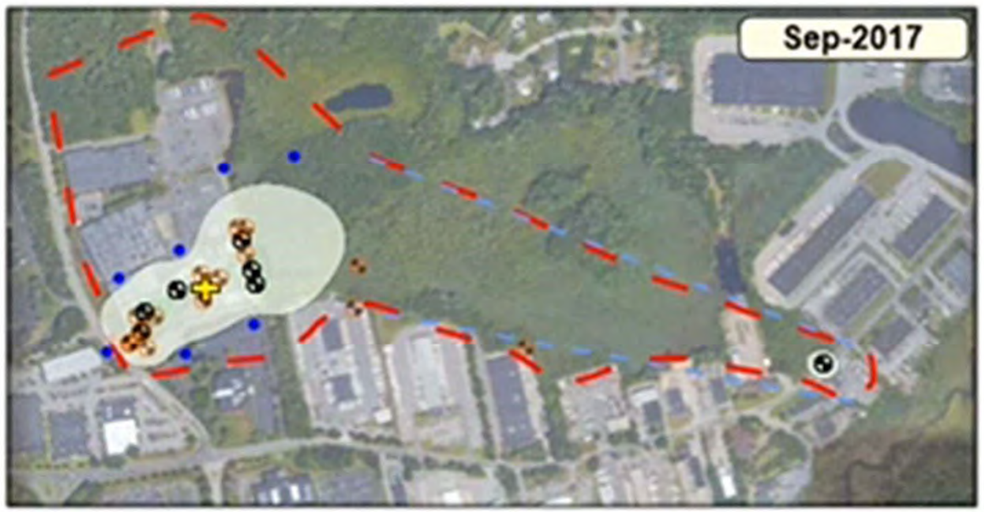
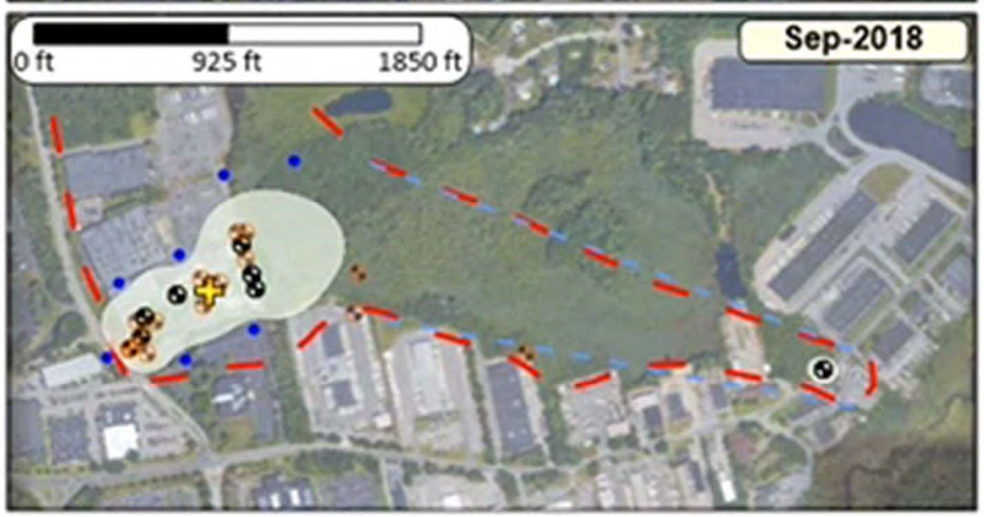
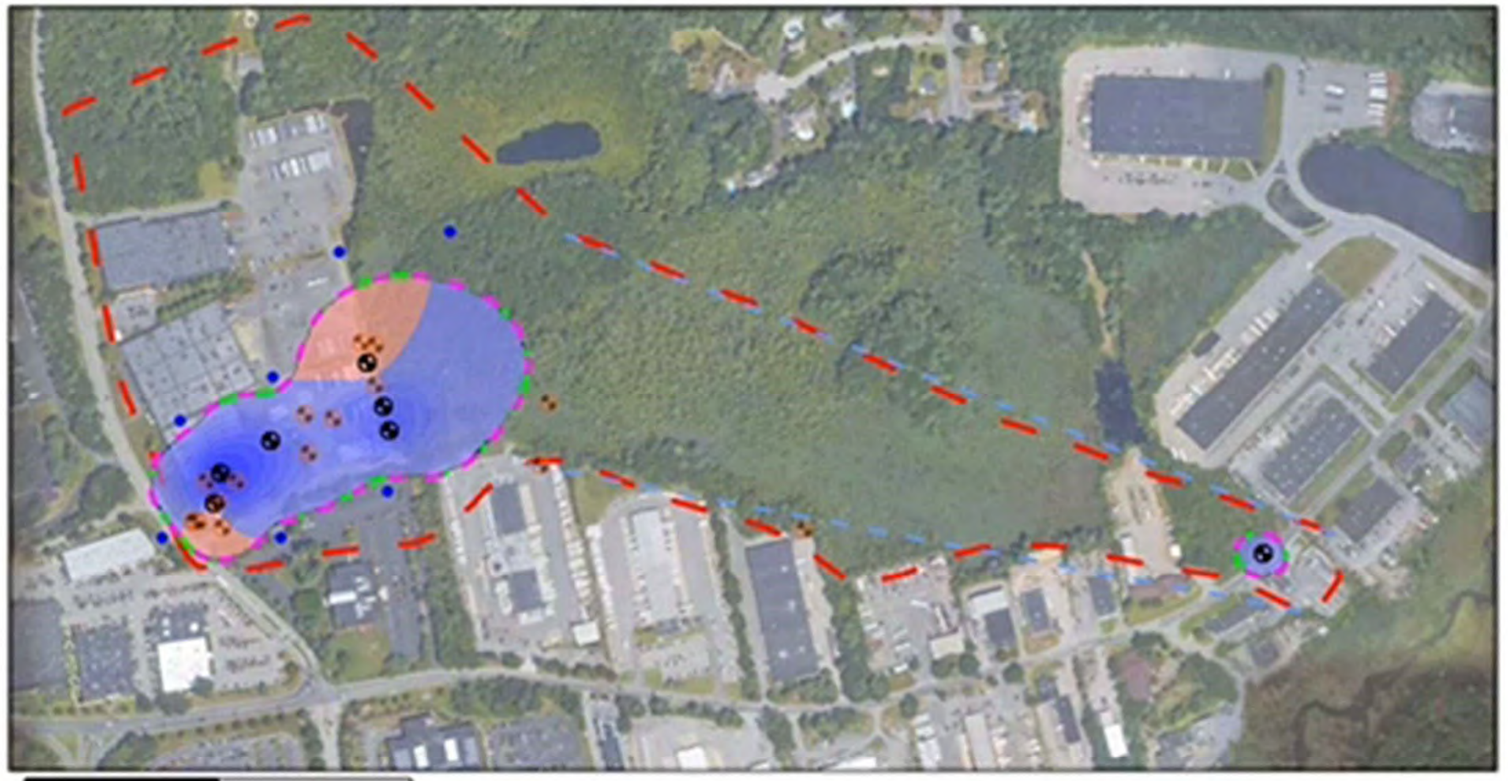
1,4-Dioxane
Upper Bedrock

Plume Differences Sep-2017 vs Sep-2018







Concentration (µg/L)

0.3 5 10 15 20 25 30 35 40 45

Spatial Change Indicator™

Decrease — Increase

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Fence
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2017 Plume Boundary
- Sep-2018 Plume Boundary

Plume Characteristics

Area: **0% Decrease**
Average Concentration: **7% Decrease**
Mass Indicator: **8% Decrease**
Mass Increase: **0.00 lbs Increase**
Mass Decrease: **0.00 lbs Decrease**

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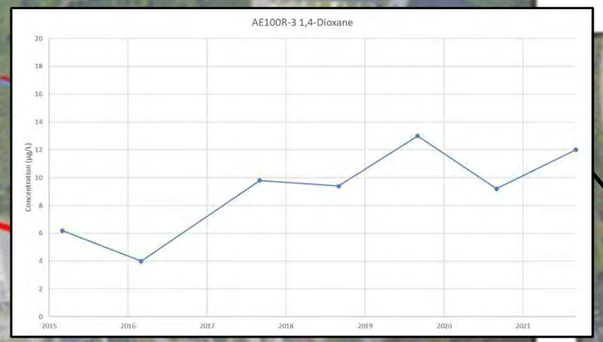
1,4-Dioxane
Upper Bedrock

Plume Differences Sep-2017 vs Sep-2021

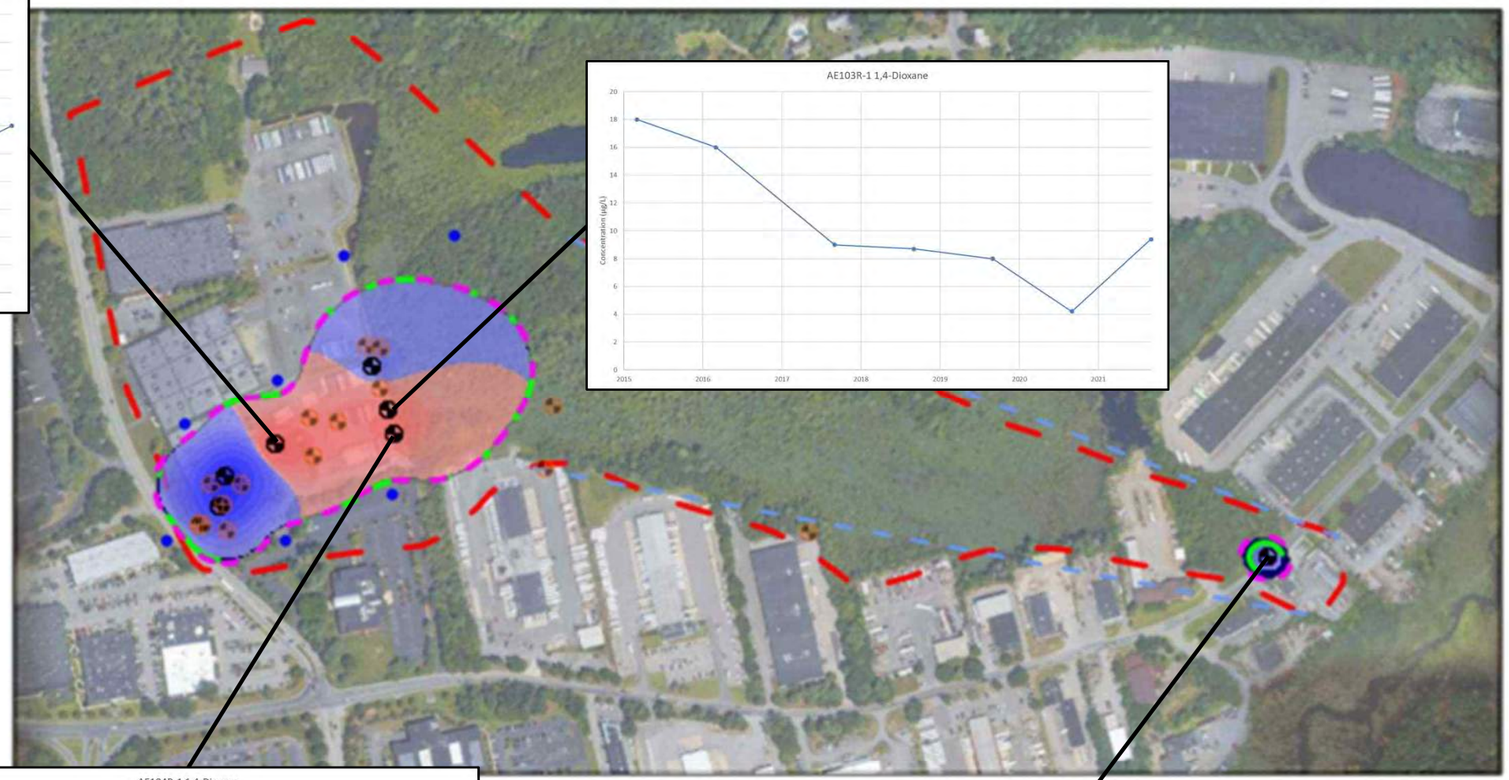
N

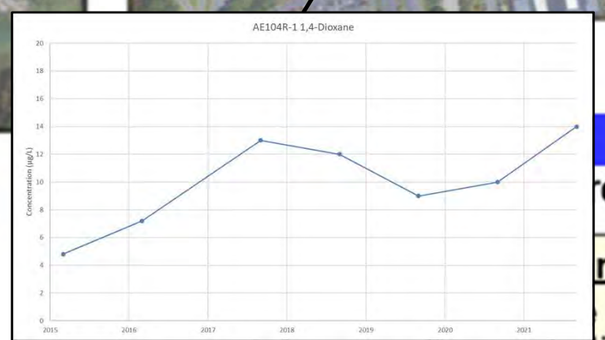
Sep-2017

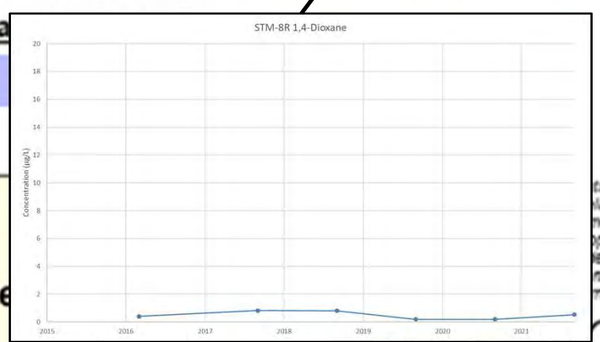


Sep-2021

0 ft 925 ft 1850 ft







Concentration (µg/L)

0.3 5 10 15 20 25 30 35 40 45

Spatial Cha

rease

racteristics

Average Concentration: **6% Decrease**
Mass Indicator: **8% Decrease**
Mass Increase: **0.00 lbs Increase**
Mass Decrease: **0.01 lbs Decrease**

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lative changes
hass indicator
pleth maps are
el of the actual
nceptual behavior
me.

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Fence
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2017 Plume Boundary
- Sep-2021 Plume Boundary

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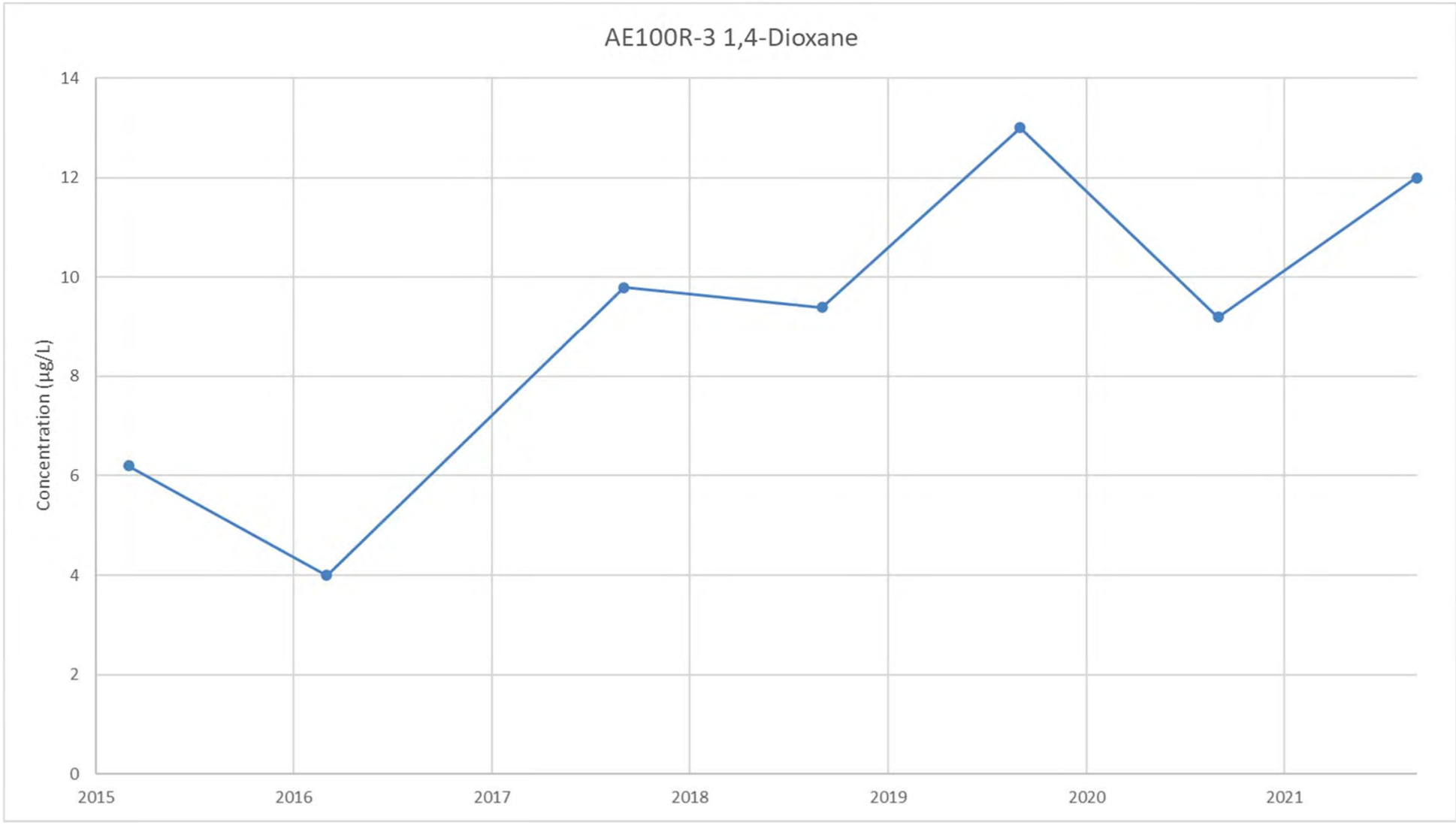
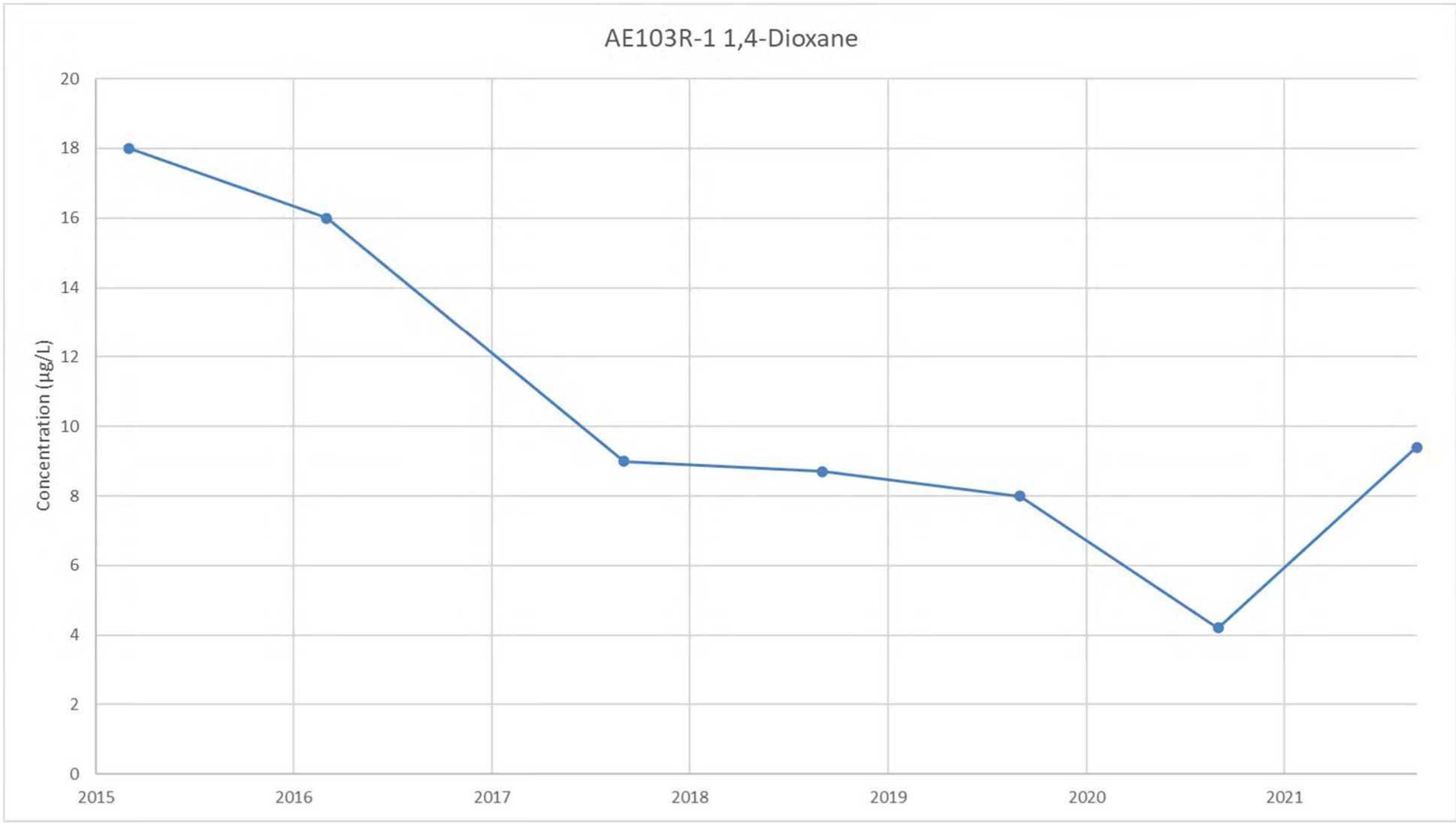
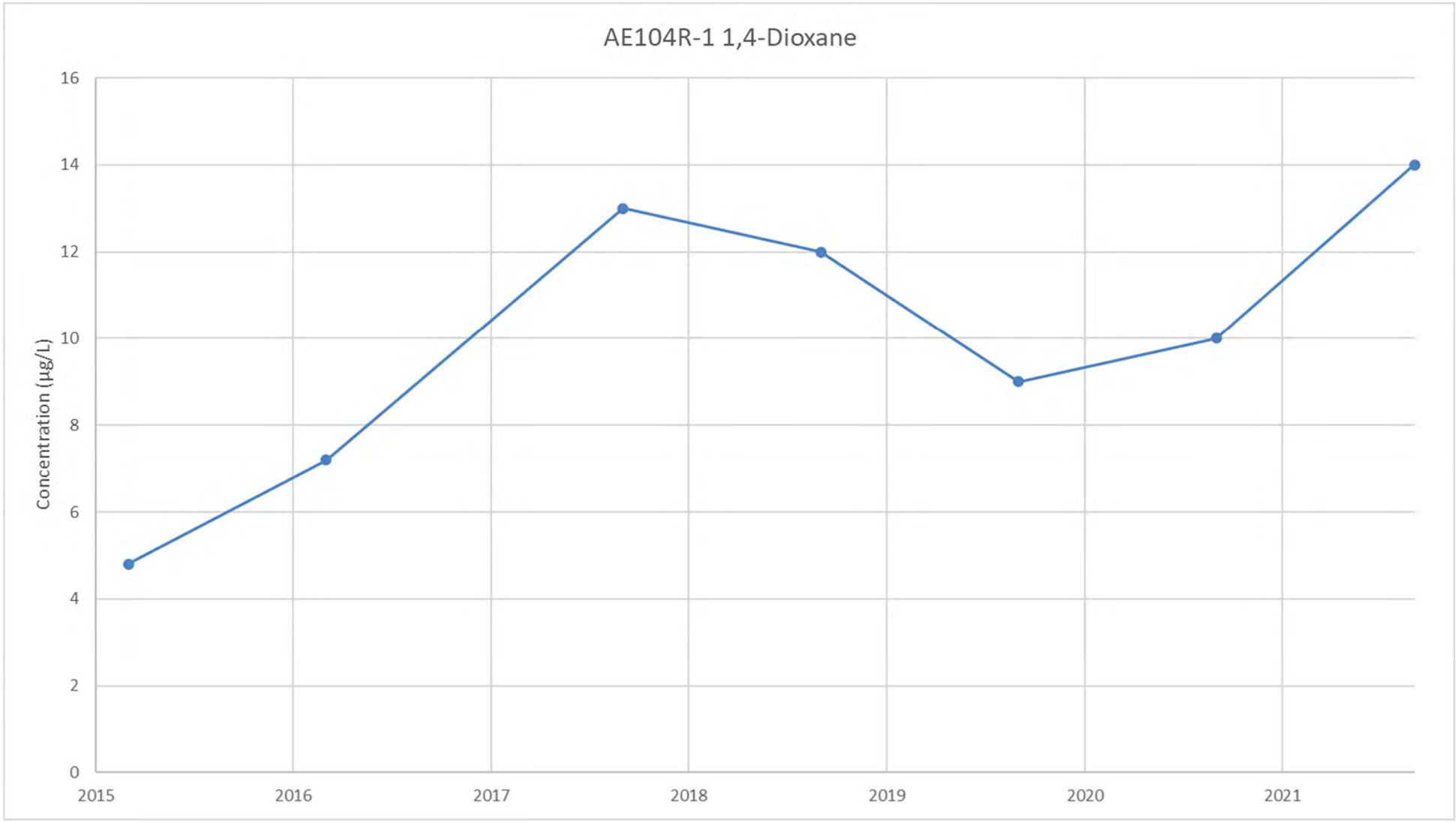
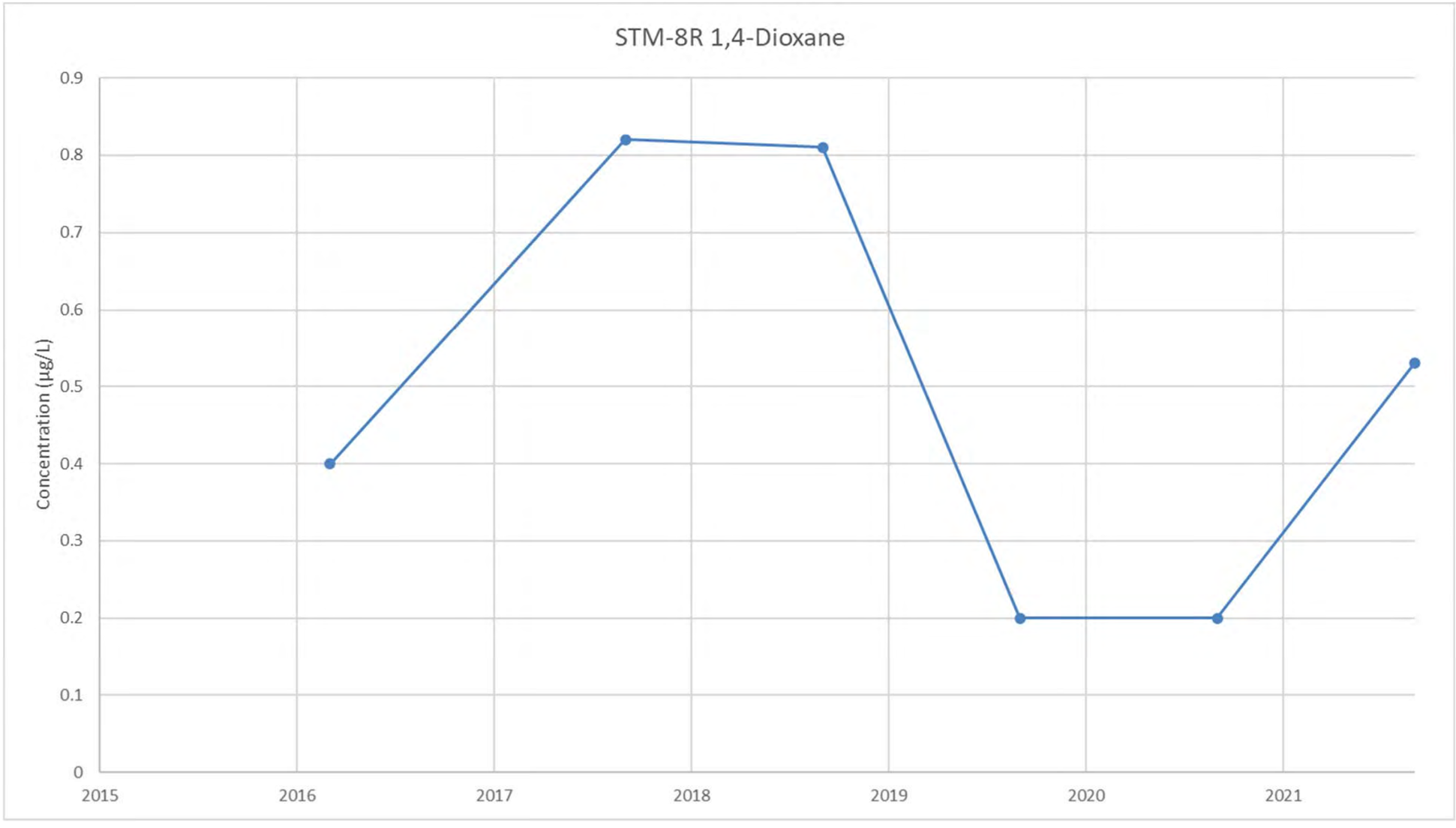
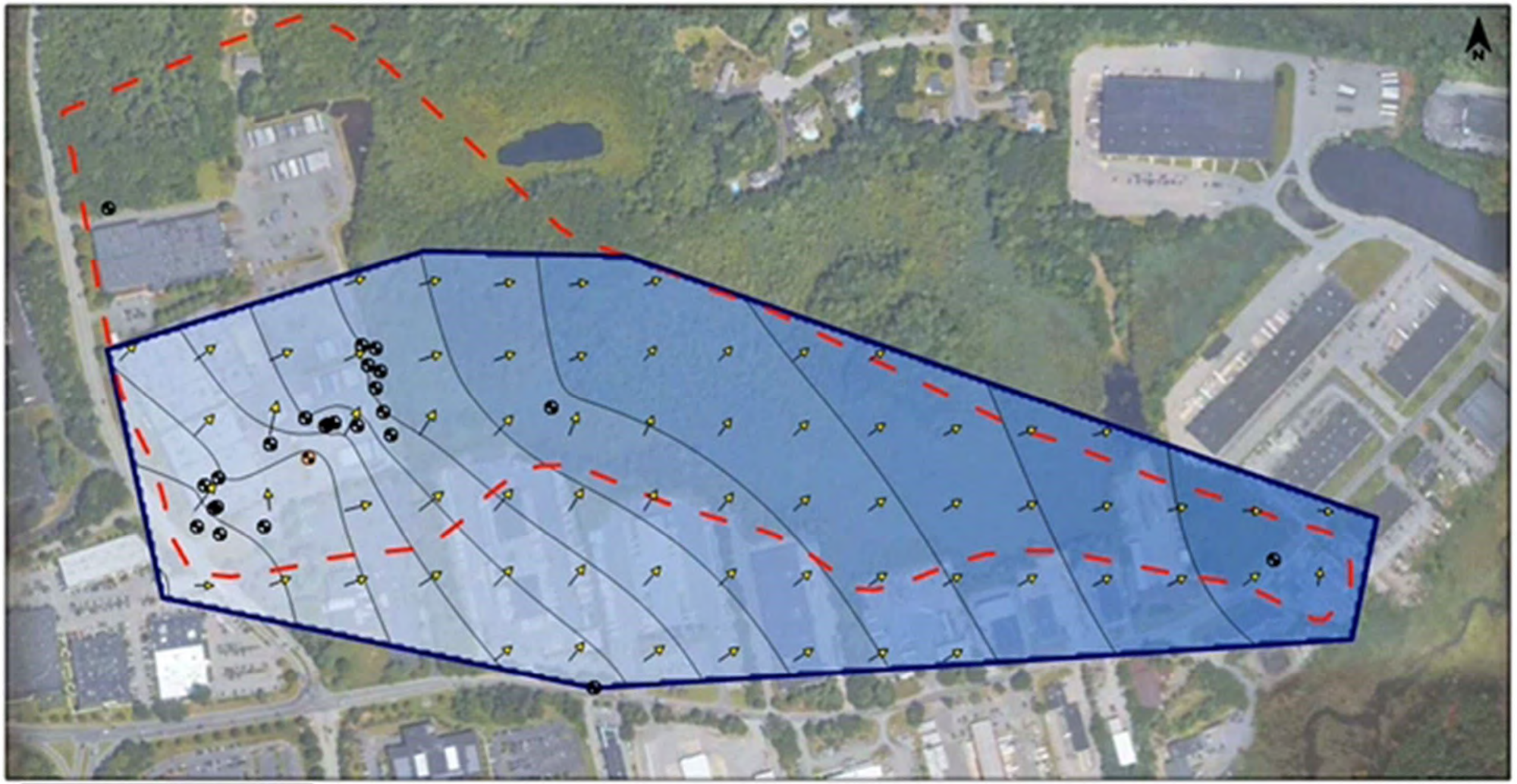

AE100R-3 1,4-Dioxane
Concentration (µg/L)
14
12
10
8
6
4
2
0
2015
2016
2017
2018
2019
2020
2021


AE103R-1 1,4-Dioxane
Concentration (µg/L)
20
18
16
14
12
10
8
6
4
2
0
2015
2016
2017
2018
2019
2020
2021


AE104R-1 1,4-Dioxane
Concentration (µg/L)
16
14
12
10
8
6
4
2
0
2015
2016
2017
2018
2019
2020
2021


STM-8R 1,4-Dioxane
Concentration (µg/L)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2015
2016
2017
2018
2019
2020
2021



Groundwater Elevation
Upper Bedrock
Dec-2014

Elevation (ft.)

80.5
80
79.5
79
78.5
78
77.5
77
76.5
76
75.5
75
74.5
74
73.5
73
72.5
72
71.5
71
70.5
70
69.5
69

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well

MW-5 Not Gauged

MCP Site Boundary

Average Groundwater Elevation

76.40 ft

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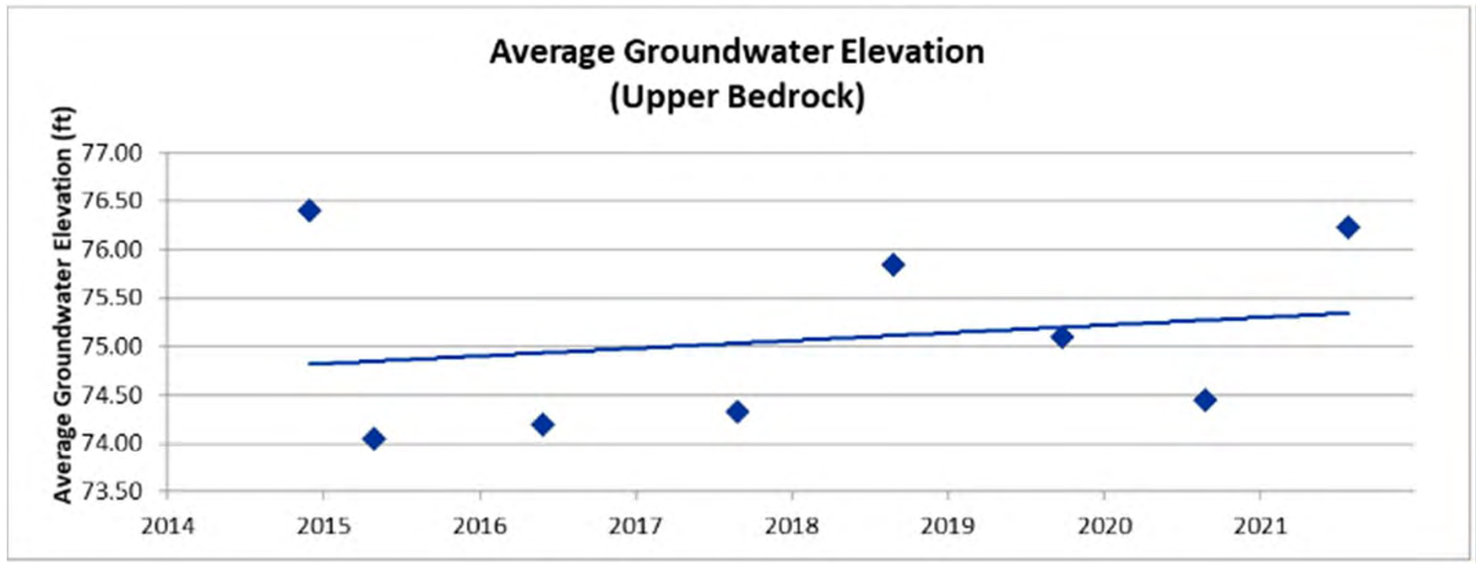
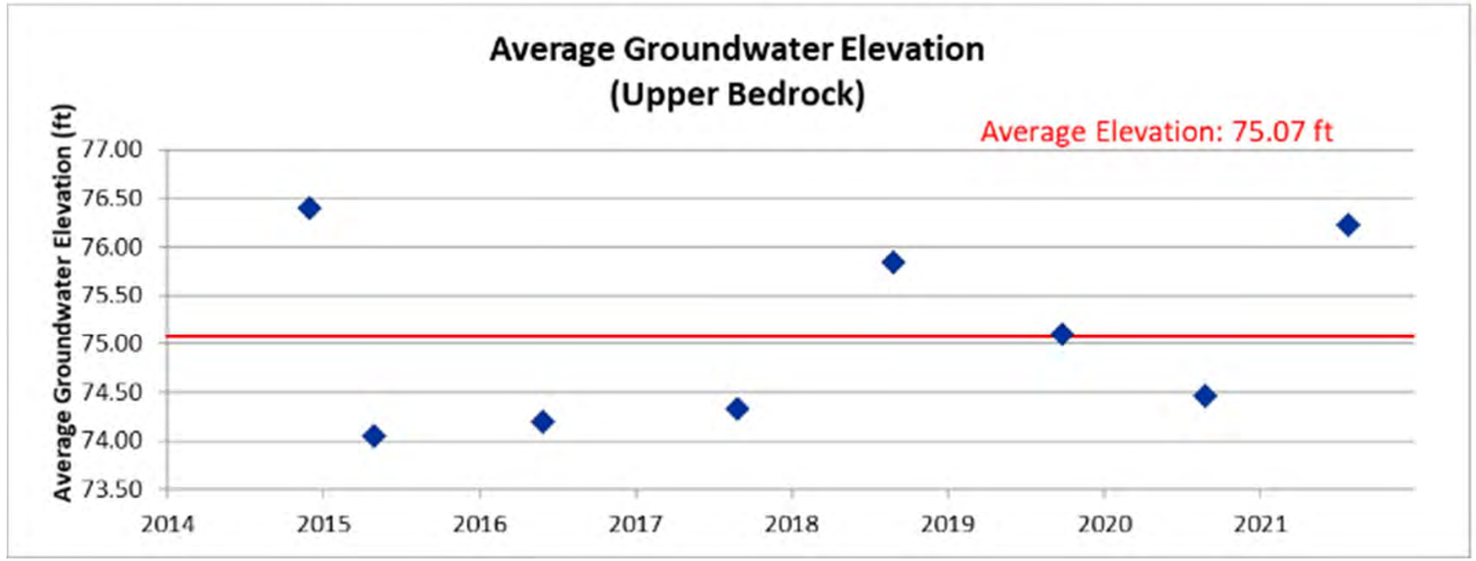


Dec-2014 to Aug-2021
No Trend
Mann-Kendall: 80% Confidence
Regression: 37% Confidence



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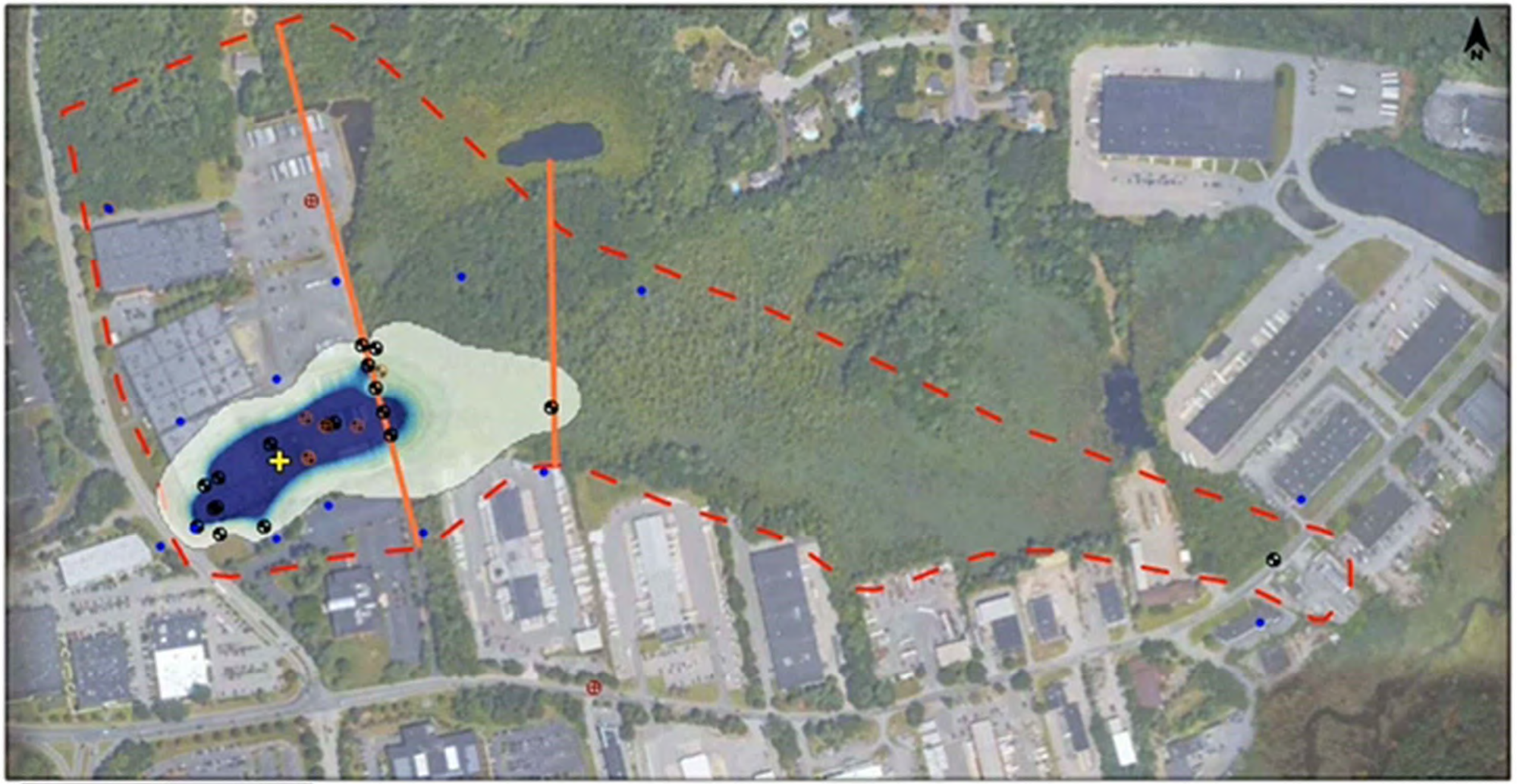

Chloroethenes
Upper Bedrock
Sep-2014

Concentration (nmol/L)

- 4,500
- 4,000
- 3,500
- 3,000
- 2,500
- 2,000
- 1,500
- 1,000
- 500
- 0

0 ft — 450 ft — 900 ft

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Transect A

Average Concentration: **4,897 nmol/L**
Mass Flux: **0.25 mol/yr**

Transect B

Average Concentration: **96 nmol/L**
Mass Flux: **0.0020 mol/yr**

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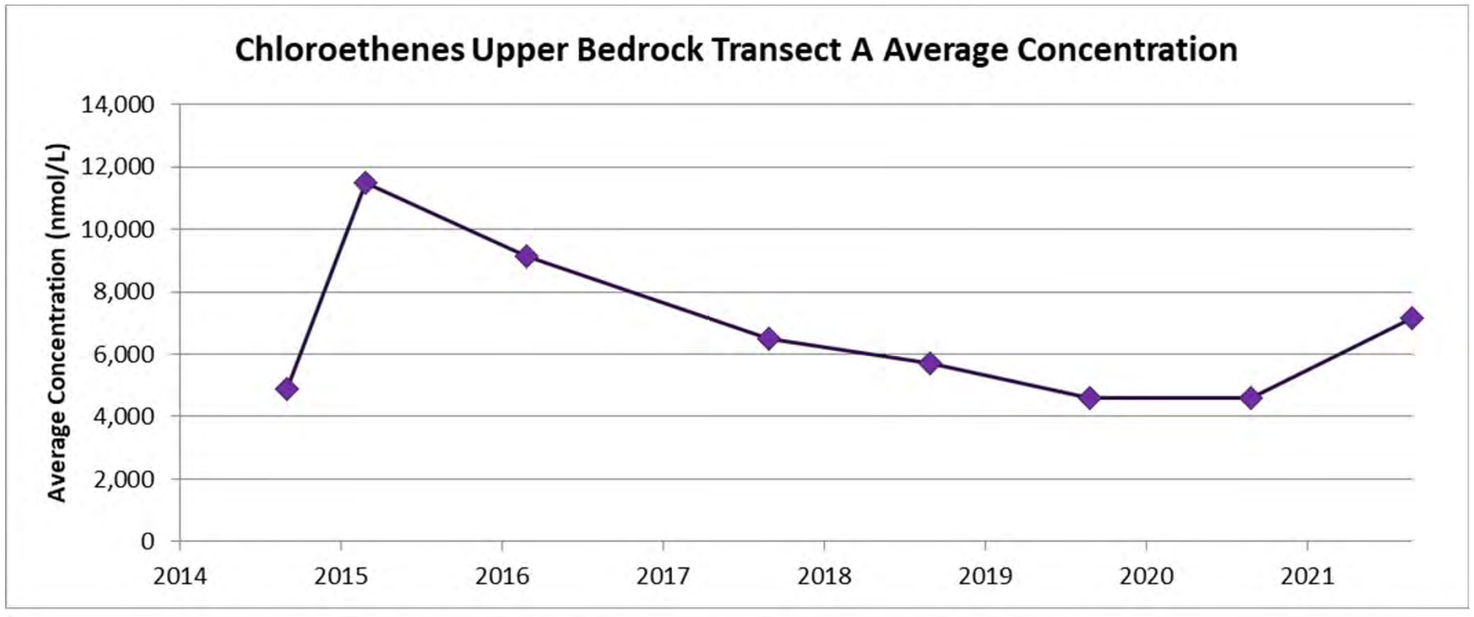
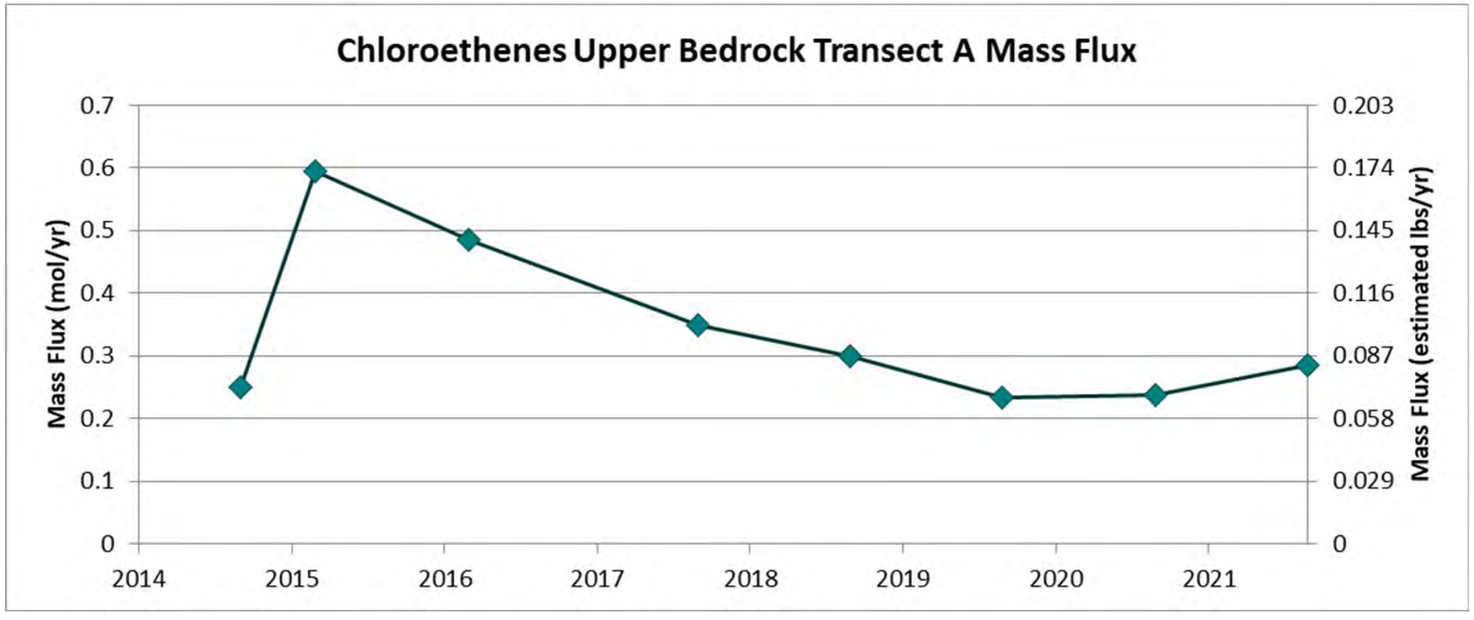
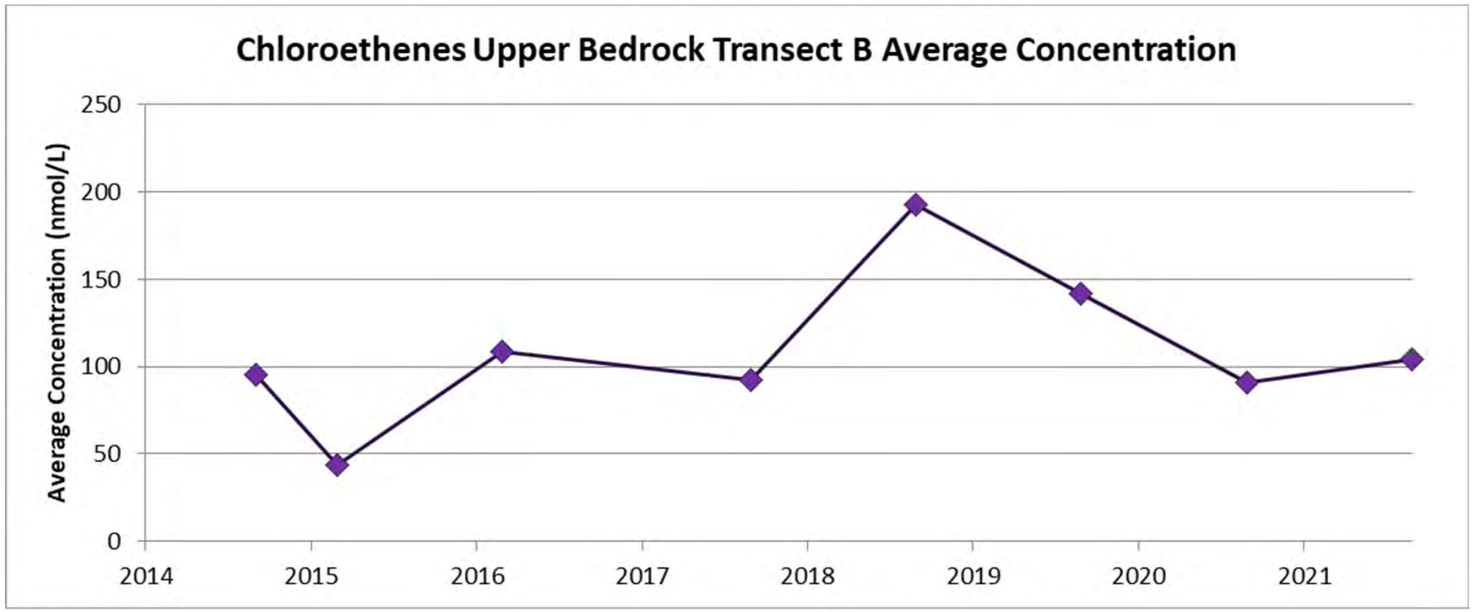
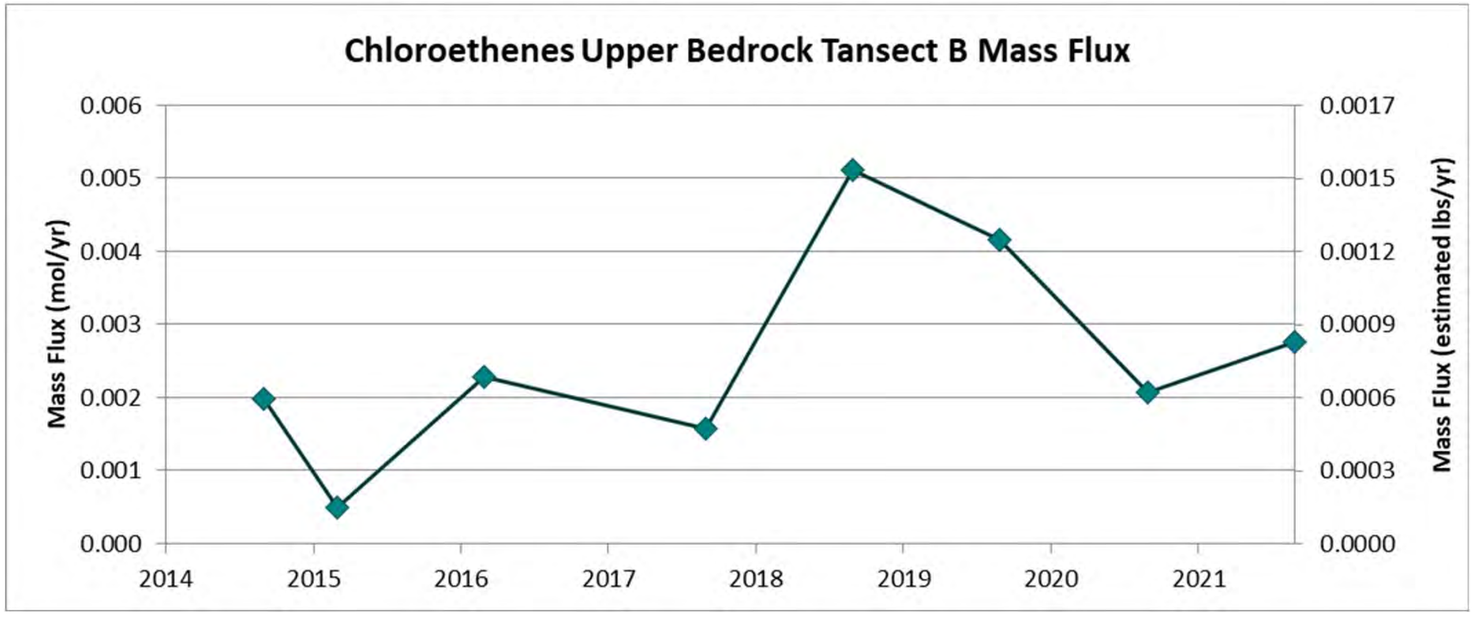

Chloroethenes Upper Bedrock Transect A Average Concentration
Average Concentration (nmol/L)
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
2014
2015
2016
2017
2018
2019
2020
2021

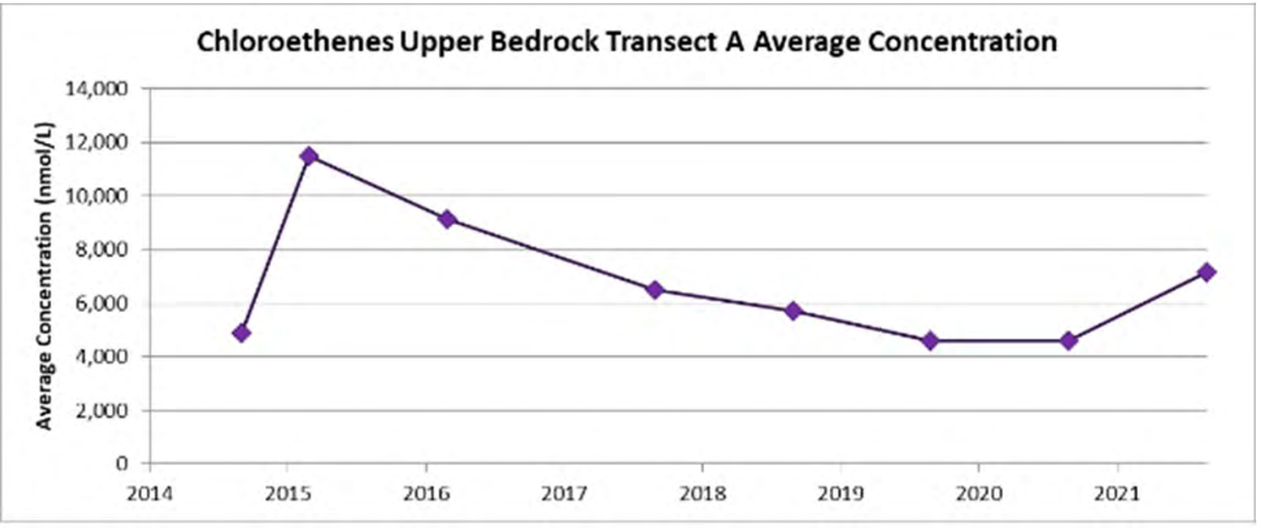

Chloroethenes Upper Bedrock Transect A Mass Flux
Mass Flux (mol/yr)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Mass Flux (estimated lbs/yr)
0.203
0.174
0.145
0.116
0.087
0.058
0.029
0
2014
2015
2016
2017
2018
2019
2020
2021

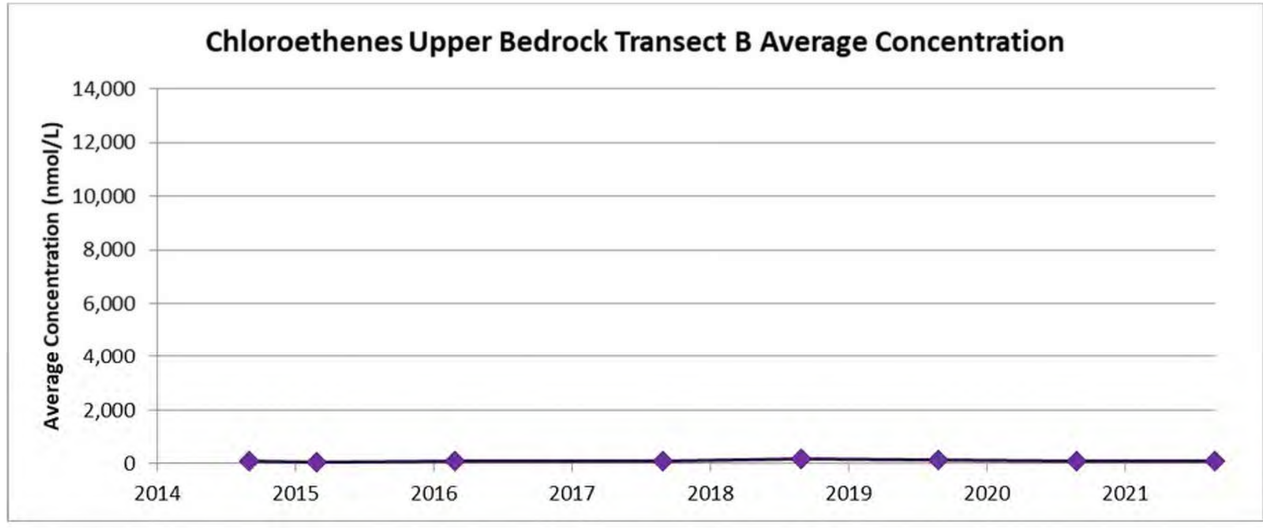
© WSP 2021

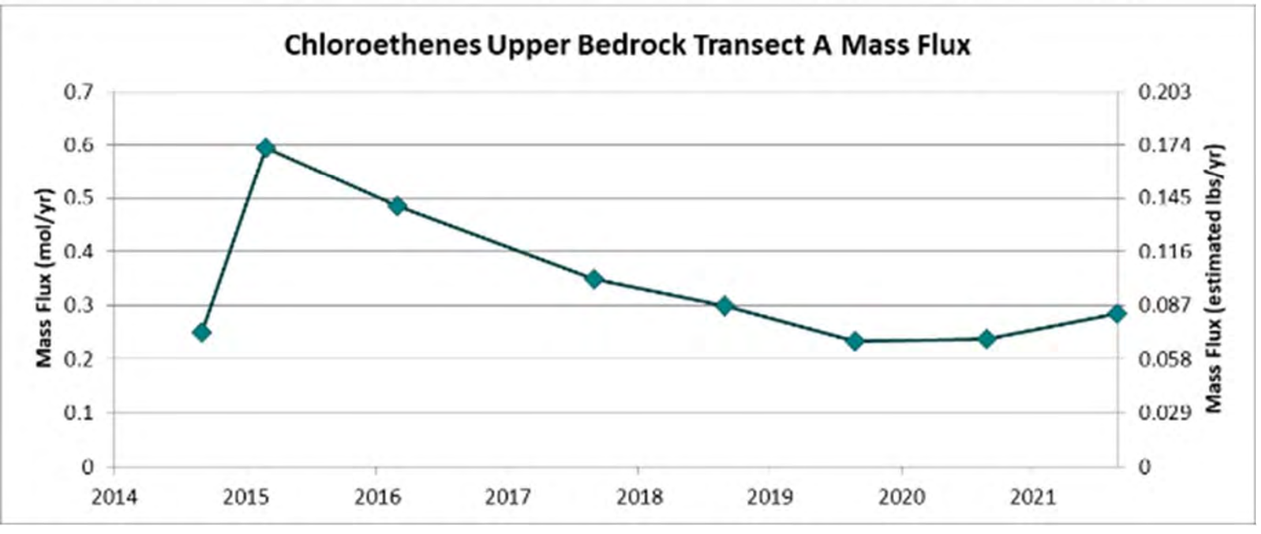

Chloroethenes Upper Bedrock Transect B Average Concentration
Average Concentration (nmol/L)
250
200
150
100
50
0
2014
2015
2016
2017
2018
2019
2020
2021

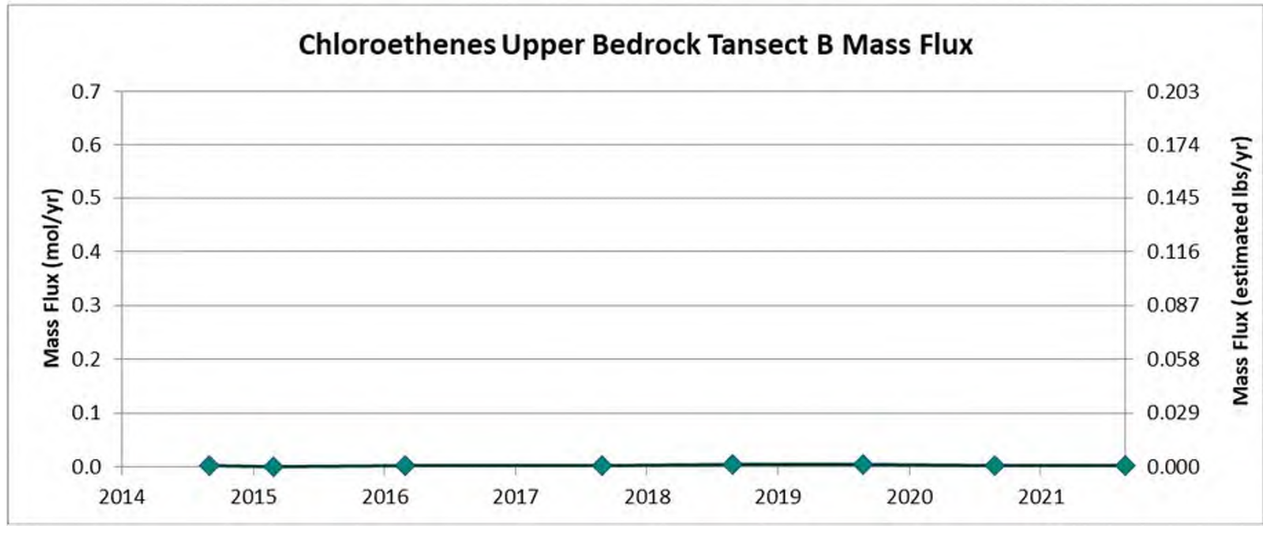

Chloroethenes Upper Bedrock Tansect B Mass Flux
Mass Flux (mol/yr)
0.006
0.005
0.004
0.003
0.002
0.001
0.000
Mass Flux (estimated lbs/yr)
0.0017
0.0015
0.0012
0.0009
0.0006
0.0003
0.0000
2014
2015
2016
2017
2018
2019
2020
2021

© WSP 2021


Chloroethenes Upper Bedrock Transect A Average Concentration
Average Concentration (nmol/L)
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Upper Bedrock Transect B Average Concentration
Average Concentration (nmol/L)
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Upper Bedrock Transect A Mass Flux
Mass Flux (mol/yr)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Mass Flux (estimated lbs/yr)
0.203
0.174
0.145
0.116
0.087
0.058
0.029
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Upper Bedrock Tansect B Mass Flux
Mass Flux (mol/yr)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Mass Flux (estimated lbs/yr)
0.203
0.174
0.145
0.116
0.087
0.058
0.029
0.000
2014
2015
2016
2017
2018
2019
2020
2021

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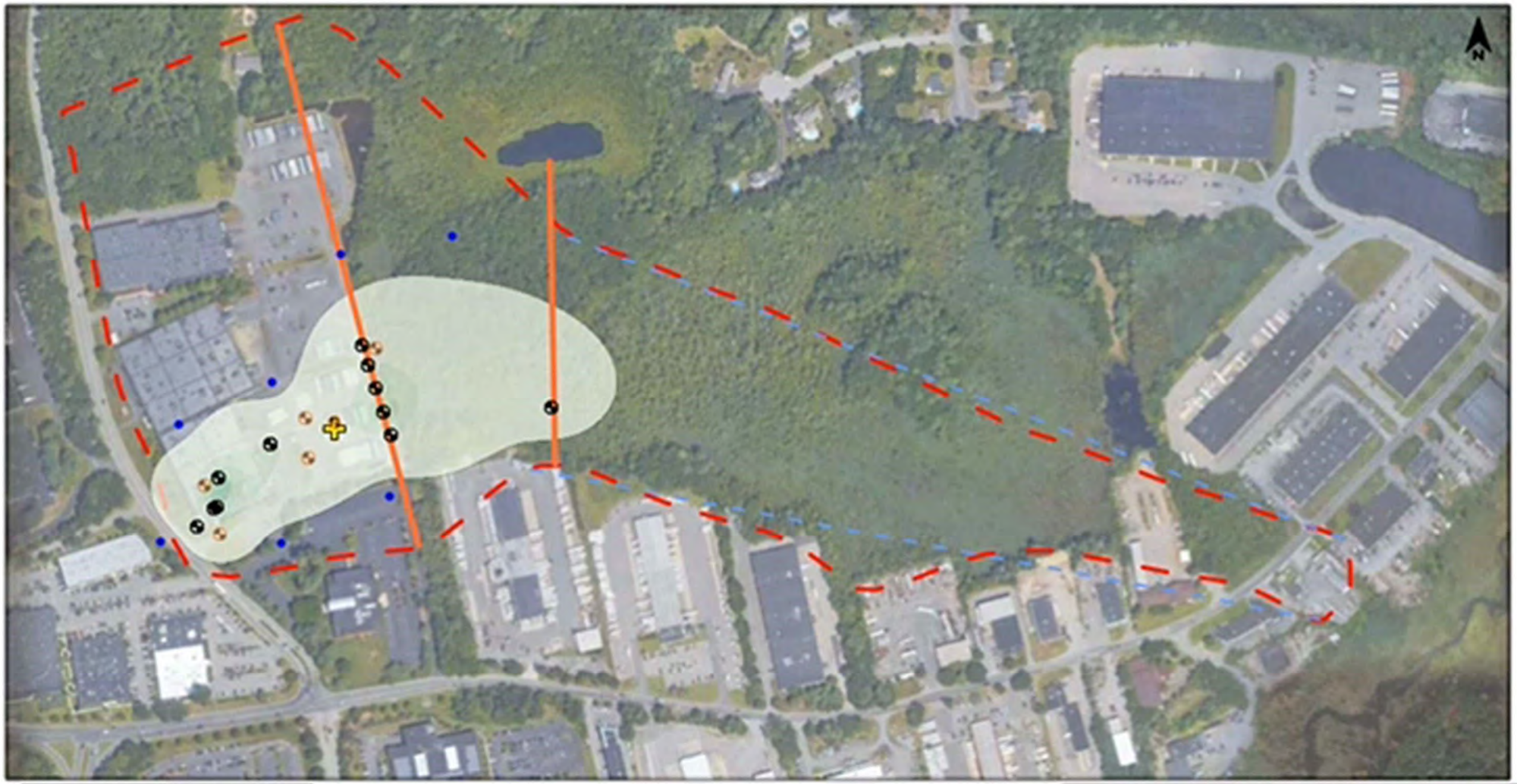

1,4-Dioxane
Upper Bedrock
Mar-2015

Concentration (µg/L)

45
40
35
30
25
20
15
10
5
0.3

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary
Control Fence

Transect A

Average Concentration: **4.4 µg/L**
Mass Flux: **0.0006 lbs/yr**

Transect B

Average Concentration: **0.62 µg/L**
Mass Flux: **0.0001 lbs/yr**

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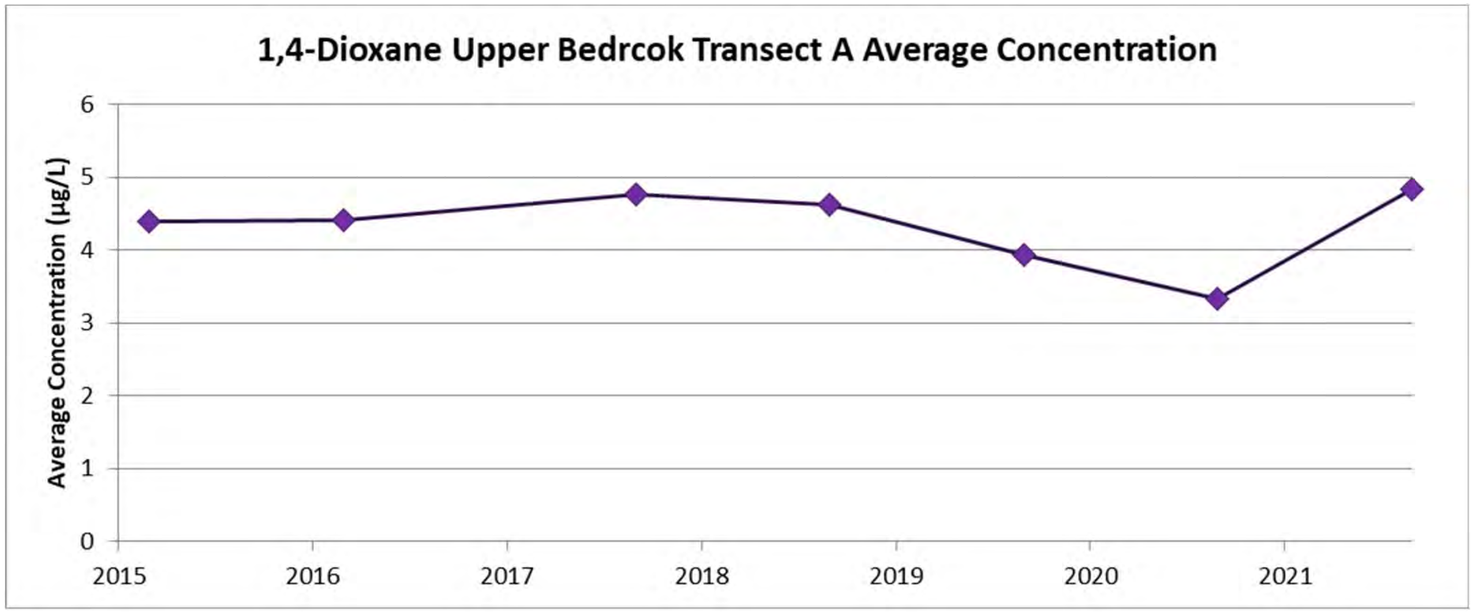
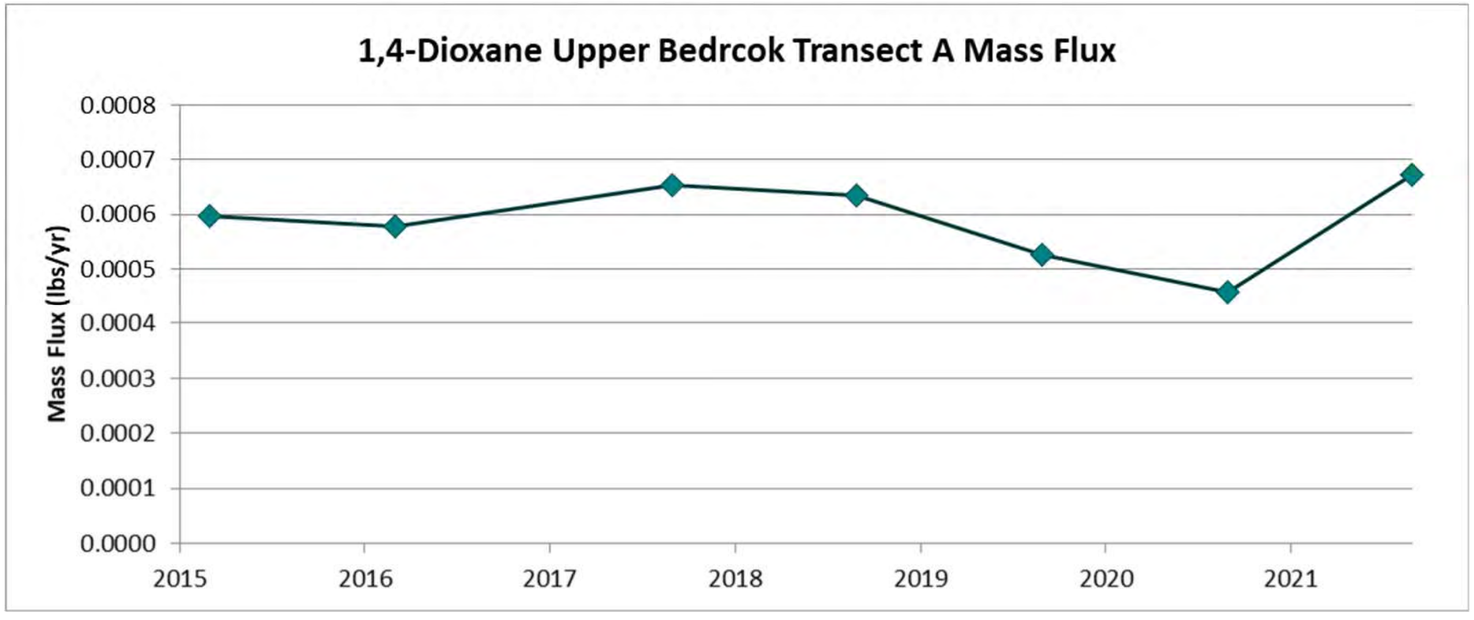
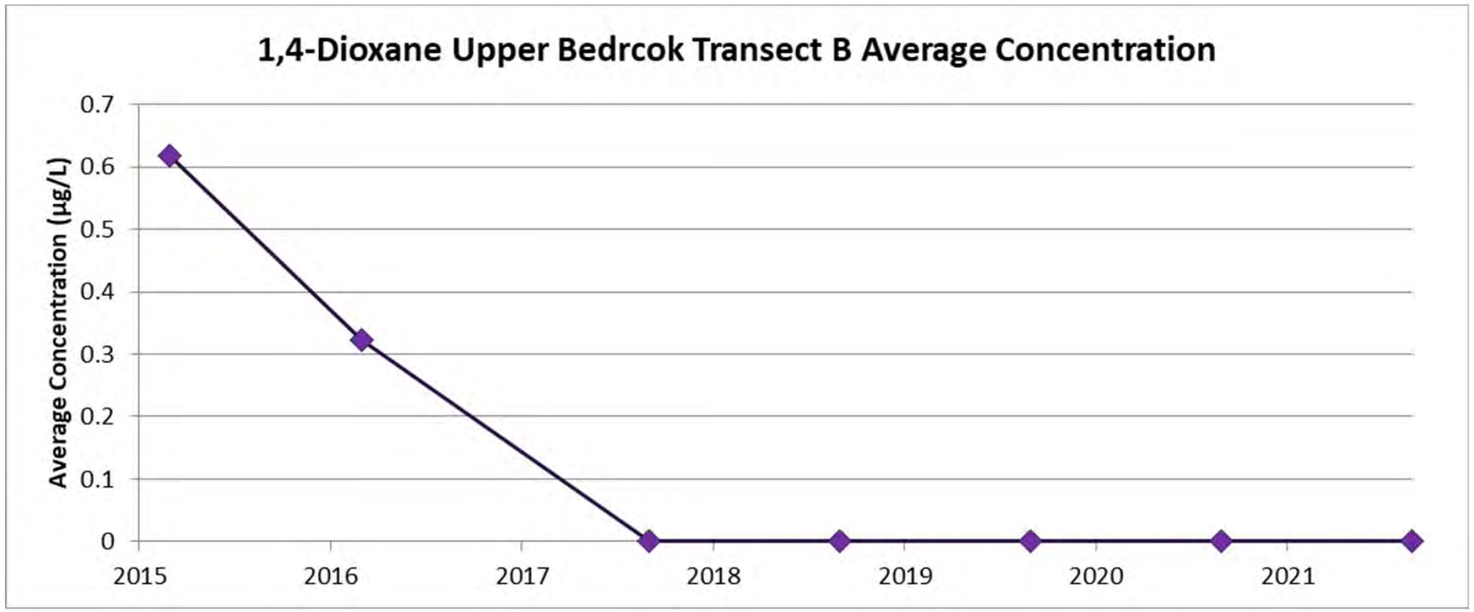
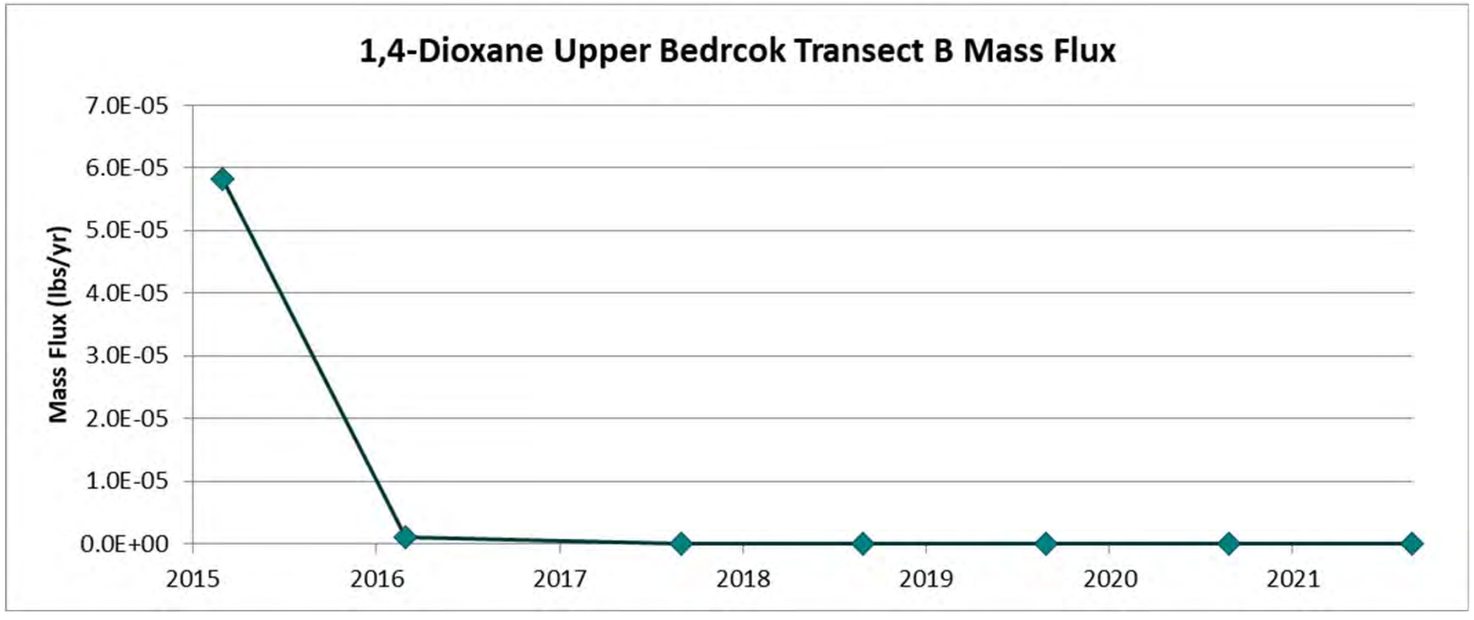

1,4-Dioxane Upper Bedrcok Transect A Average Concentration
Average Concentration (µg/L)
0
1
2
3
4
5
6
2015
2016
2017
2018
2019
2020
2021

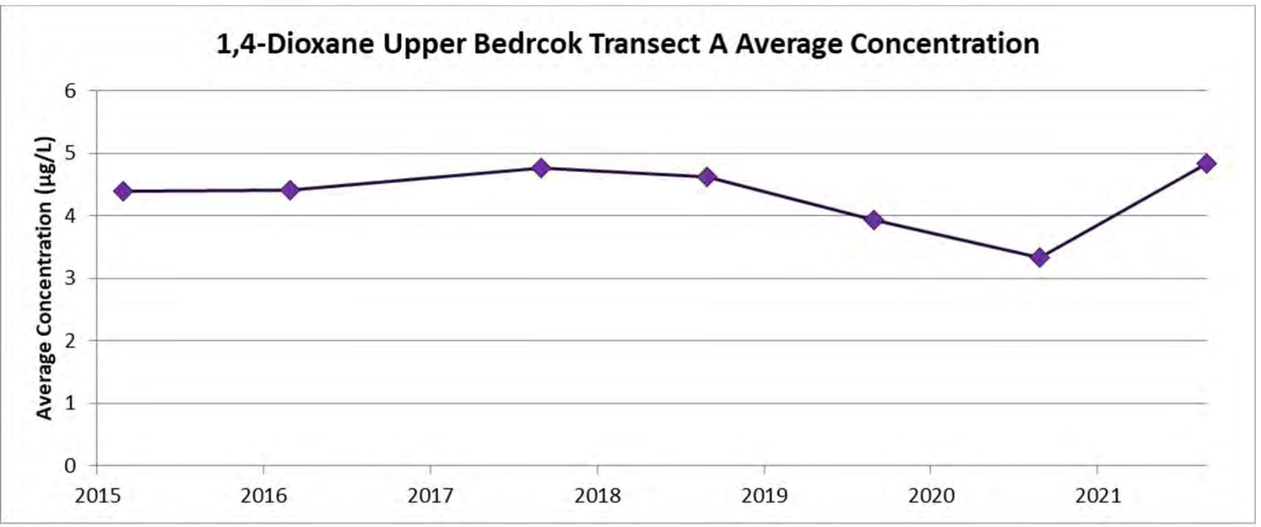

1,4-Dioxane Upper Bedrcok Transect A Mass Flux
Mass Flux (lbs/yr)
0.0000
0.0001
0.0002
0.0003
0.0004
0.0005
0.0006
0.0007
0.0008
2015
2016
2017
2018
2019
2020
2021

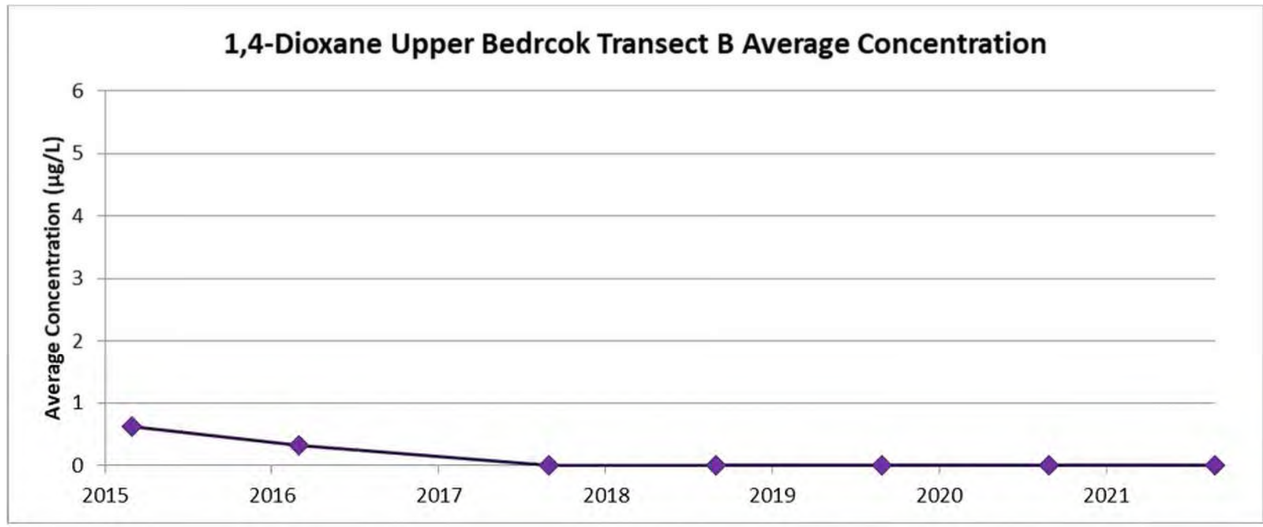
© WSP 2021

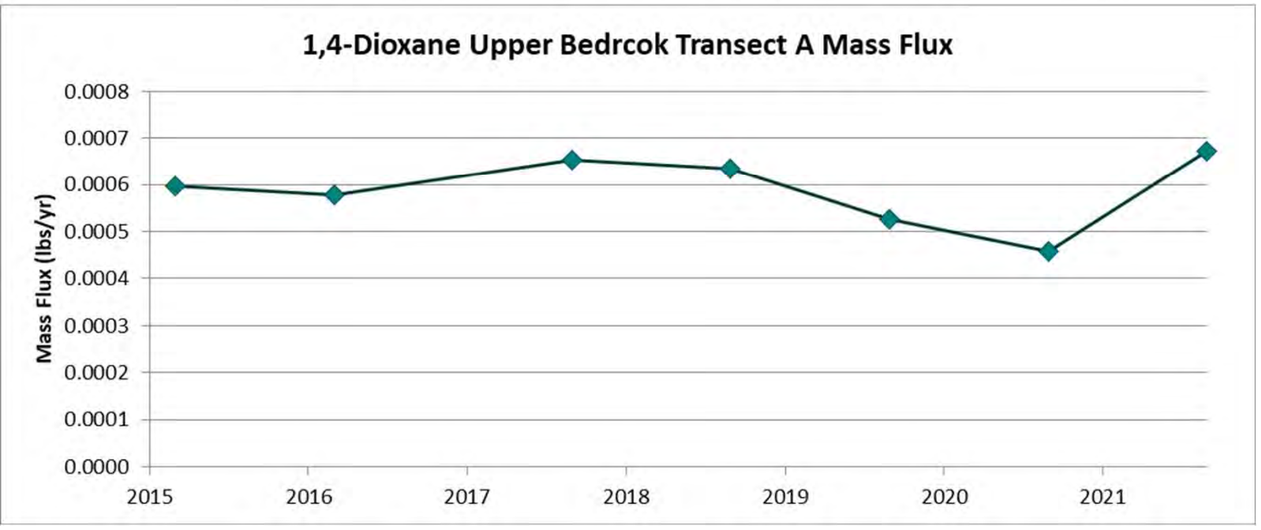

1,4-Dioxane Upper Bedrcok Transect B Average Concentration
Average Concentration (µg/L)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2015
2016
2017
2018
2019
2020
2021

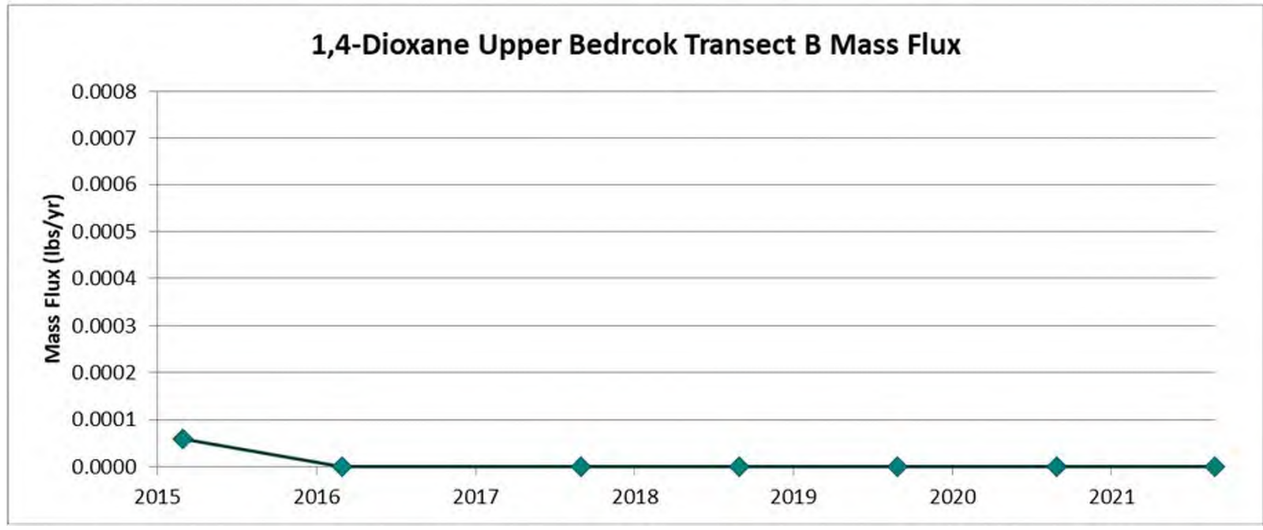

1,4-Dioxane Upper Bedrcok Transect B Mass Flux
Mass Flux (lbs/yr)
7.0E-05
6.0E-05
5.0E-05
4.0E-05
3.0E-05
2.0E-05
1.0E-05
0.0E+00
2015
2016
2017
2018
2019
2020
2021

© WSP 2021


1,4-Dioxane Upper Bedrcok Transect A Average Concentration
Average Concentration (µg/L)
0
1
2
3
4
5
6
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Upper Bedrcok Transect B Average Concentration
Average Concentration (µg/L)
0
1
2
3
4
5
6
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Upper Bedrcok Transect A Mass Flux
Mass Flux (lbs/yr)
0.0000
0.0001
0.0002
0.0003
0.0004
0.0005
0.0006
0.0007
0.0008
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Upper Bedrcok Transect B Mass Flux
Mass Flux (lbs/yr)
0.0000
0.0001
0.0002
0.0003
0.0004
0.0005
0.0006
0.0007
0.0008
2015
2016
2017
2018
2019
2020
2021

© WSP 2021



0 ft 450 ft 900 ft

Ethane
Upper Bedrock
Sep-2021

Concentration (µg/L)

5
4.5
4
3.5
3
2.5
2
1.5
1
0.5

LEGEND

EMW-10R — Monitoring Well

<0.24 — Concentration (µg/L)

MCP Site Boundary

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0 ft 450 ft 900 ft

Ethene
Upper Bedrock
Sep-2021

Concentration (µg/L)

5
4.5
4
3.5
3
2.5
2
1.5
1
0.5

LEGEND

EMW-10R — Monitoring Well

<0.24 — Concentration (µg/L)

MCP Site Boundary

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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0 ft 450 ft 900 ft

Methane
Upper Bedrock
Sep-2021

Concentration (µg/L)

900
800
700
600
500
400
300
200
100
5

LEGEND

EMW-10R — Monitoring Well

<0.24 — Concentration (µg/L)

MCP Site Boundary

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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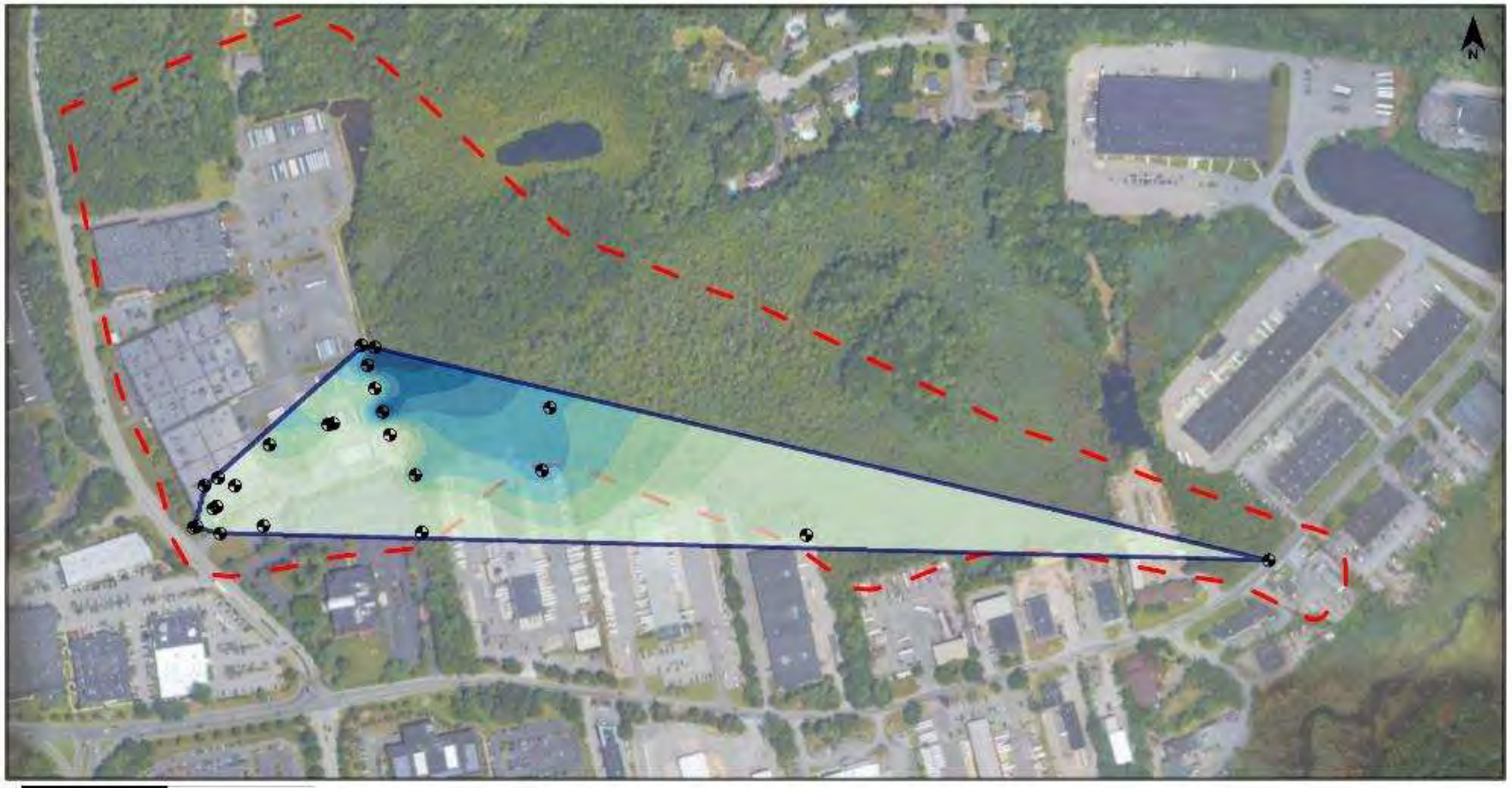

0 ft 450 ft 900 ft

ORP
Upper Bedrock
Sep-2021

ORP (mV)

100
50
25
0
-25
-50
-75
-100
-200
-250

LEGEND

MW-4 Monitoring Well — — MCP Site Boundary

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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0 ft 450 ft 900 ft

PCE
Middle Bedrock
Sep-1992

Concentration (µg/L)

1,000
750
500
250
100
50
25
15
10
5

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Plume Characteristics

Plume Area: **0.061 acres**
Plume Average Concentration: **5.4 µg/L**
Plume Mass Indicator: **0.001 lbs**

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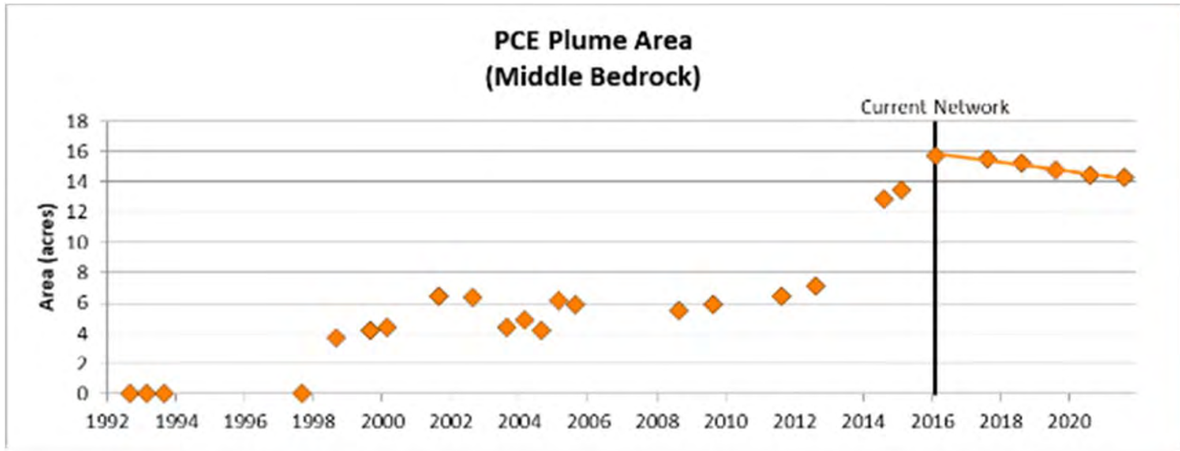
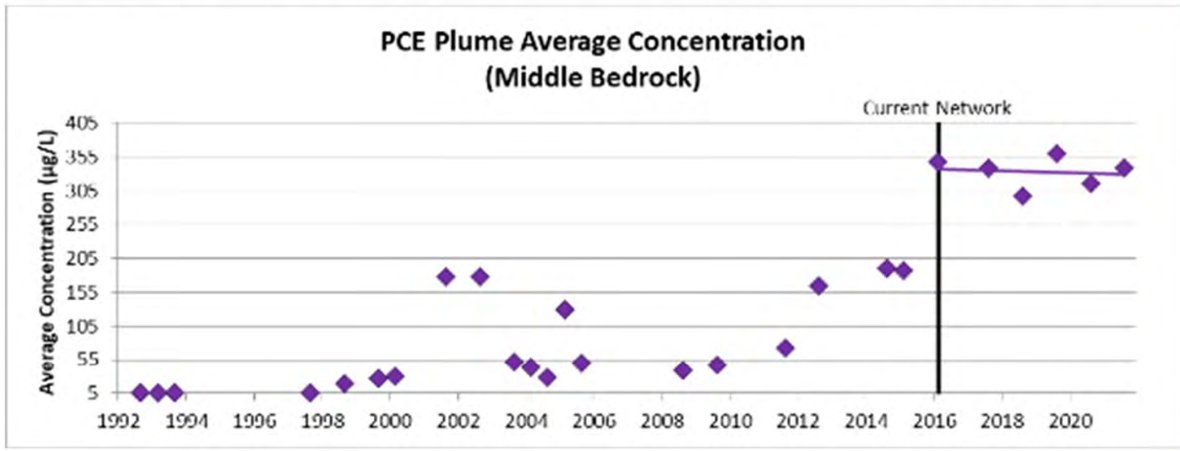
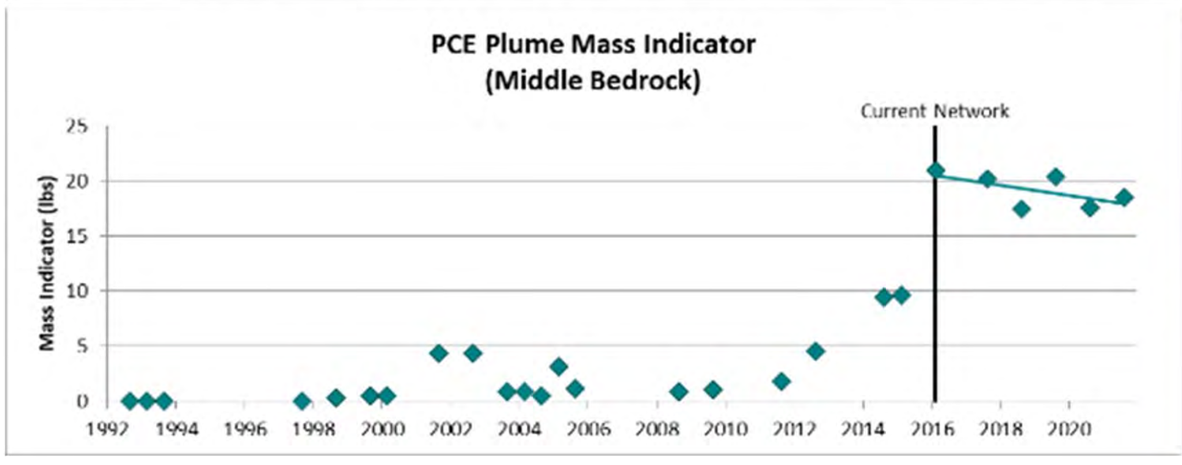


Mar-2016 to Sep-2021
Decreasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence



Mar-2016 to Sep-2021
No Trend
Mann-Kendall: 50% Confidence
Regression: 20% Confidence



Mar-2016 to Sep-2021
No Trend
Mann-Kendall: 77% Confidence
Regression: 80% Confidence

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0 ft 450 ft 900 ft

TCE
Middle Bedrock
Sep-1992

Concentration (µg/L)

- 1,000
- 750
- 500
- 250
- 100
- 50
- 25
- 15
- 10
- 5

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **0.47 acres**
Plume Average Concentration: **6.3 µg/L**
Plume Mass Indicator: **0.011 lbs**

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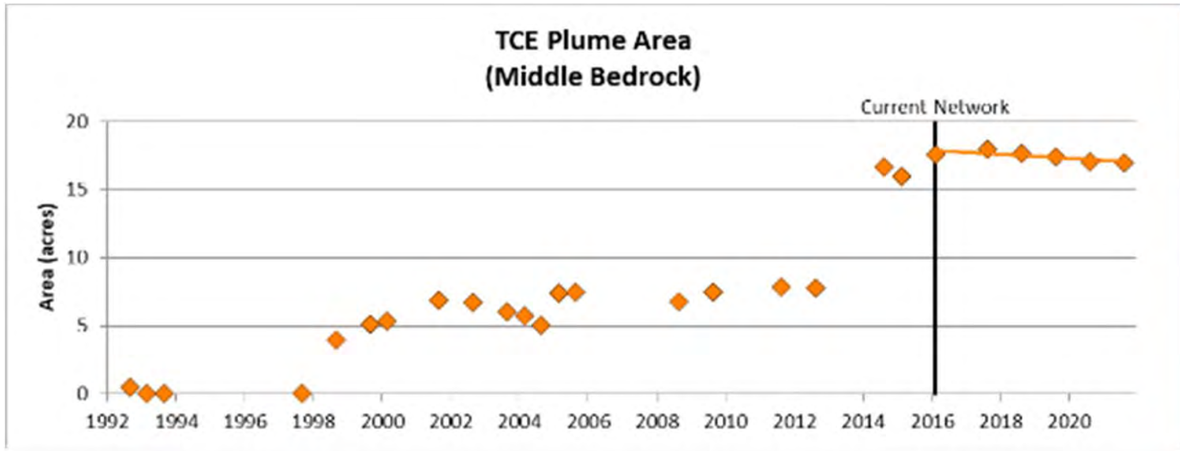
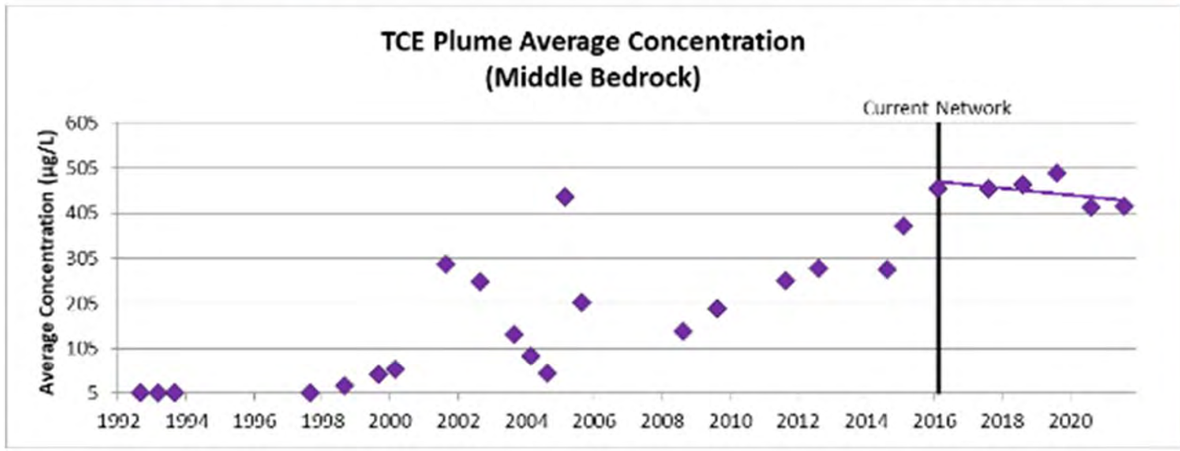
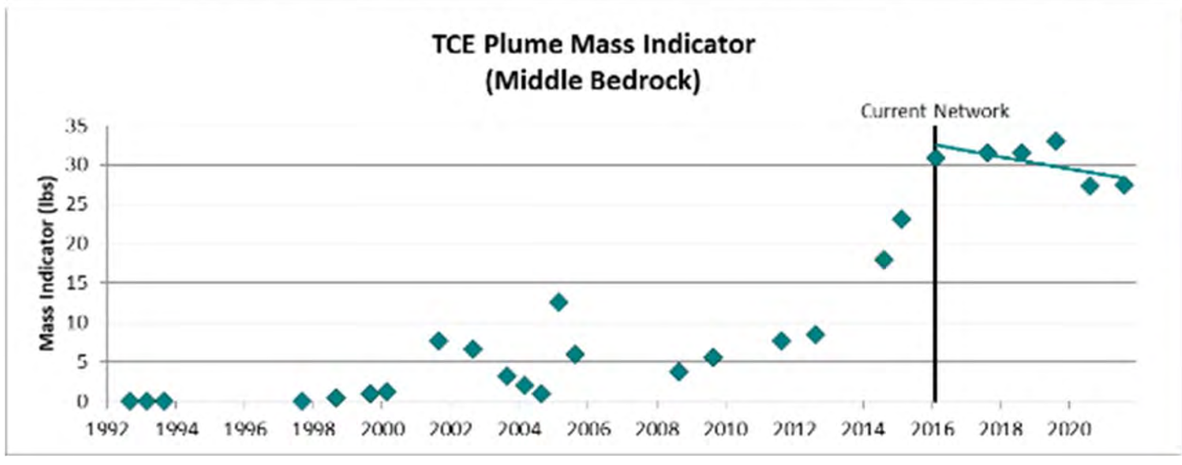


Mar-2016 to Sep-2021
Decreasing Trend
Mann-Kendall: 97% Confidence
Regression: 94% Confidence



Mar-2016 to Sep-2021
No Trend
Mann-Kendall: 64% Confidence
Regression: 72% Confidence



Mar-2016 to Sep-2021
No Trend
Mann-Kendall: 50% Confidence
Regression: 83% Confidence

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0 ft 450 ft 900 ft

Cis-1,2-DCE
Middle Bedrock
Sep-1992

Concentration (µg/L)

1,000
750
500
250
100
MCL 70
25
15
10
5

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Plume Characteristics

Plume Area: **0.000 acres**
Plume Average Concentration: **< 5.0 µg/L**
Plume Mass Indicator: **0.000 lbs**

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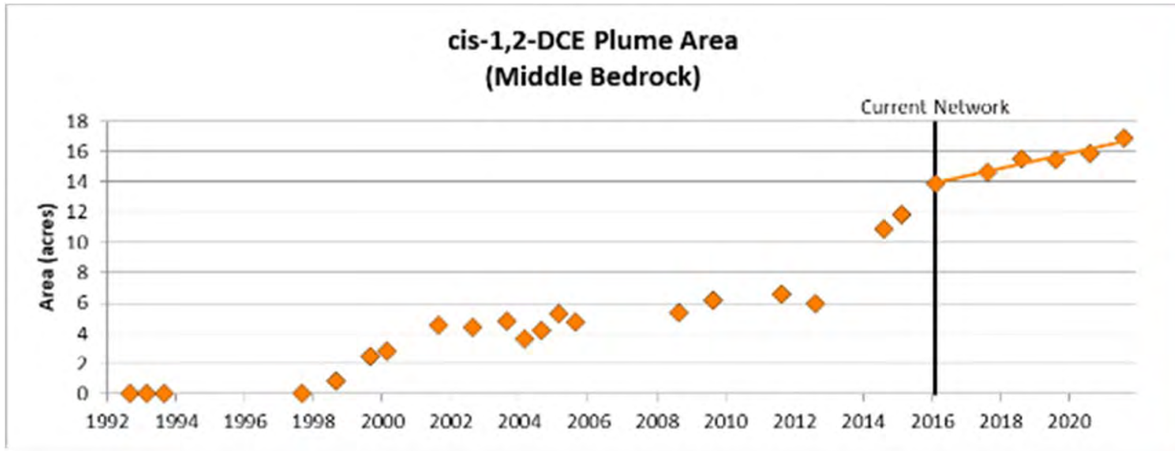
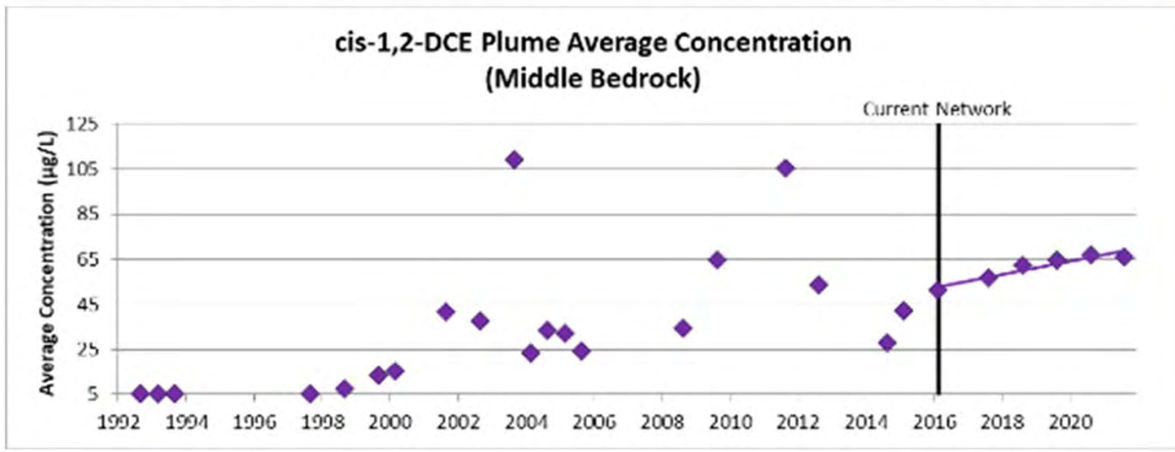
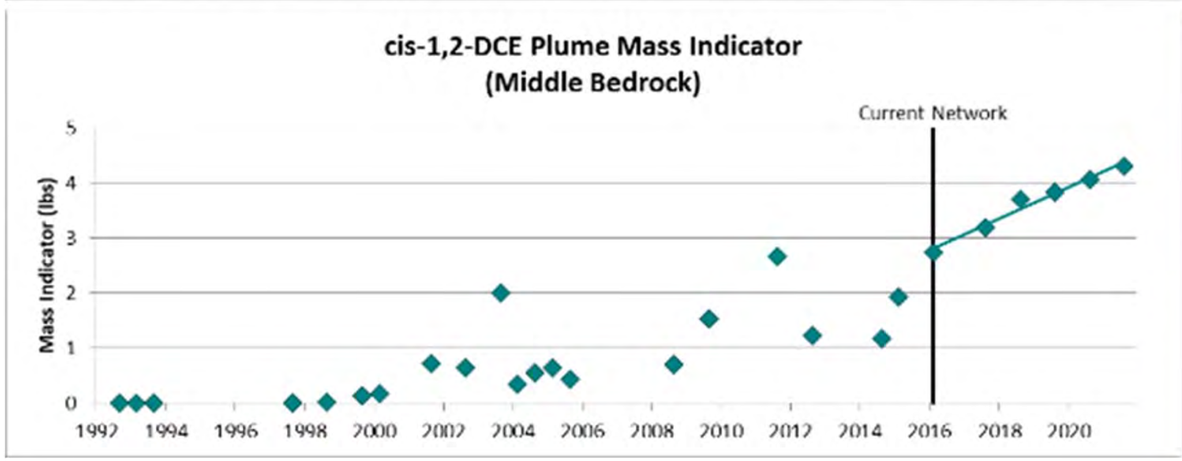


Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: 99% Confidence
Regression: >99% Confidence



Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: 99% Confidence
Regression: >99% Confidence



Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence

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0 ft 450 ft 900 ft

Vinyl Chloride
Middle Bedrock
Sep-1992

Concentration (µg/L)

1,000
750
500
250
100
50
25
15
10
2

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Plume Characteristics

Plume Area: **0.000 acres**
Plume Average Concentration: **< 2.0 µg/L**
Plume Mass Indicator: **0.000 lbs**

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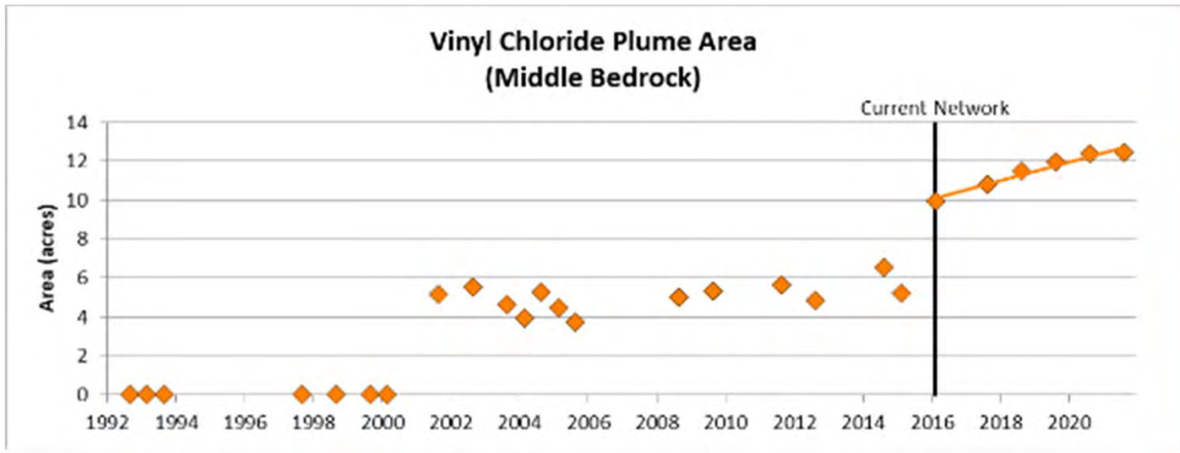
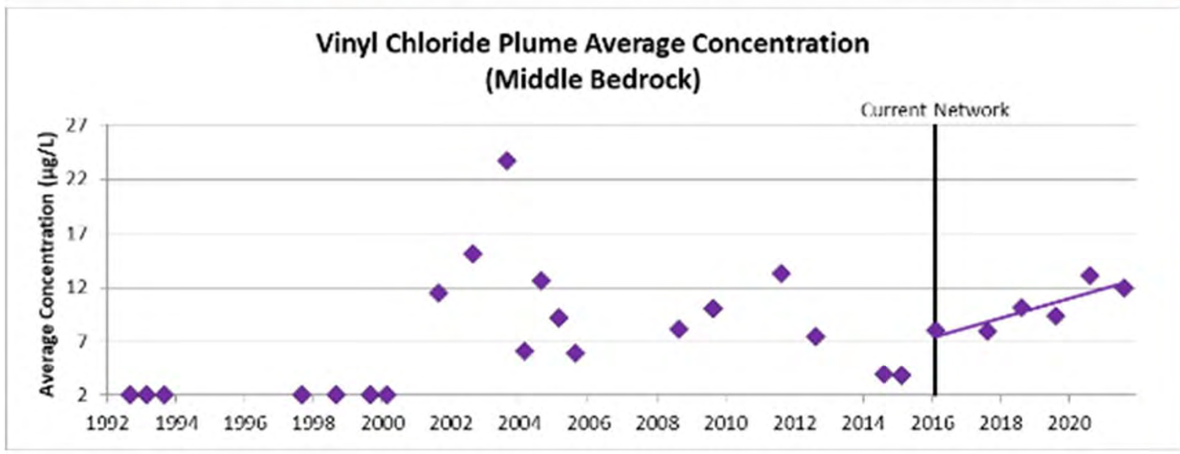
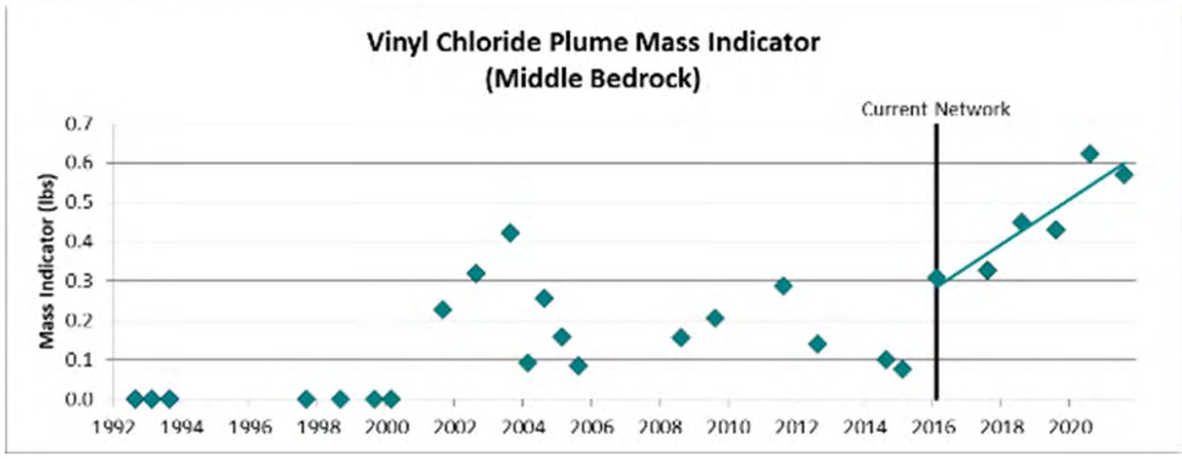


Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence



Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: 93% Confidence
Regression: 97% Confidence



Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: 97% Confidence
Regression: 99% Confidence

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Chloroethenes
Middle Bedrock
Sep-1992

Concentration (nmol/L)

- 4,500
- 4,000
- 3,500
- 3,000
- 2,500
- 2,000
- 1,500
- 1,000
- 500
- 0

0 ft 450 ft 900 ft

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Well not used in analysis
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **0.42 acres**
Plume Average Concentration: **86.7 nmol/L**
Plume Mass Indicator: **0.06 moles**

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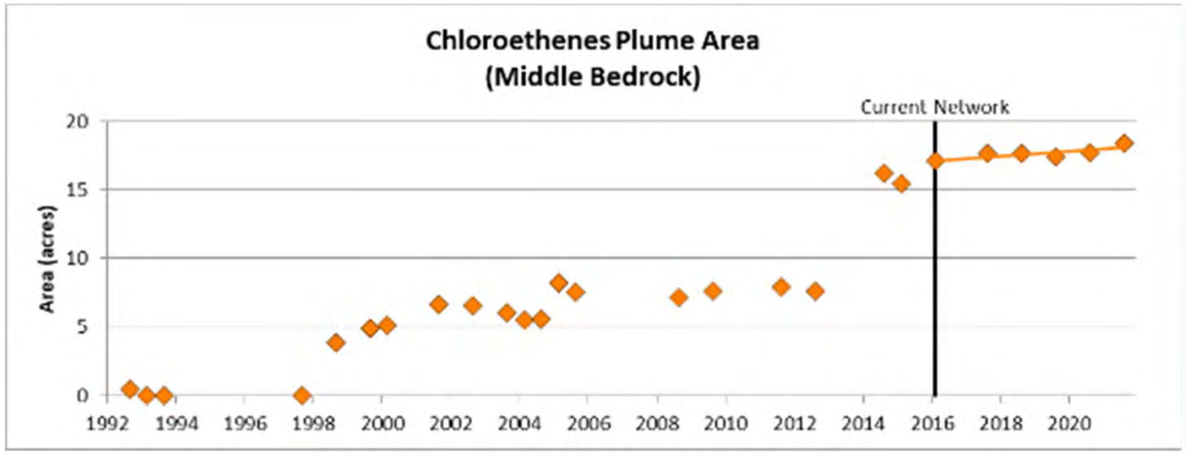
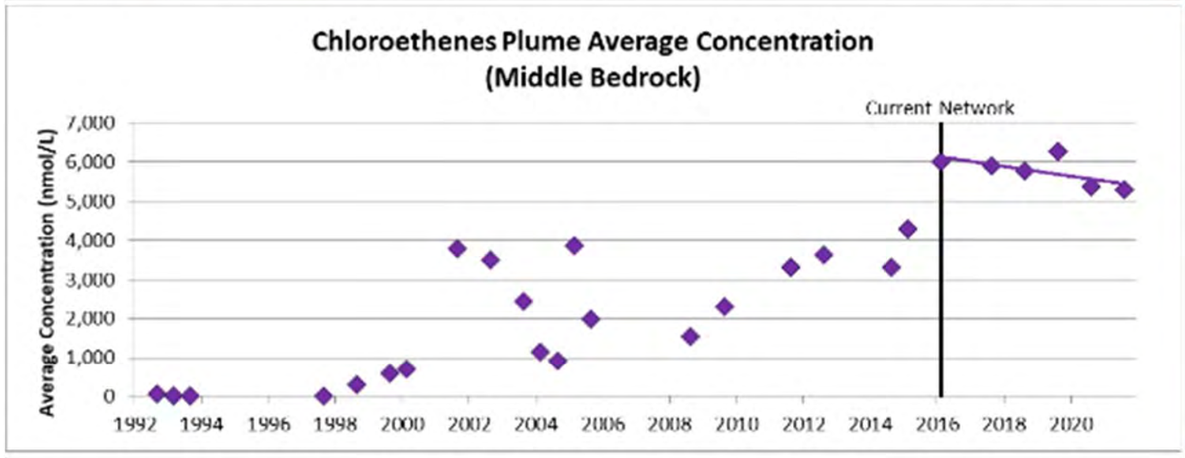
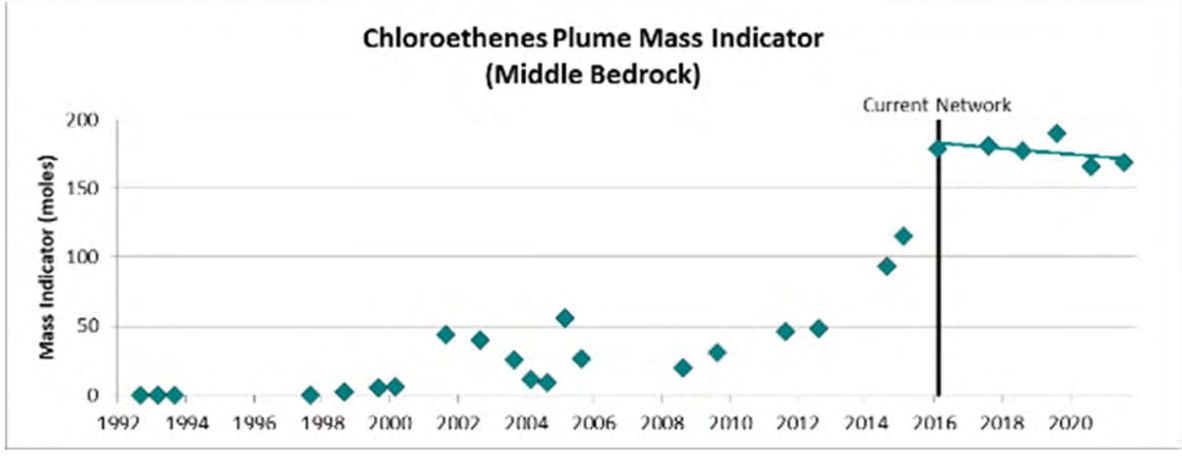


Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: 93% Confidence
Regression: 95% Confidence



Mar-2016 to Sep-2021
No Trend/Decreasing Trend
Mann-Kendall: 93% Confidence
Regression: 85% Confidence



Mar-2016 to Sep-2021
No Trend
Mann-Kendall: 77% Confidence
Regression: 67% Confidence

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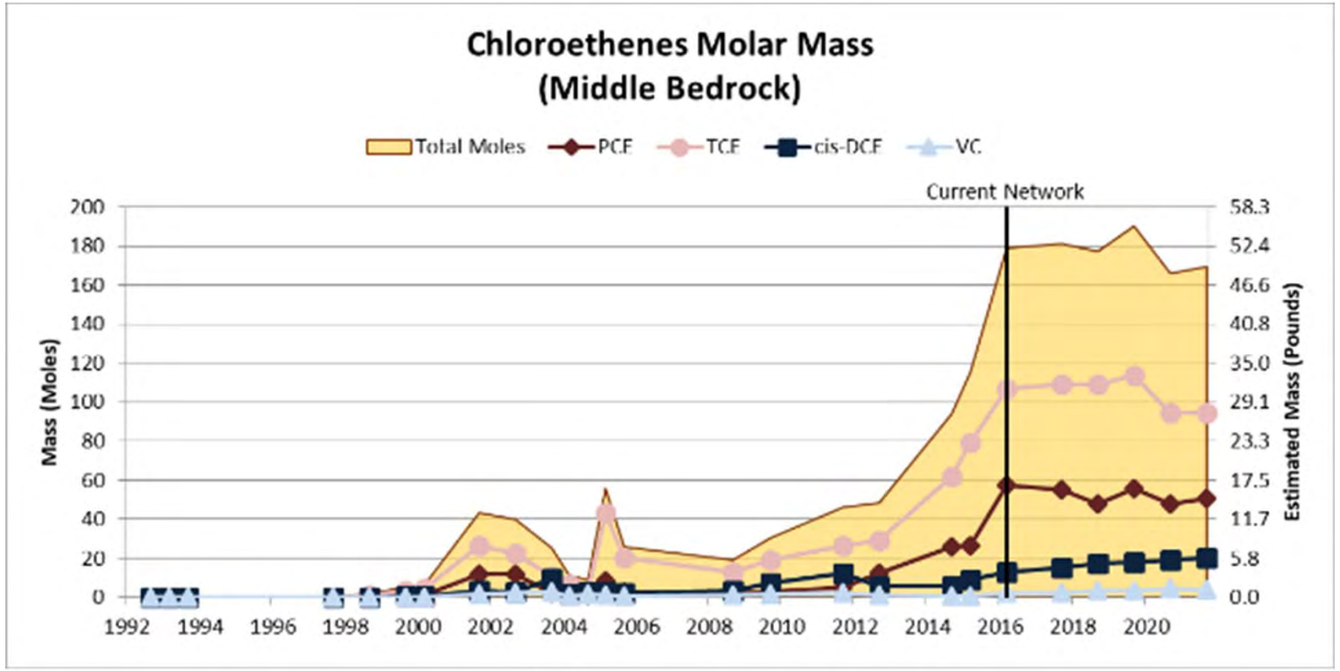
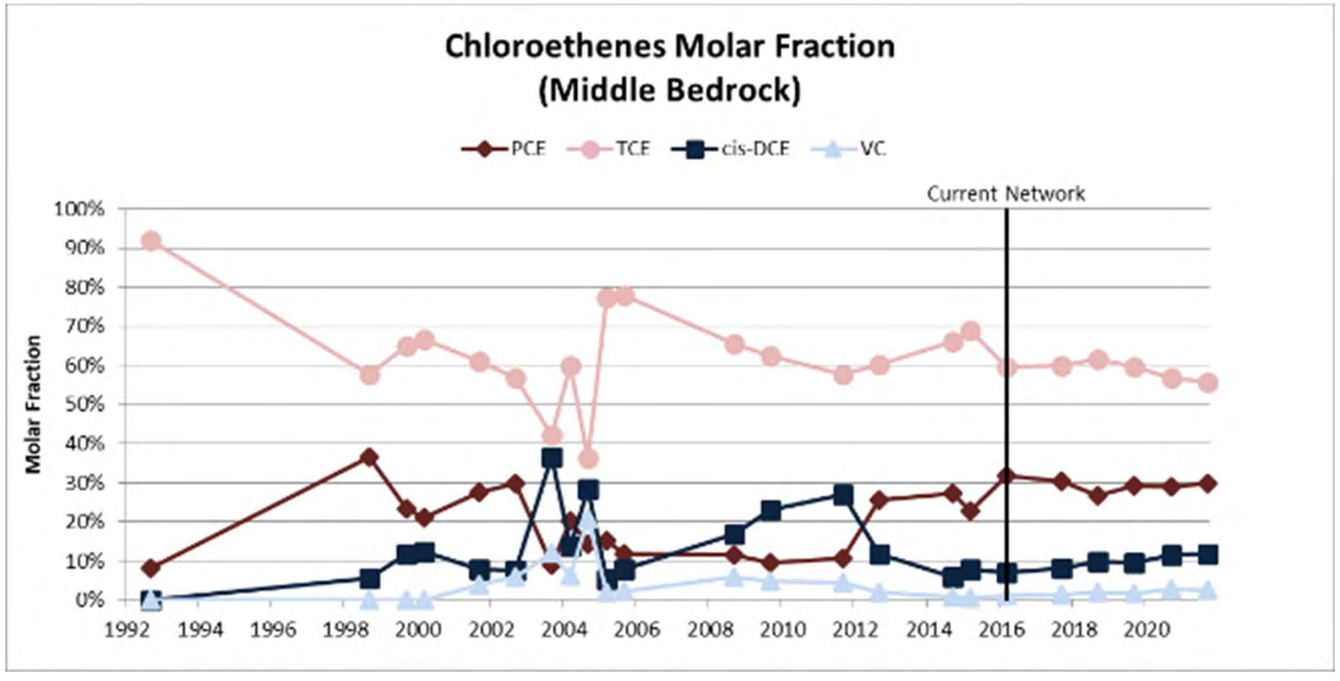

Chloroethenes Molar Mass
(Middle Bedrock)
Total Moles
PCE
TCE
cis-DCE
VC
Current Network
Mass (Moles)
Estimated Mass (Pounds)
200
180
160
140
120
100
80
60
40
20
0
58.3
52.4
46.6
40.8
35.0
29.1
23.3
17.5
11.7
5.8
0.0
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


Chloroethenes Molar Fraction
(Middle Bedrock)
PCE
TCE
cis-DCE
VC
Current Network
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

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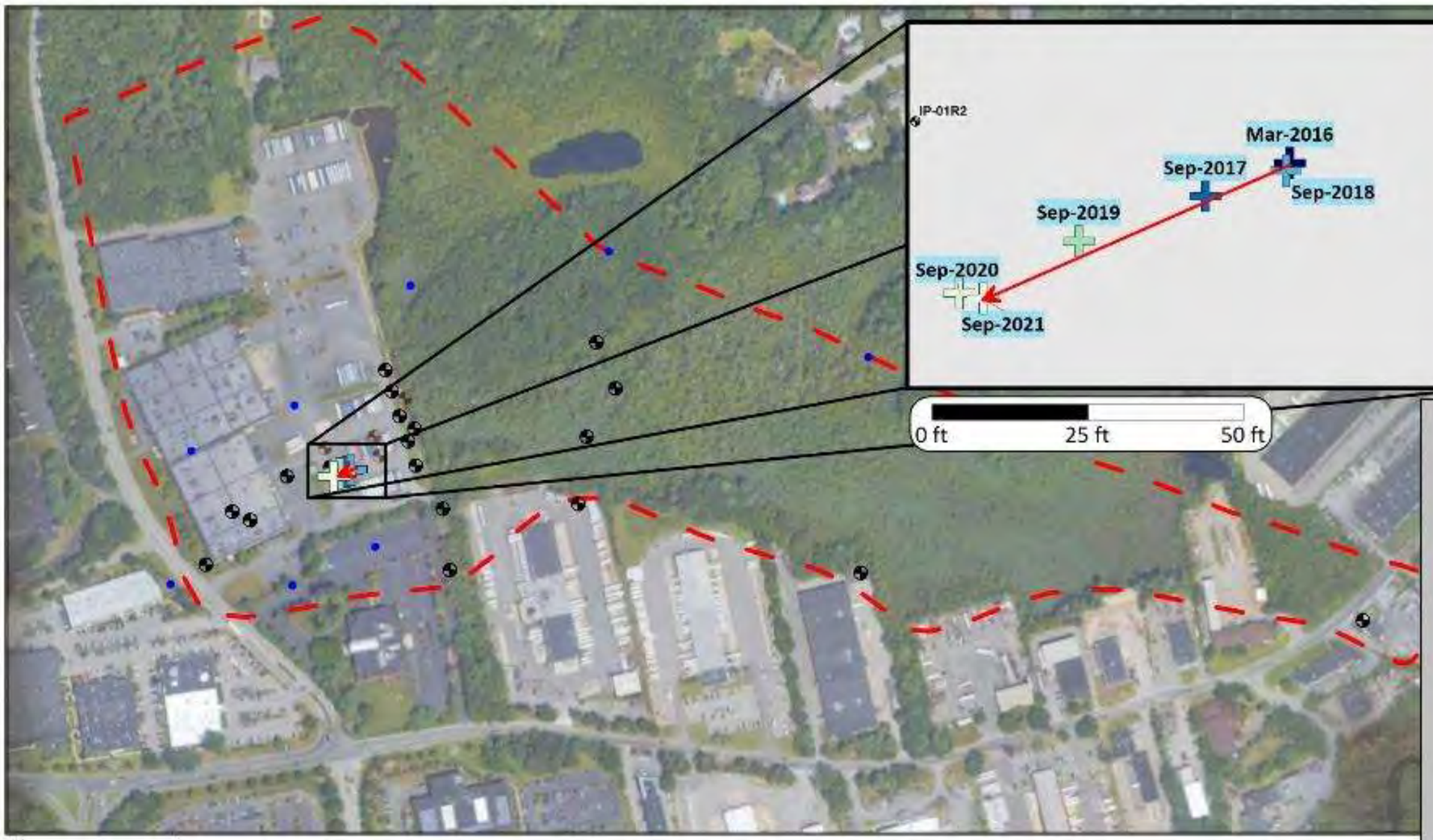
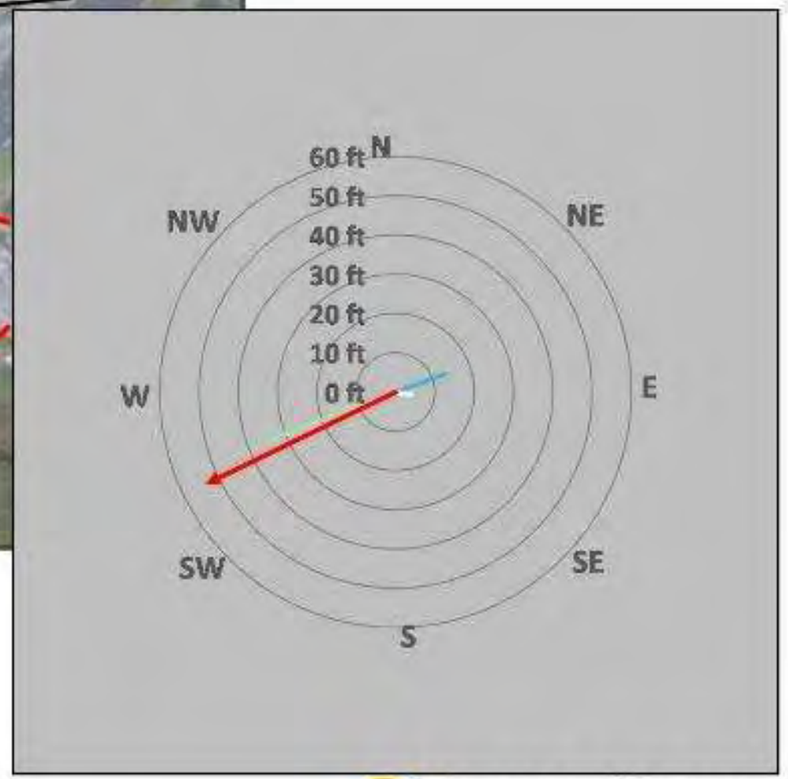
Chloroethenes Middle Bedrock Center of Mass





0 ft 450 ft 900 ft

Center of Mass Scale

Mar-2016 → Sep-2021

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Point
- MCP Site Boundary
- Net COM Movement

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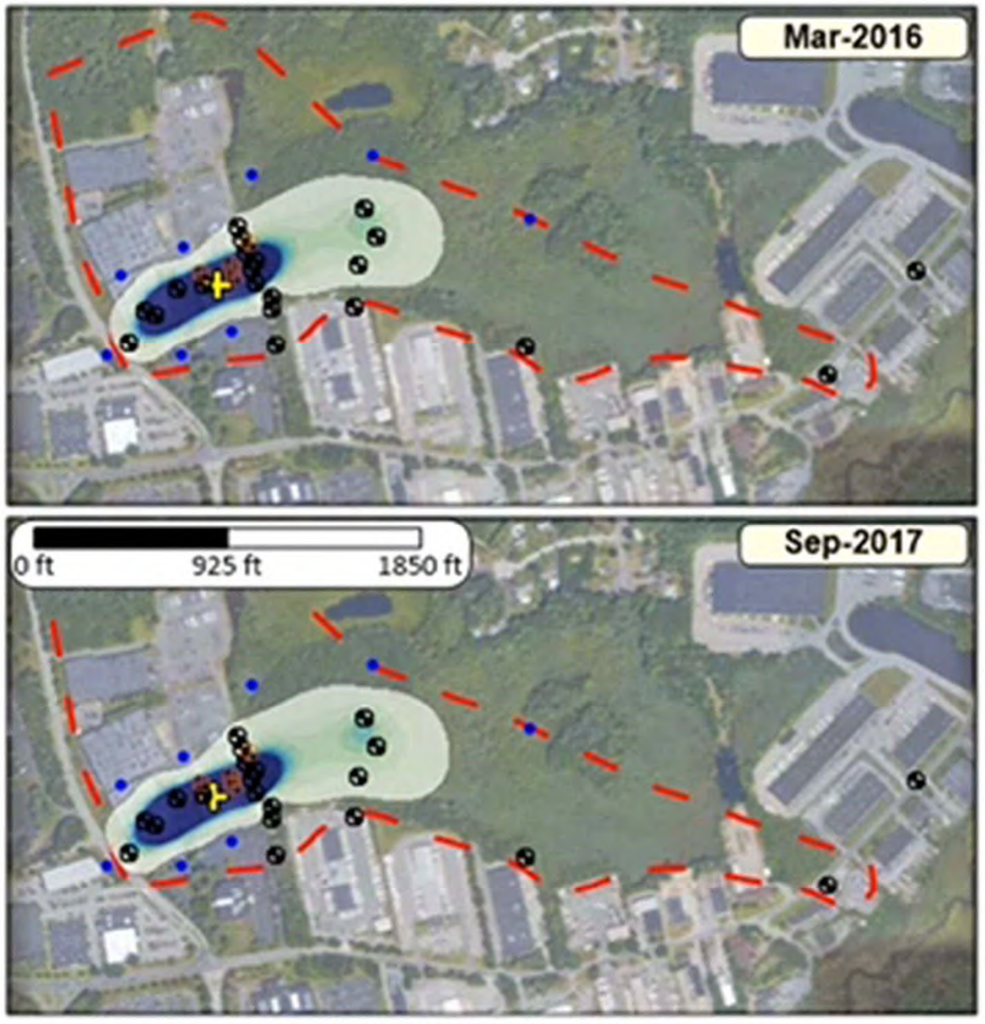


Concentration (nmol/L)

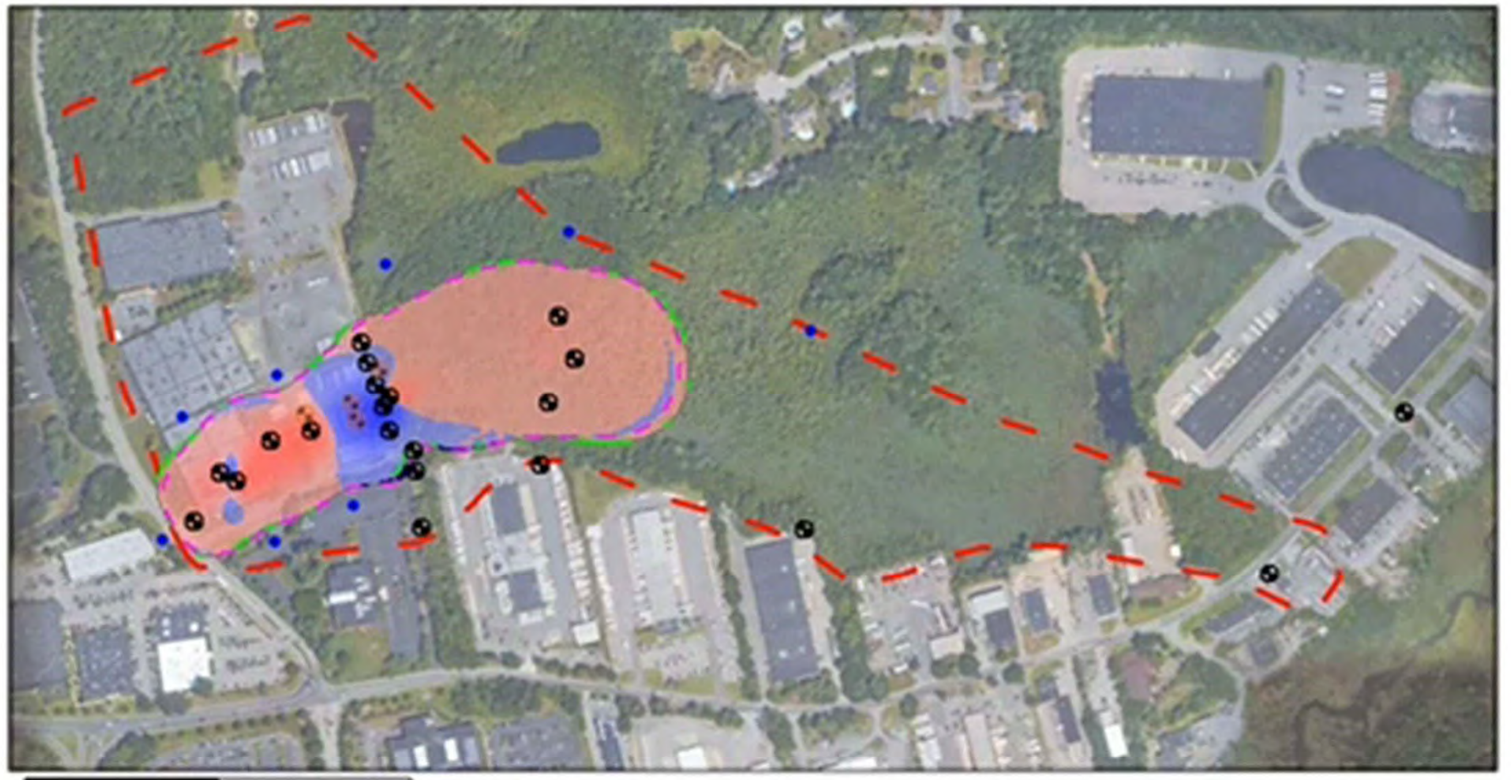
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary
Mar-2016 Plume Boundary
Sep-2017 Plume Boundary

Chloroethenes
Middle Bedrock

Plume Differences Mar-2016 vs Sep-2017



Spatial Change Indicator™

Decrease Increase

Plume Characteristics

Area: **3% Increase**
Average Concentration: **2% Decrease**
Mass Indicator: **1% Increase**
Mass Increase: **14.0 moles Increase**
Mass Decrease: **11.6 moles Decrease**

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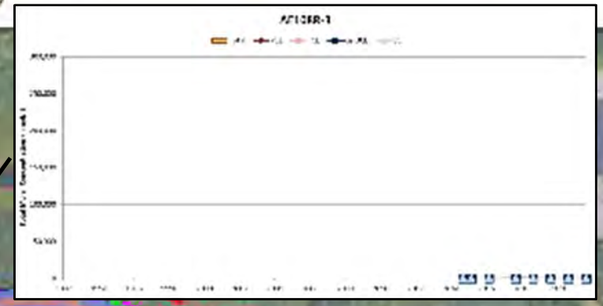
Chloroethenes
Middle Bedrock

Plume Differences Mar-2016 vs Sep-2021

Mar-2016





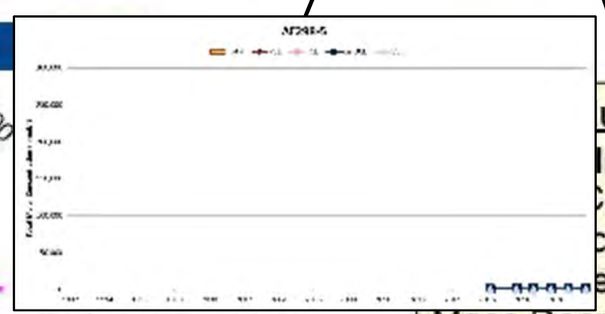


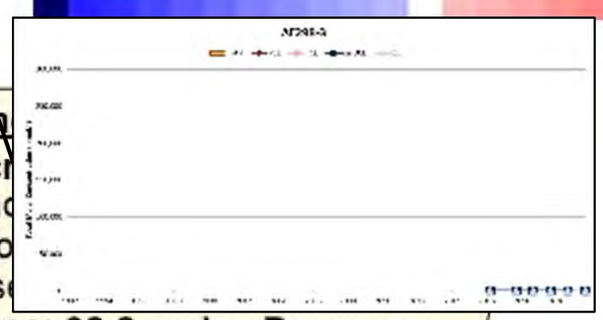












Concentration (nmol/L)

0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000

Increase

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2021 Plume Boundary

Mass Decrease: **32.2 moles Decrease**

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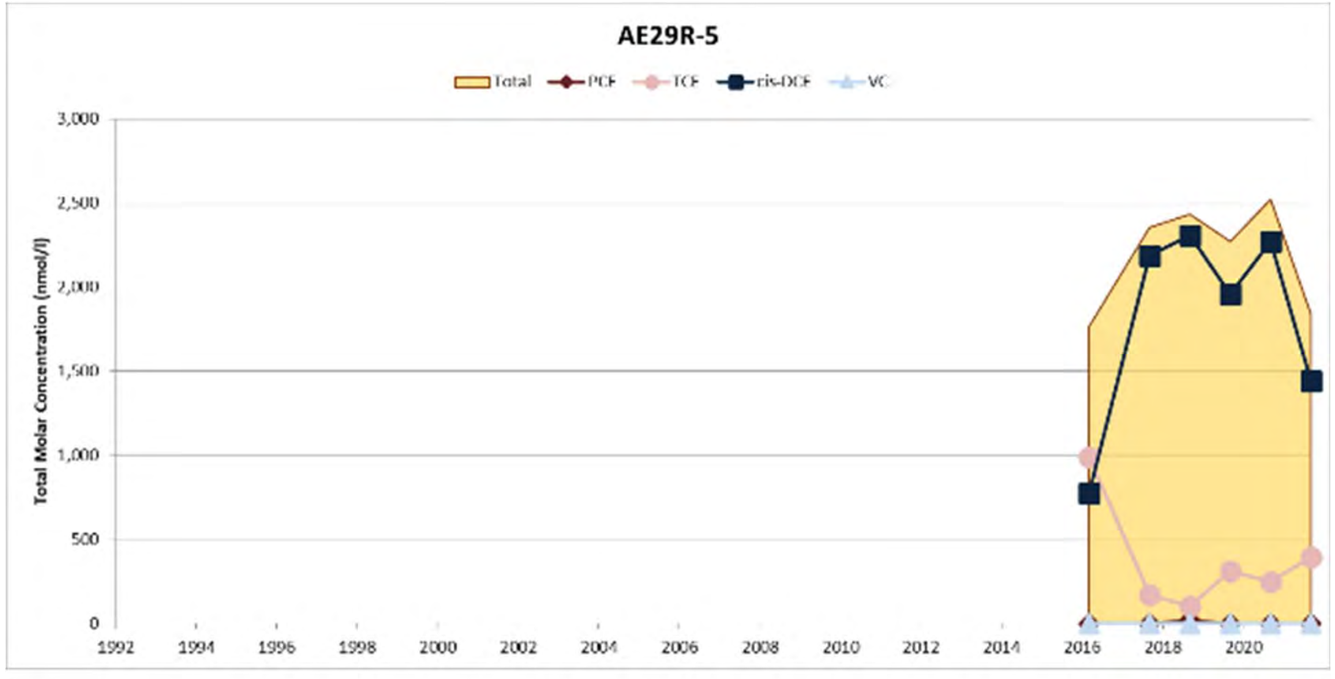
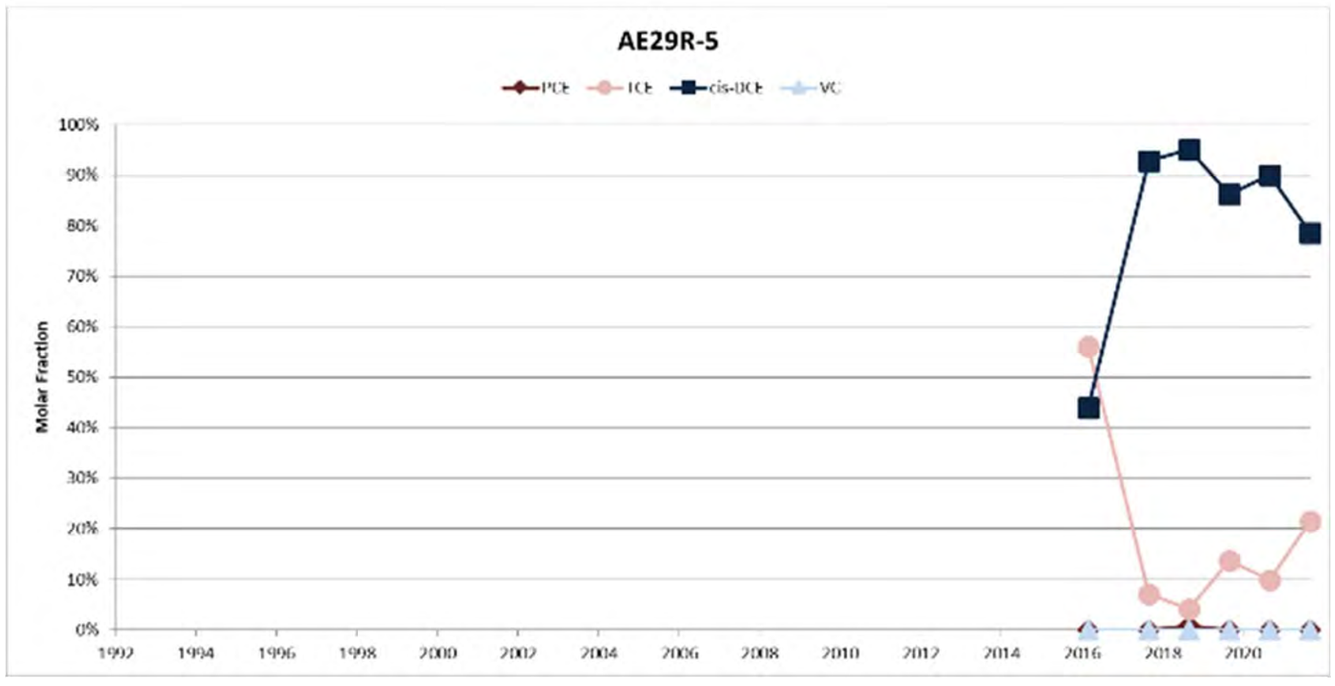

AE29R-5
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
3,000
2,500
2,000
1,500
1,000
500
0
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE29R-5
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

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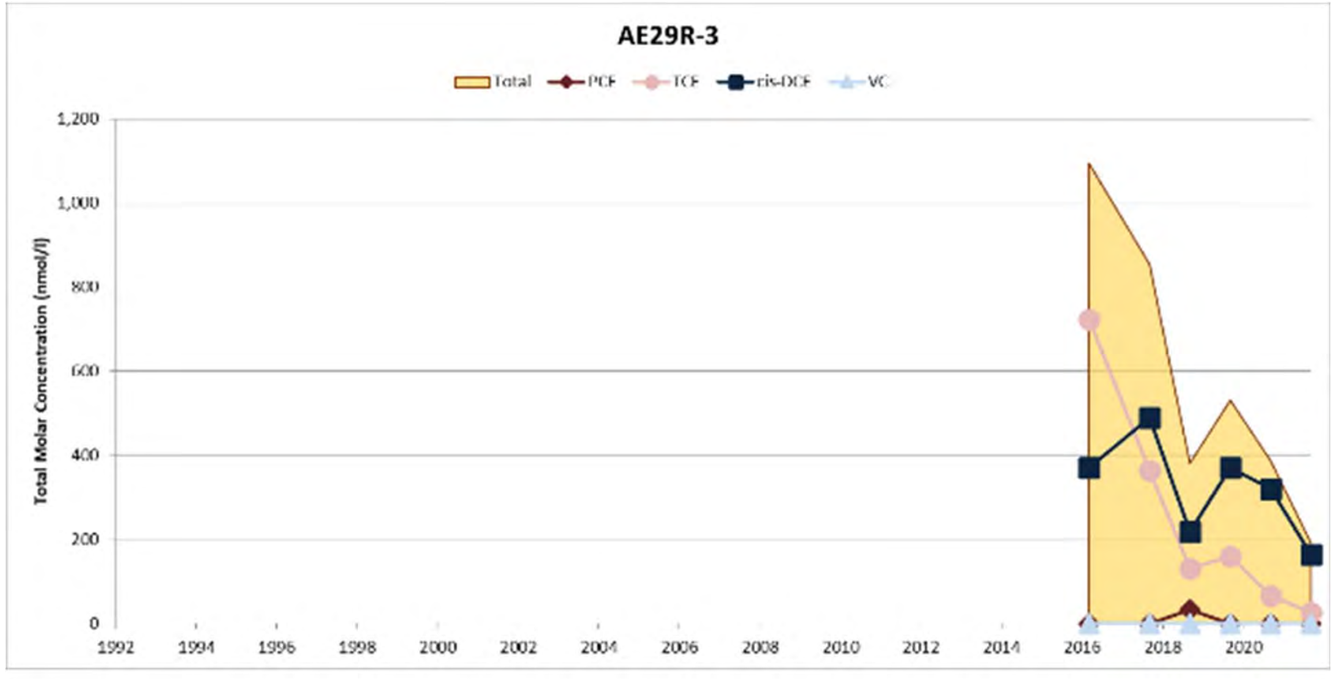
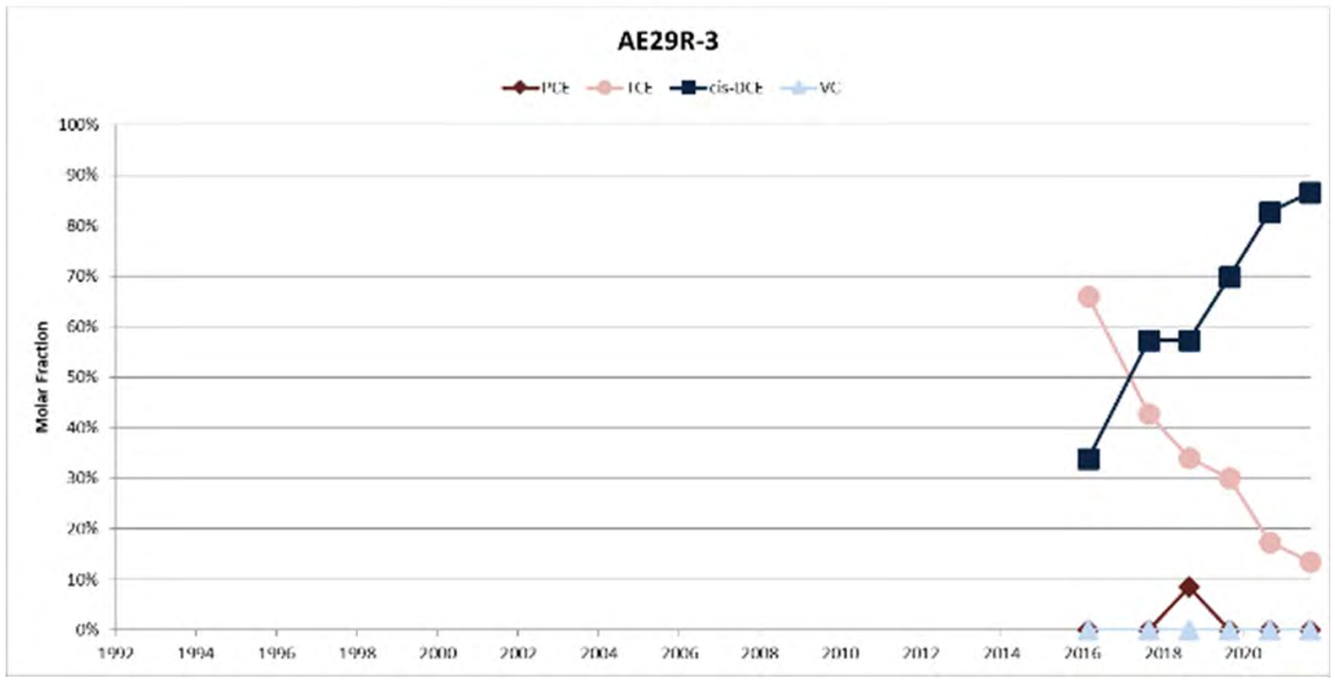

AE29R-3
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
1,200
1,000
800
600
400
200
0
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE29R-3
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1992
1994
1996
1998
2000
2002
2004
2006
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2010
2012
2014
2016
2018
2020

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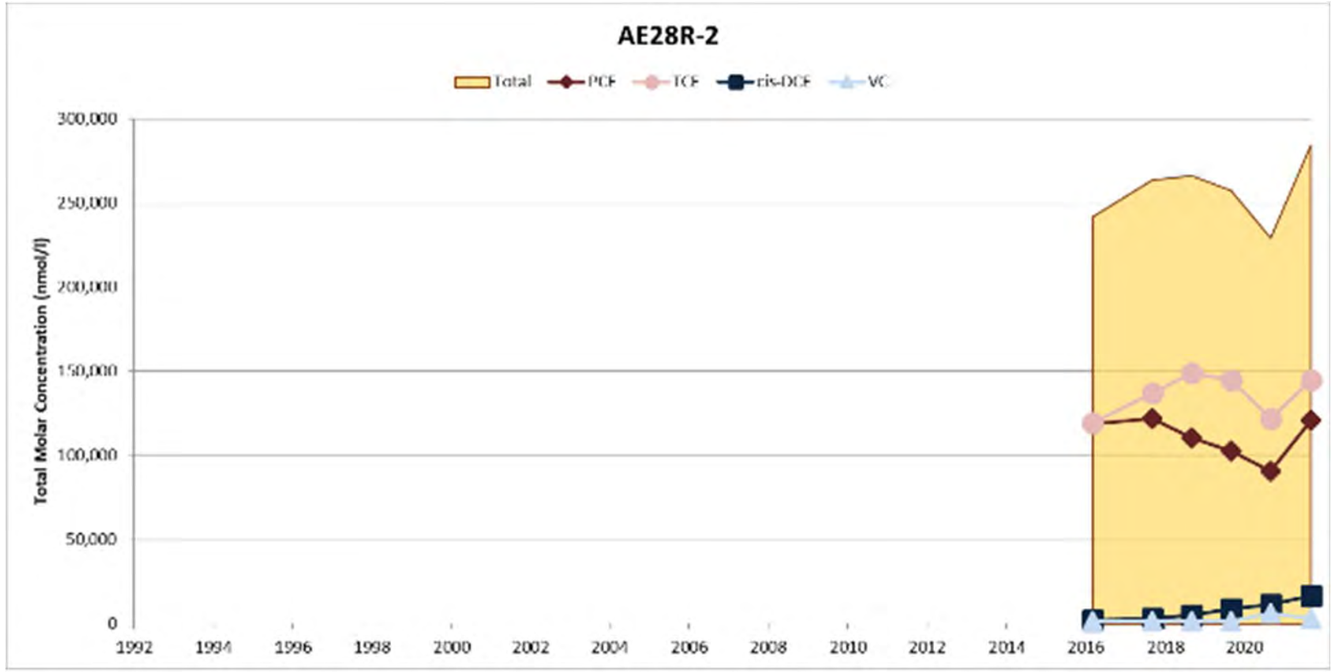
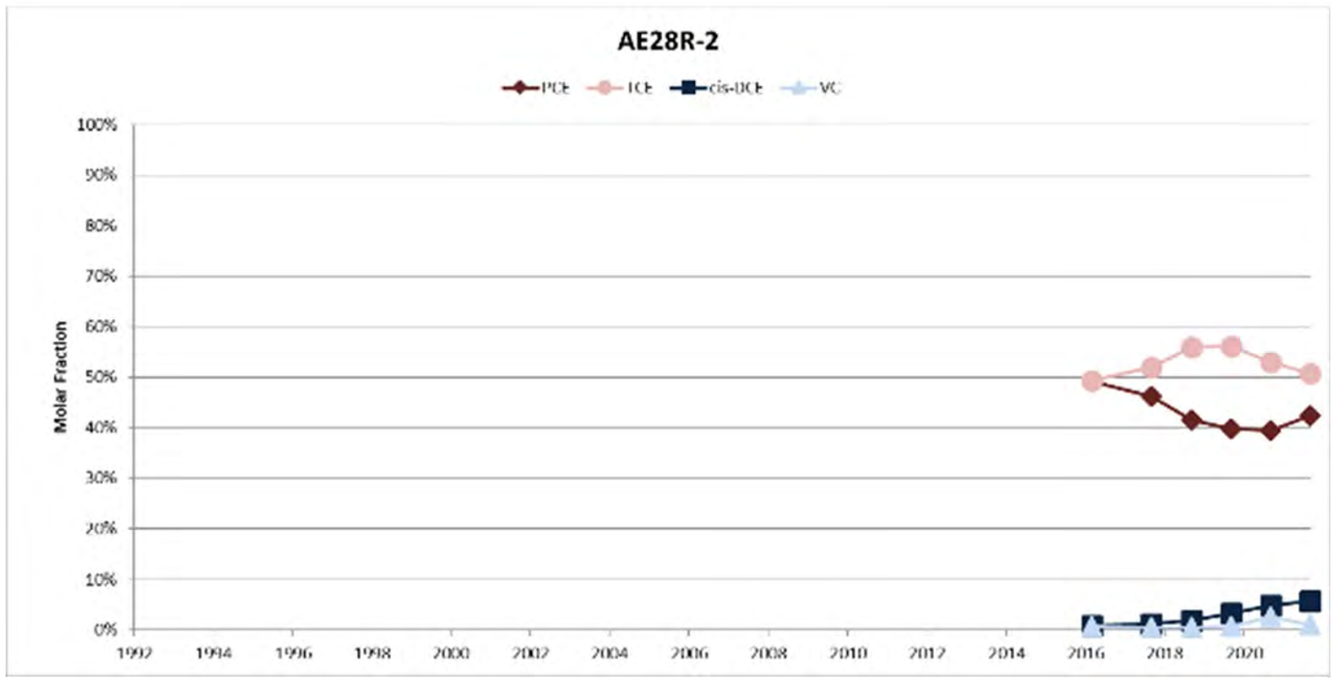

AE28R-2
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
300,000
250,000
200,000
150,000
100,000
50,000
0
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE28R-2
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

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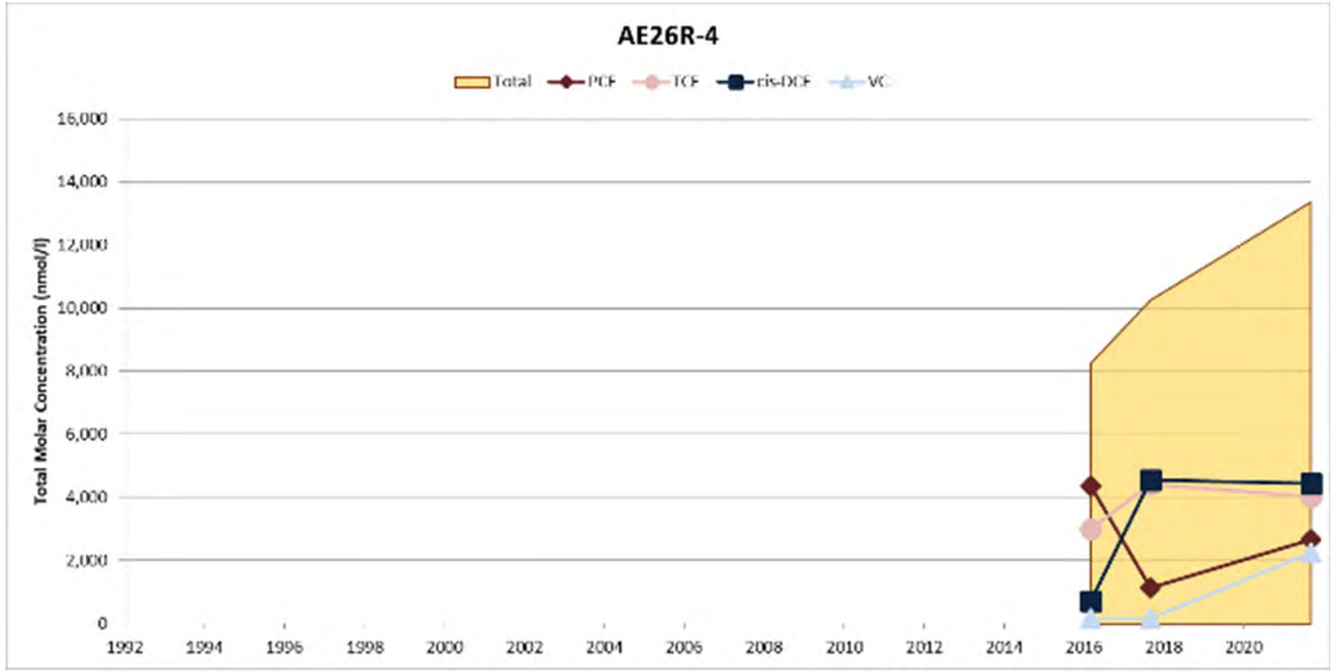
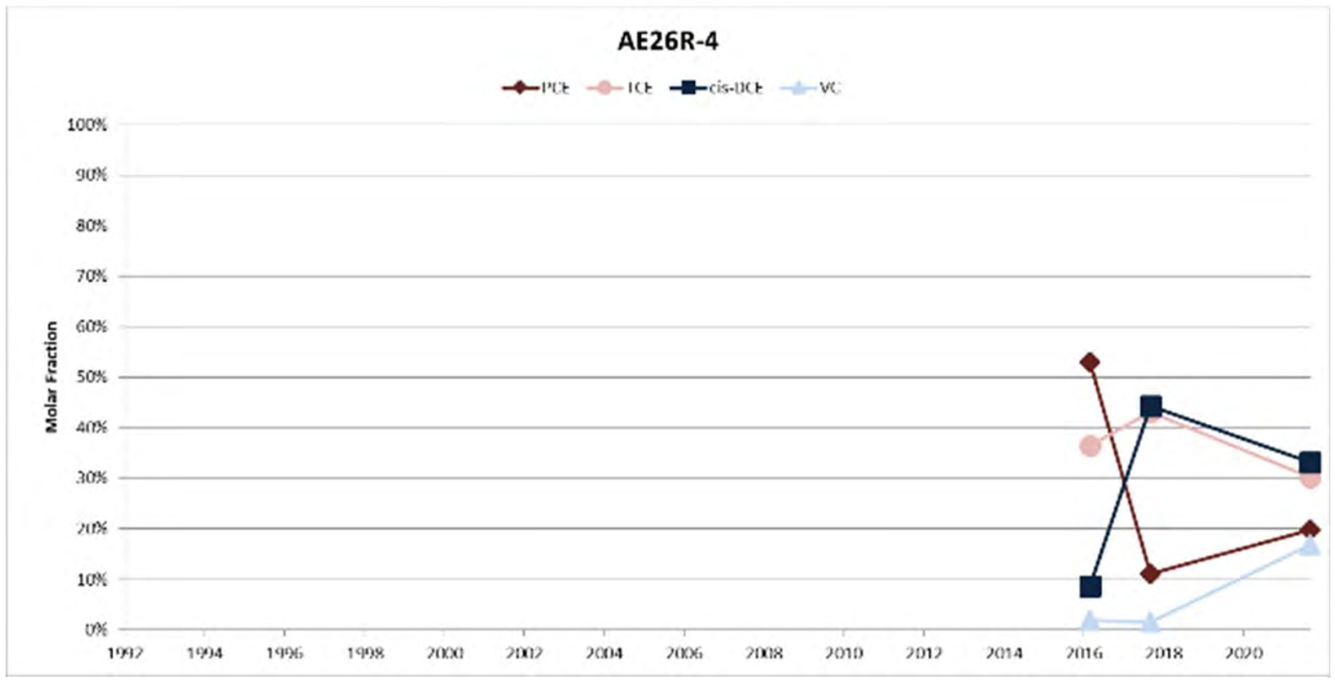

AE26R-4
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE26R-4
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

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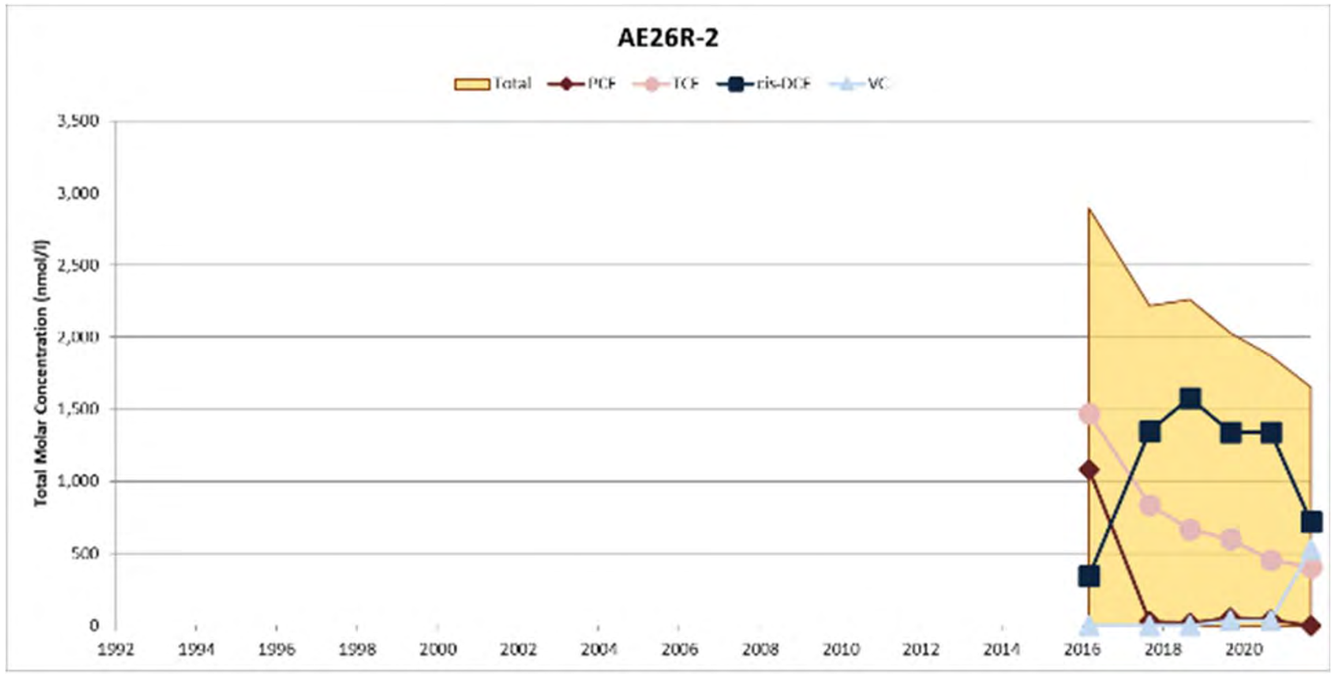
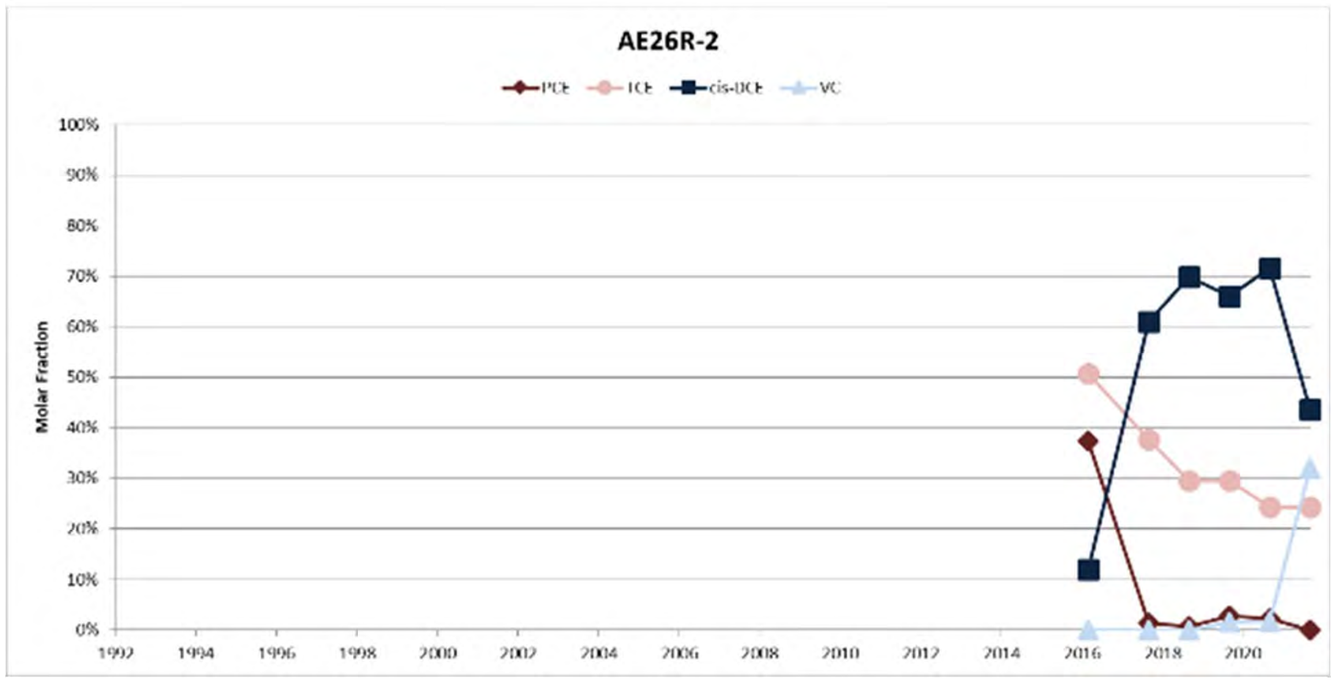

AE26R-2
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE26R-2
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

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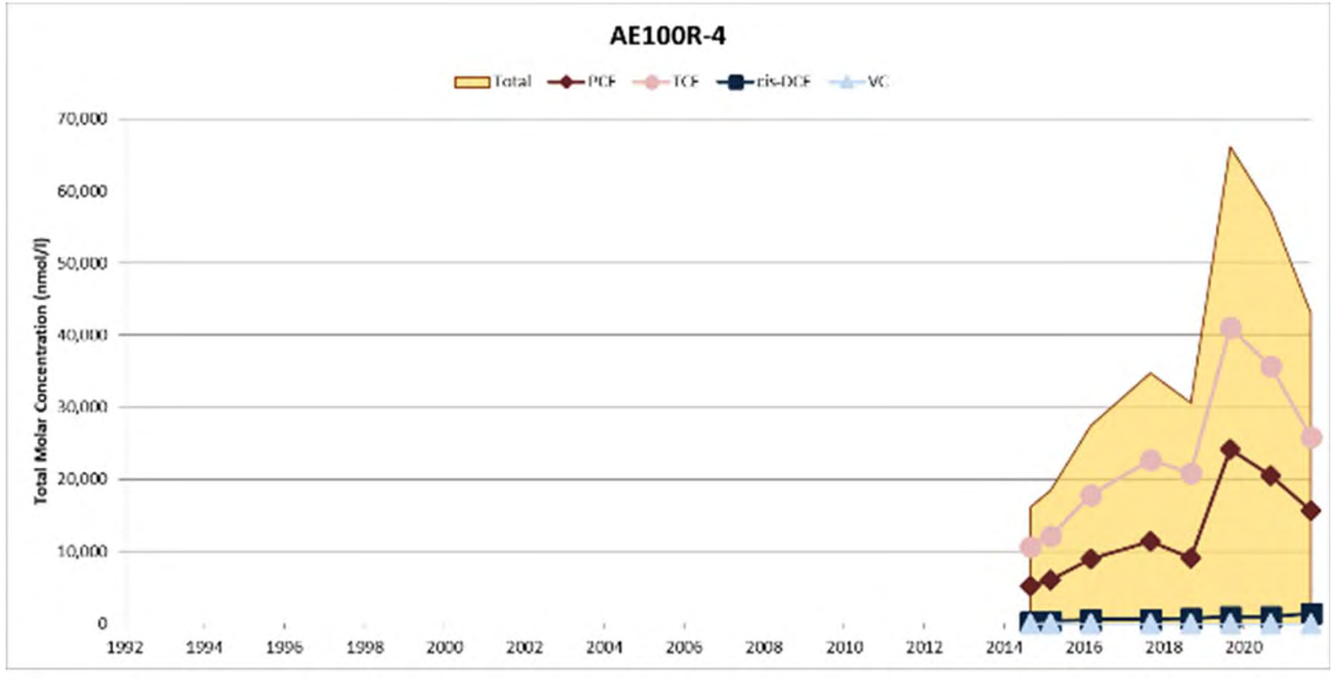
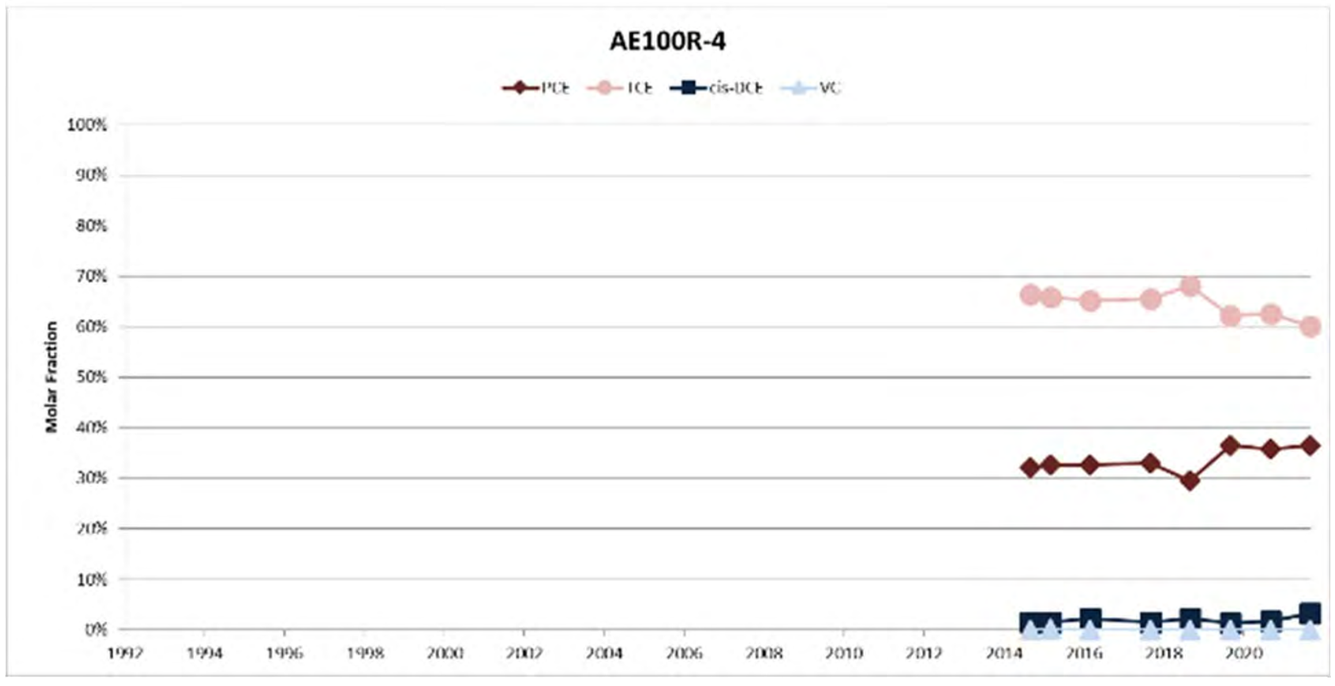

AE100R-4
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE100R-4
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

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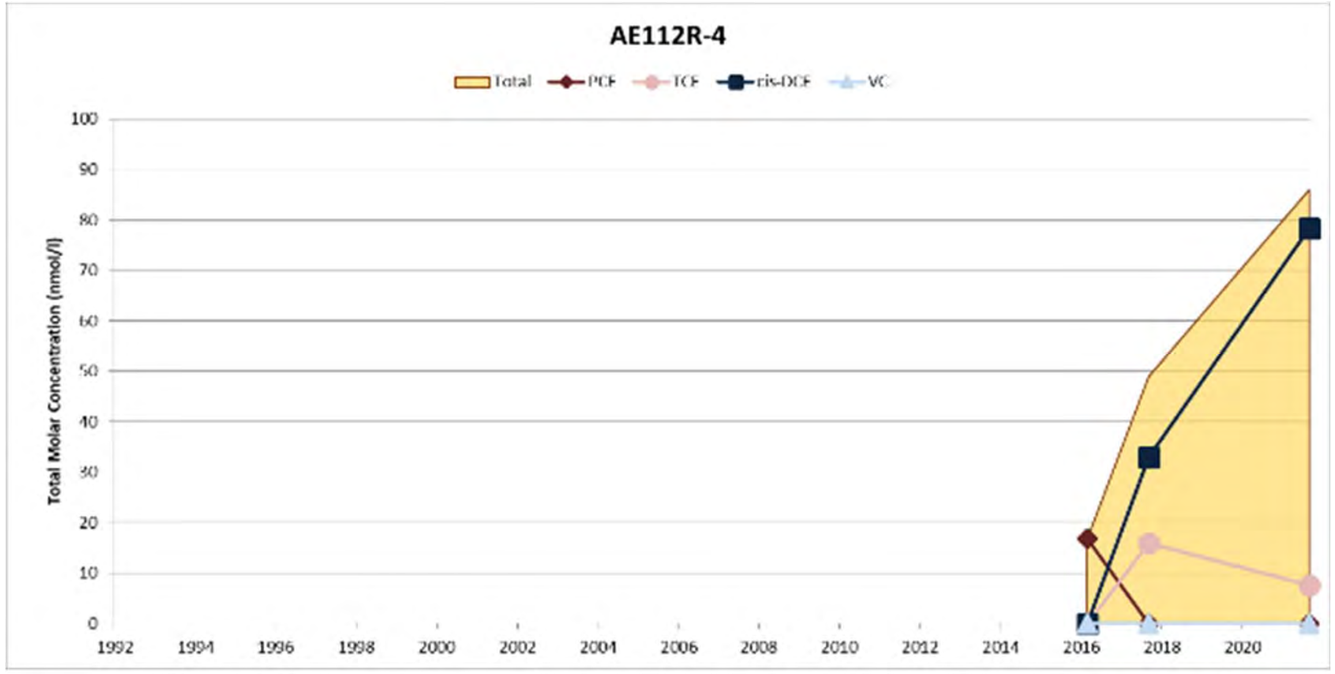
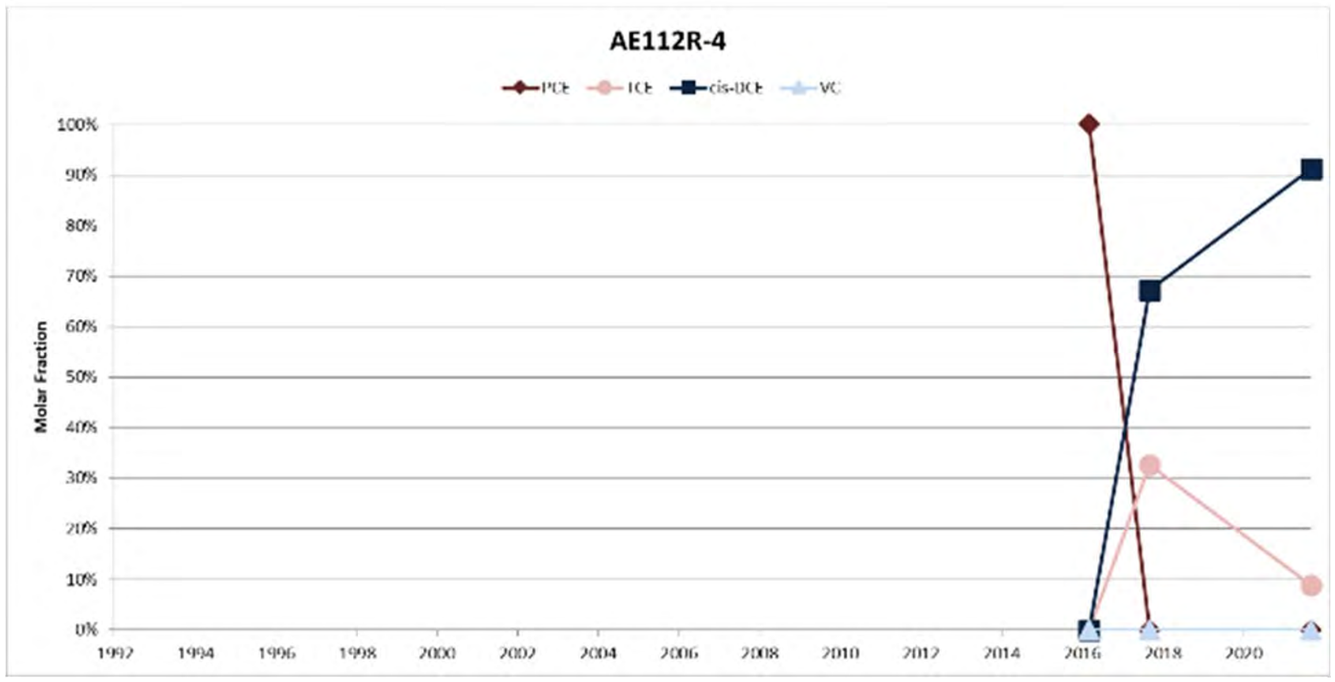

AE112R-4
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
100
90
80
70
60
50
40
30
20
10
0
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE112R-4
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

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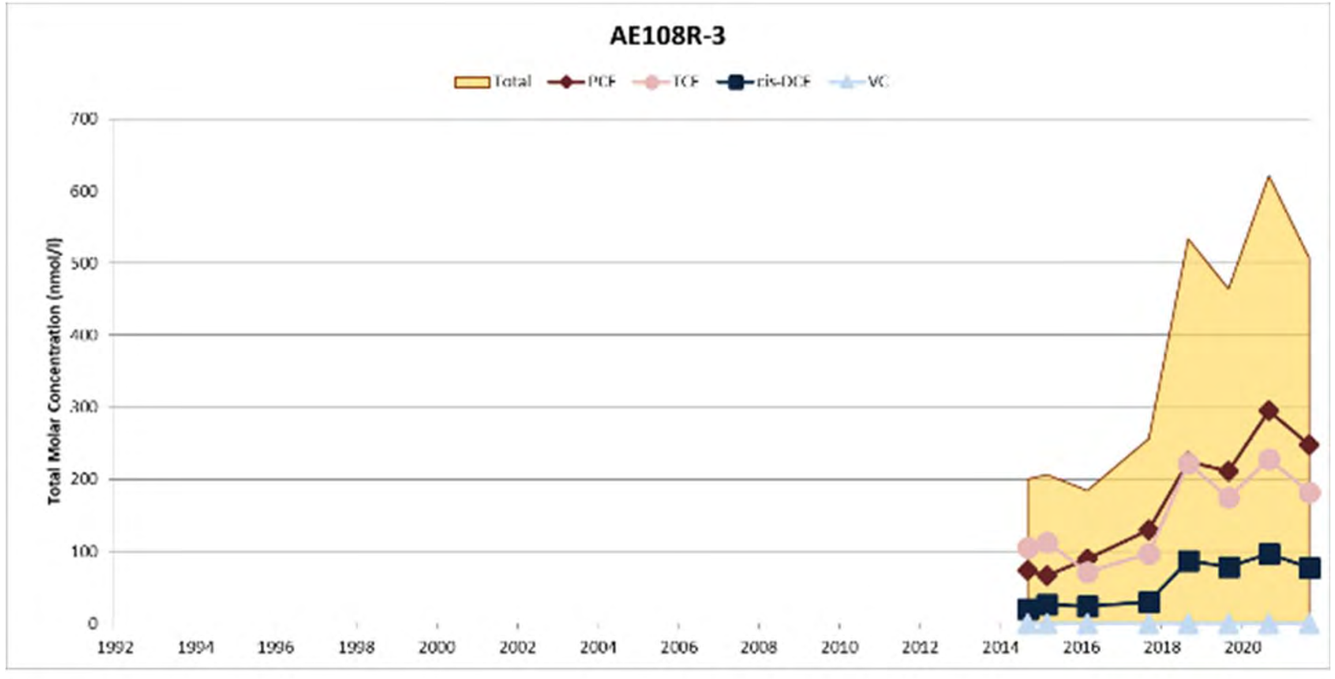
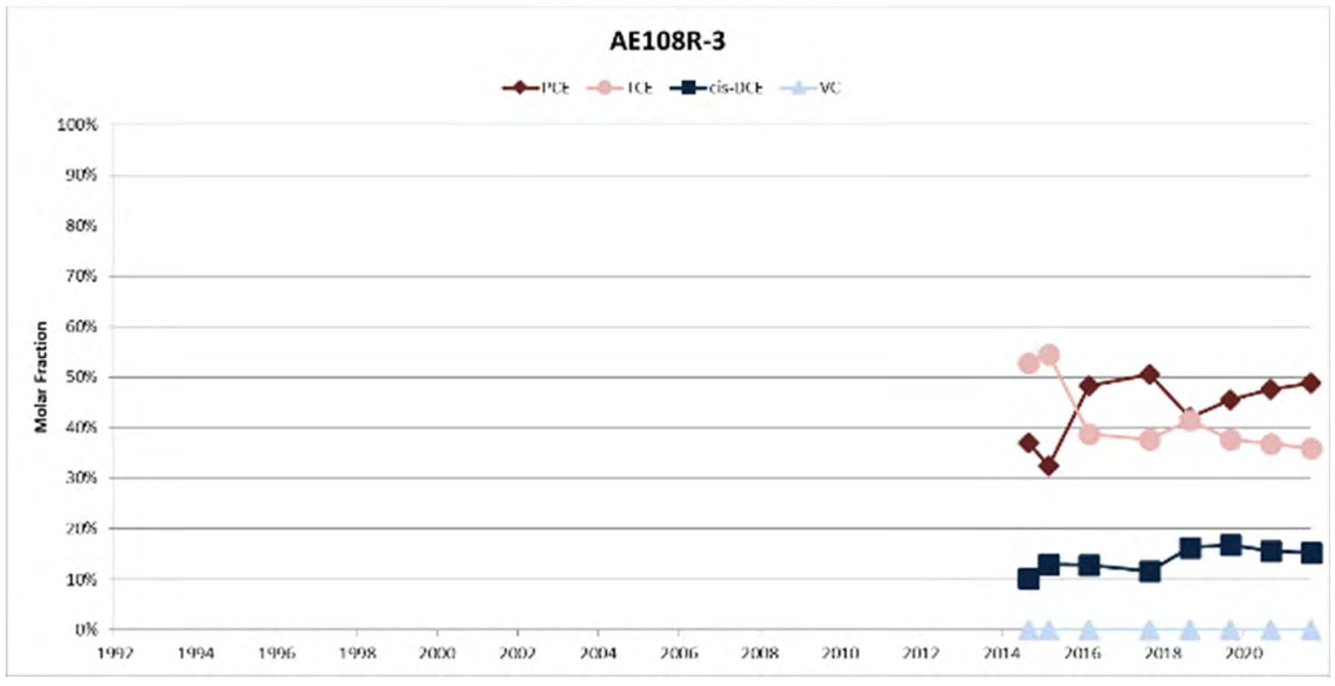

AE108R-3
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
0
100
200
300
400
500
600
700
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE108R-3
PCE
TCE
cis-DCE
VC
Molar Fraction
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

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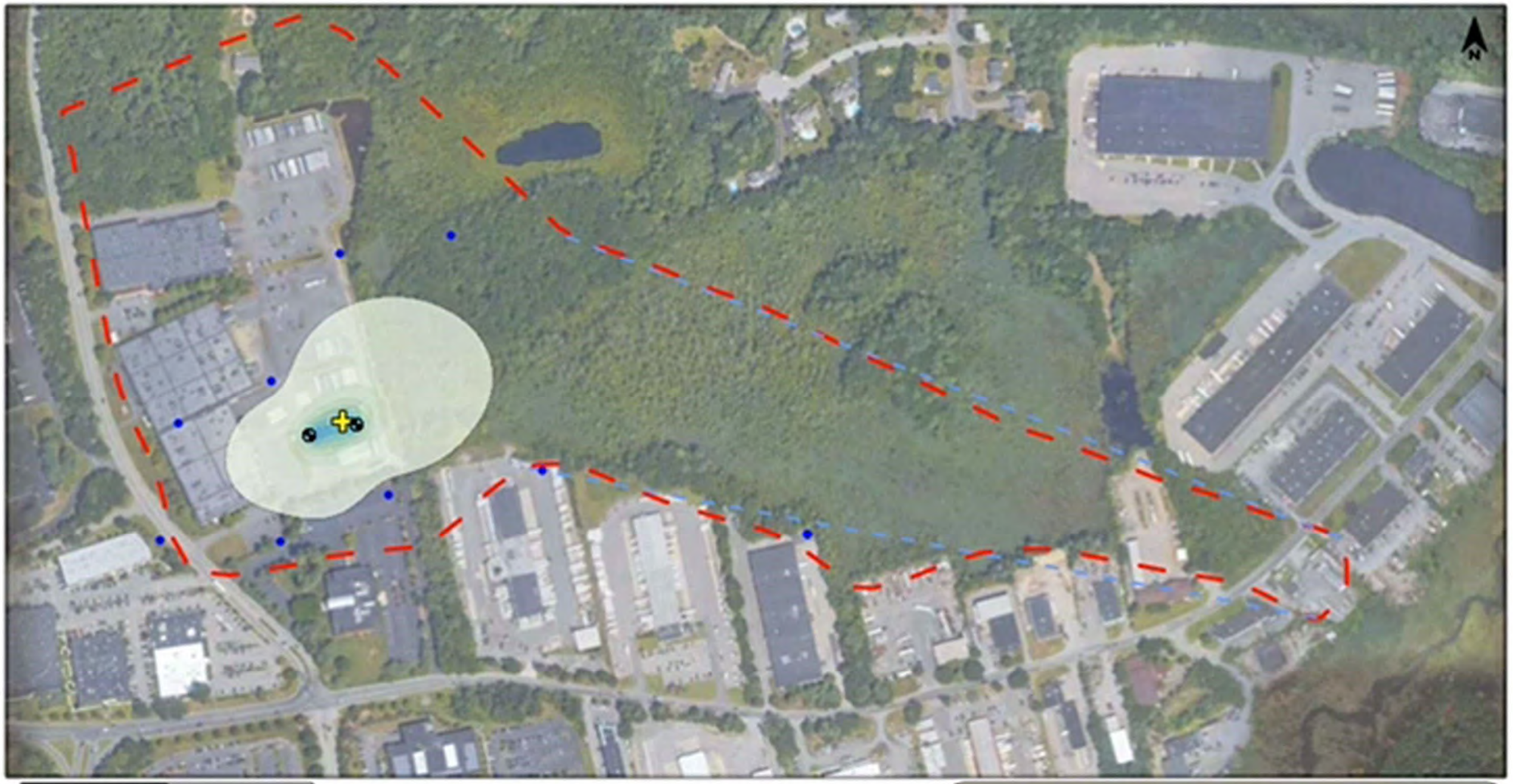

0 ft 450 ft 900 ft

1,4-Dioxane
Middle Bedrock
Mar-2008

Concentration (µg/L)

45
40
35
30
25
20
15
10
5
0.3

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary
Control Fence

Plume Characteristics

Plume Area: **8.6 acres**
Plume Average Concentration: **3.0 µg/L**
Plume Mass Indicator: **0.100 lbs**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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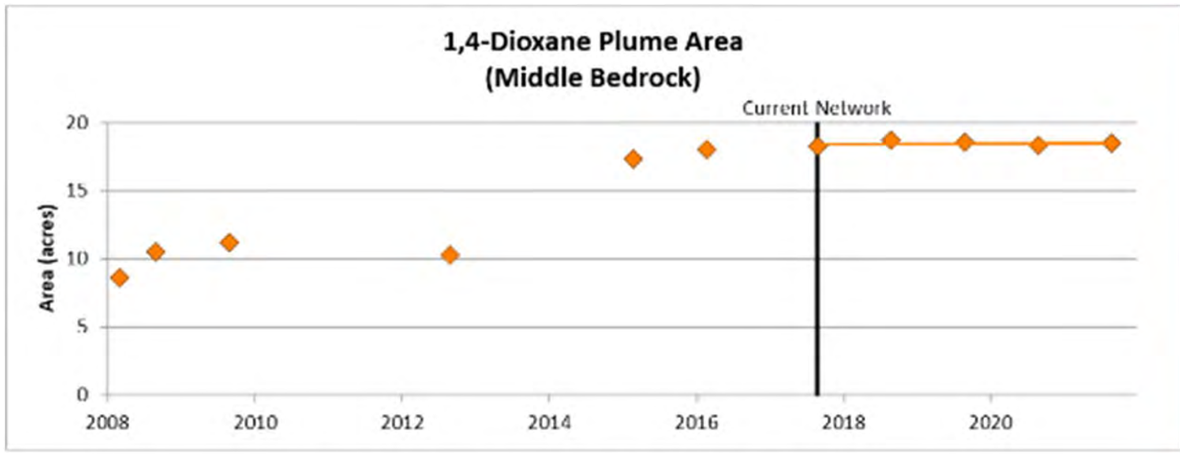
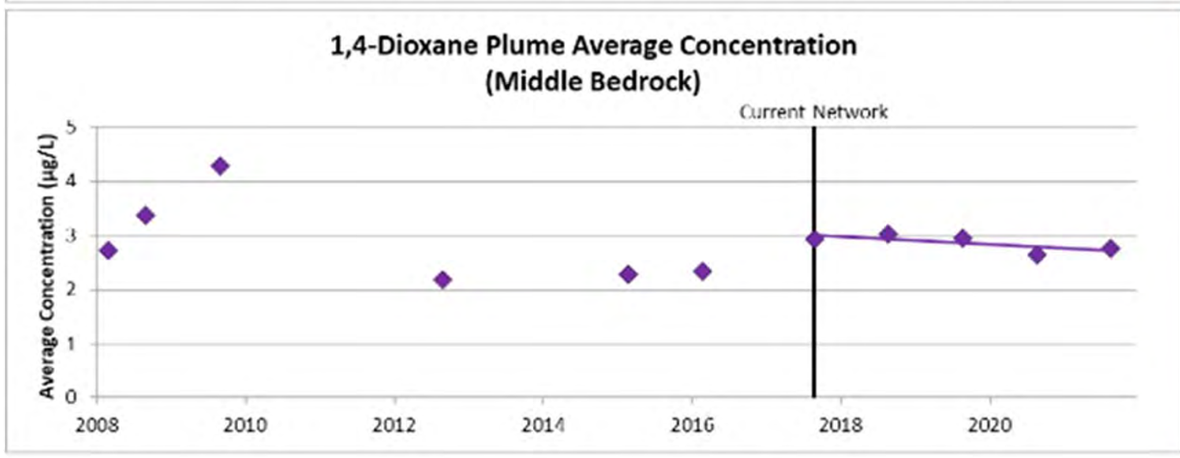
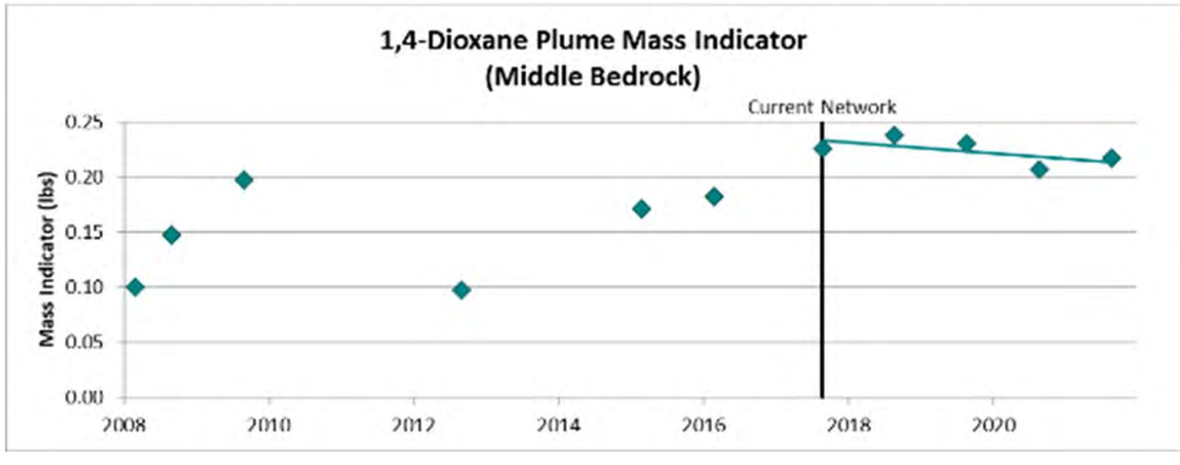


Sep-2017 to Sep-2021
No Trend
Mann-Kendall: 41% Confidence
Regression: 16% Confidence



Sep-2017 to Sep-2021
No Trend
Mann-Kendall: 76% Confidence
Regression: 84% Confidence



Sep-2017 to Sep-2021
No Trend
Mann-Kendall: 76% Confidence
Regression: 76% Confidence

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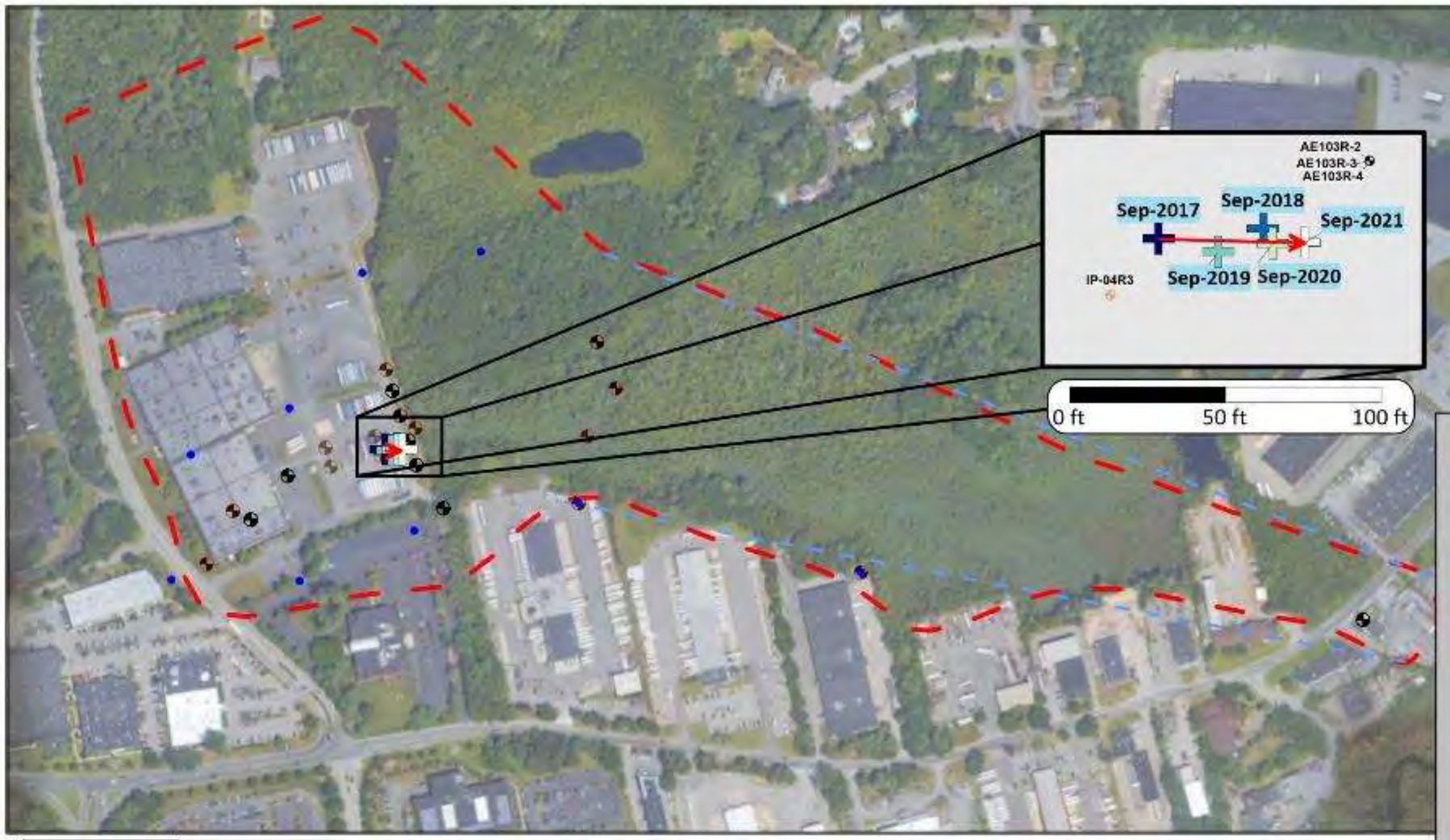
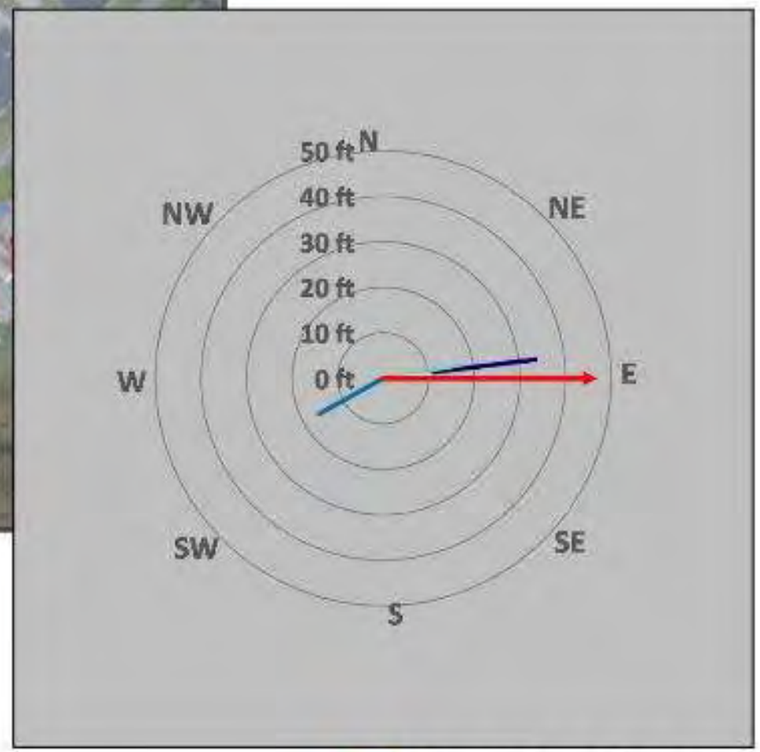
1,4-Dioxane
Middle Bedrock
Center of Mass





Center of Mass Scale

Sep-2017 → Sep-2021

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Point
- MCP Site Boundary
- Net COM Movement
- Control Fence

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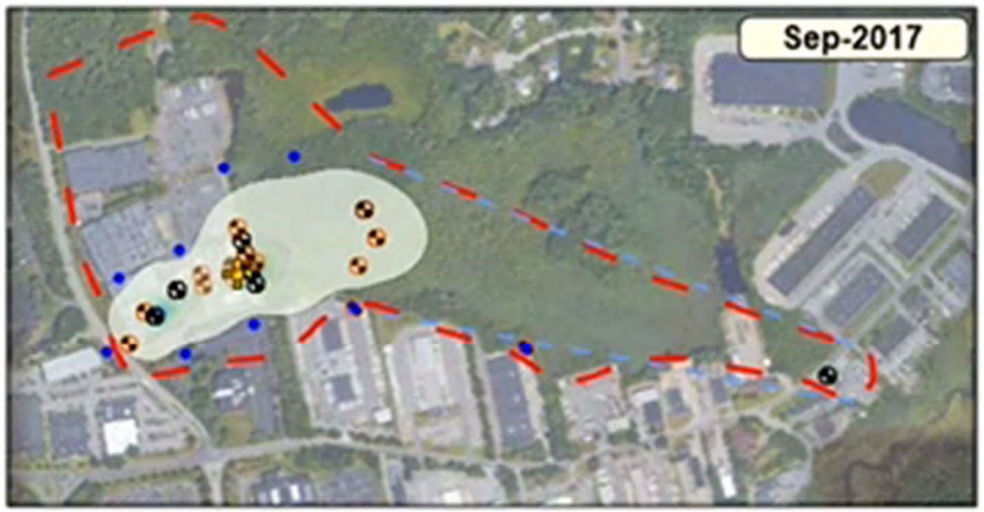
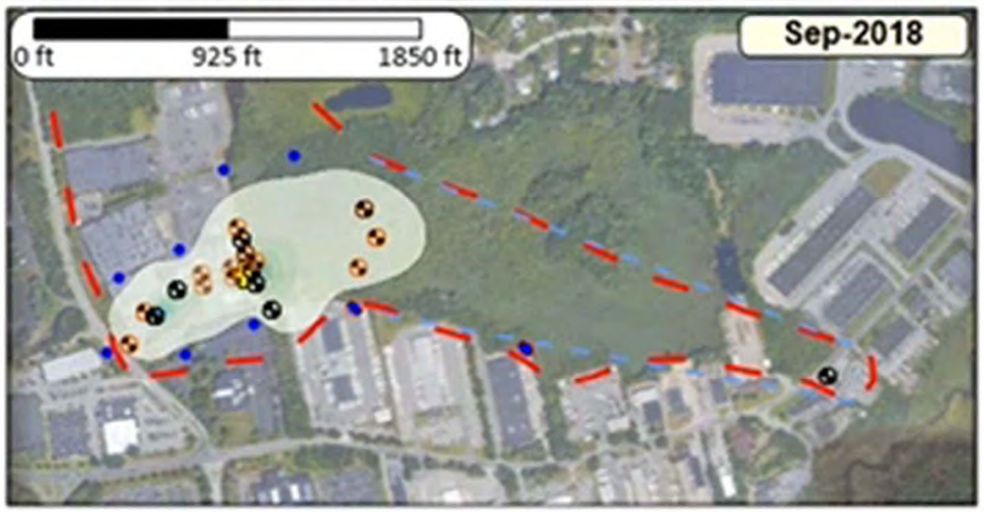




Concentration (µg/L)

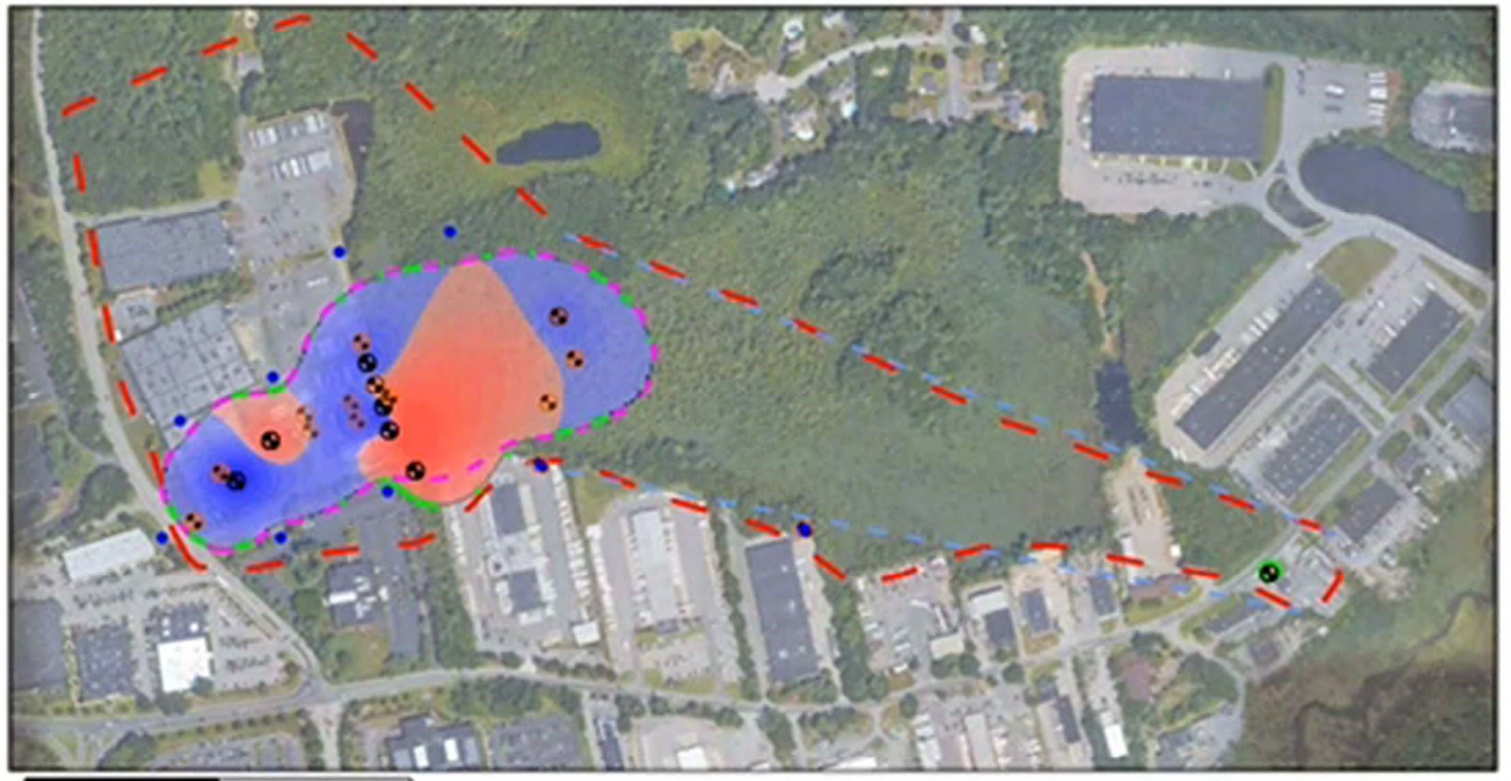
0.3 5 10 15 20 25 30 35 40 45

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Fence
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2017 Plume Boundary
- Sep-2018 Plume Boundary

1,4-Dioxane
Middle Bedrock

Plume Differences Sep-2017 vs Sep-2018



Spatial Change Indicator™

Decrease — Increase

Plume Characteristics

Area: **3% Increase**
Average Concentration: **3% Increase**
Mass Indicator: **5% Increase**
Mass Increase: **0.02 lbs Increase**
Mass Decrease: **0.01 lbs Decrease**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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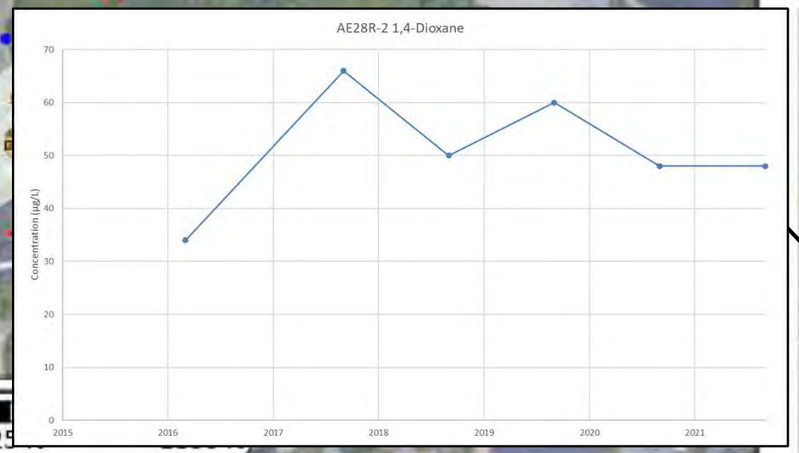
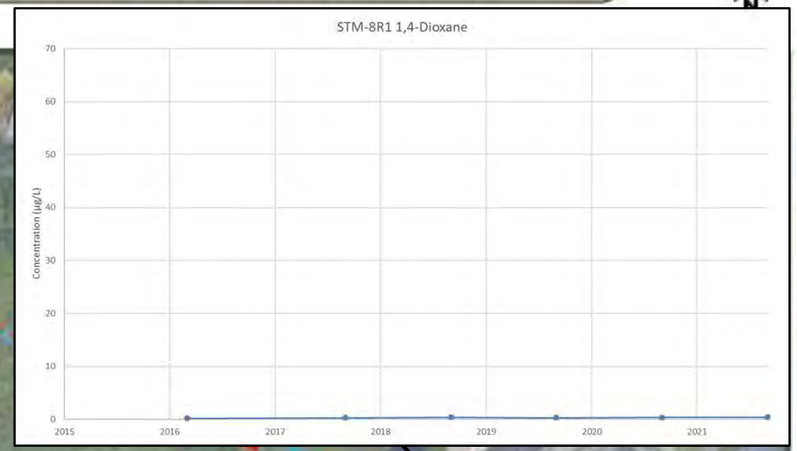
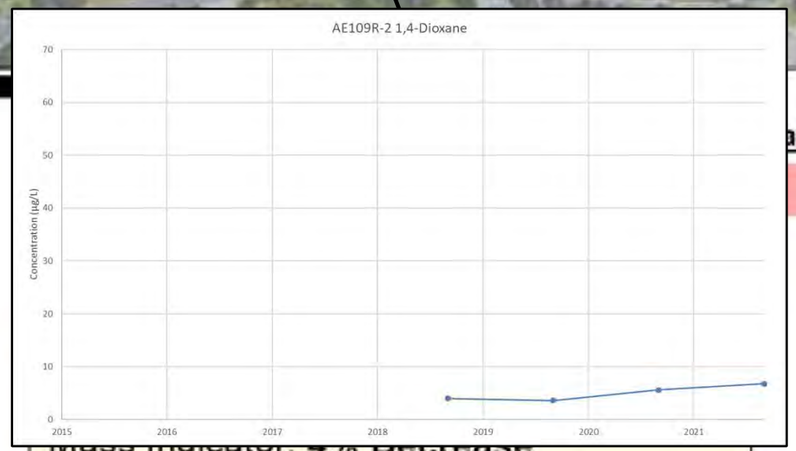
1,4-Dioxane
Middle Bedrock

Plume Differences Sep-2017 vs Sep-2021

Sep-2017







Concentration (µg/L)

0.3 5 10 15 20 25 30 35 40 45

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Fence
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2017 Plume Boundary
- Sep-2021 Plume Boundary

ator™

Increase

Mass Increase: **0.02 lbs Increase**
Mass Decrease: **0.03 lbs Decrease**

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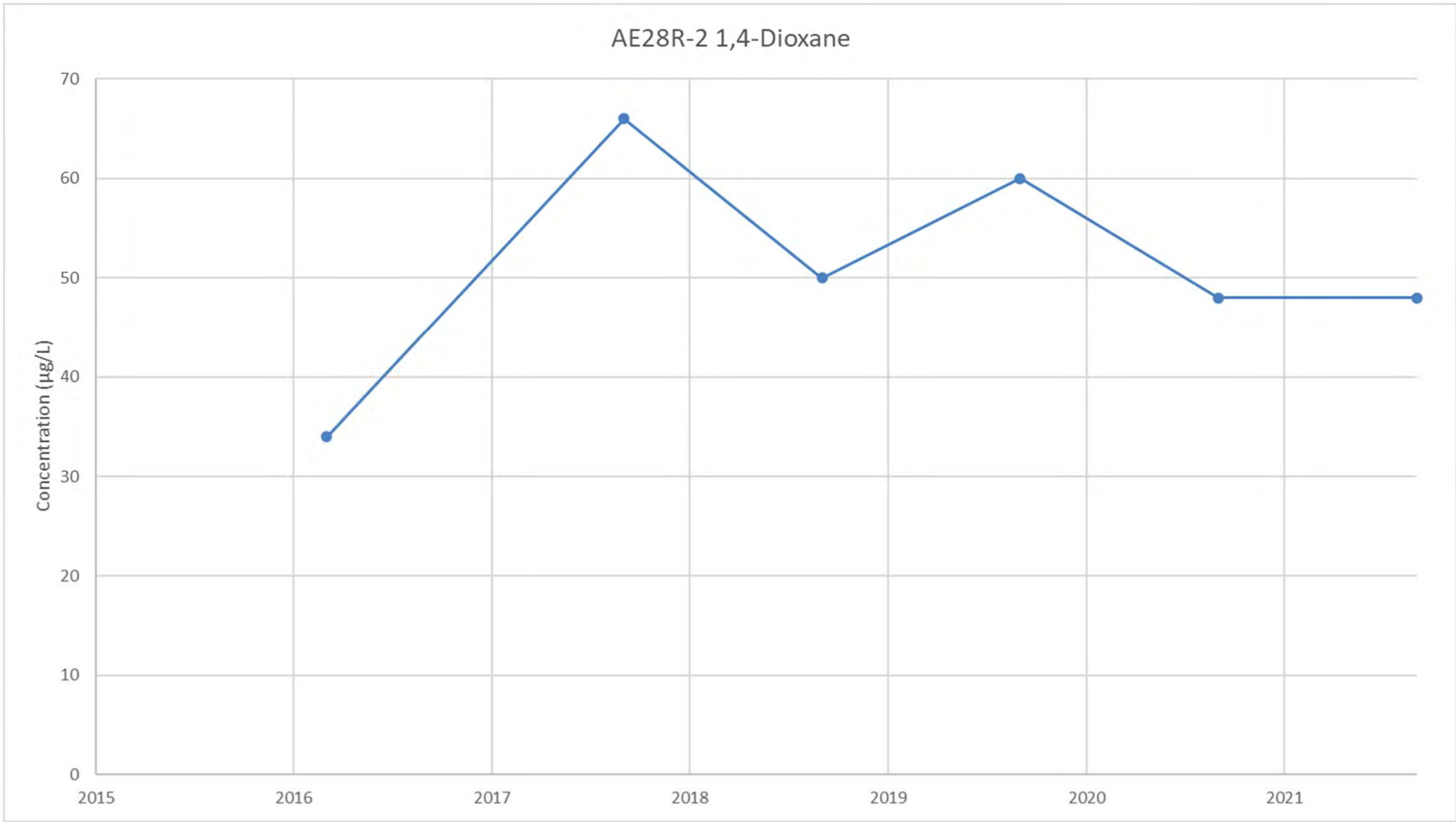
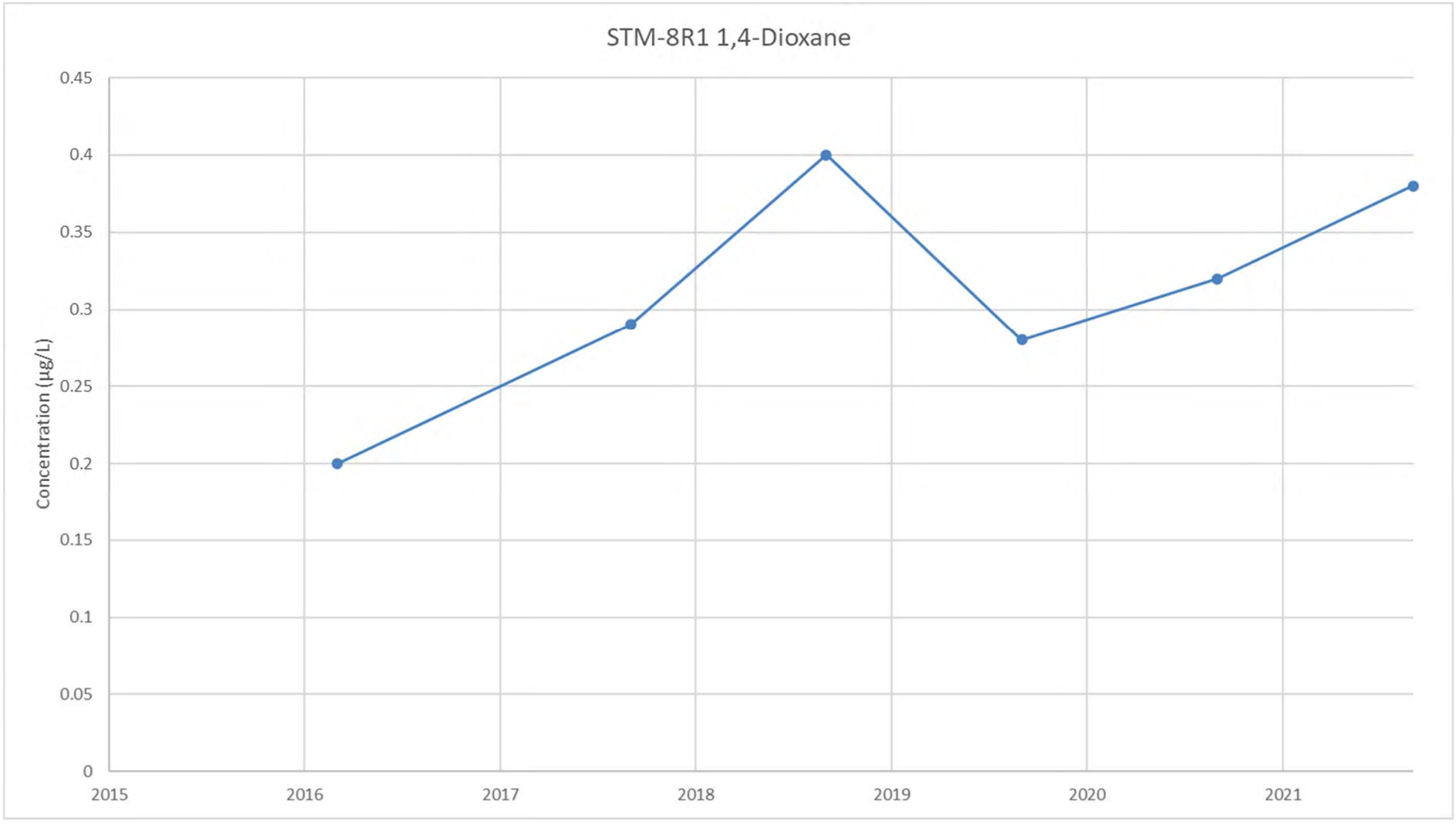
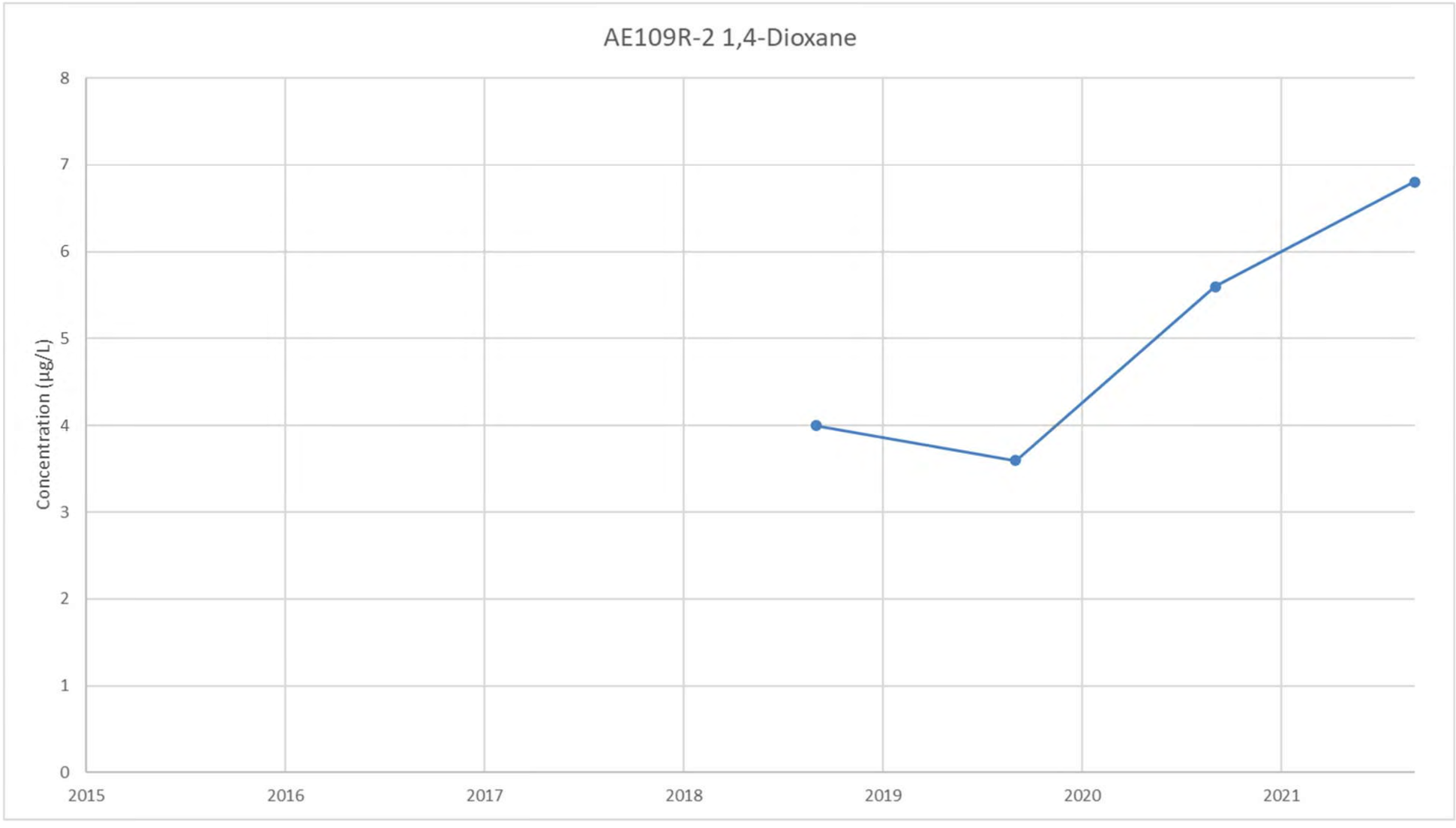
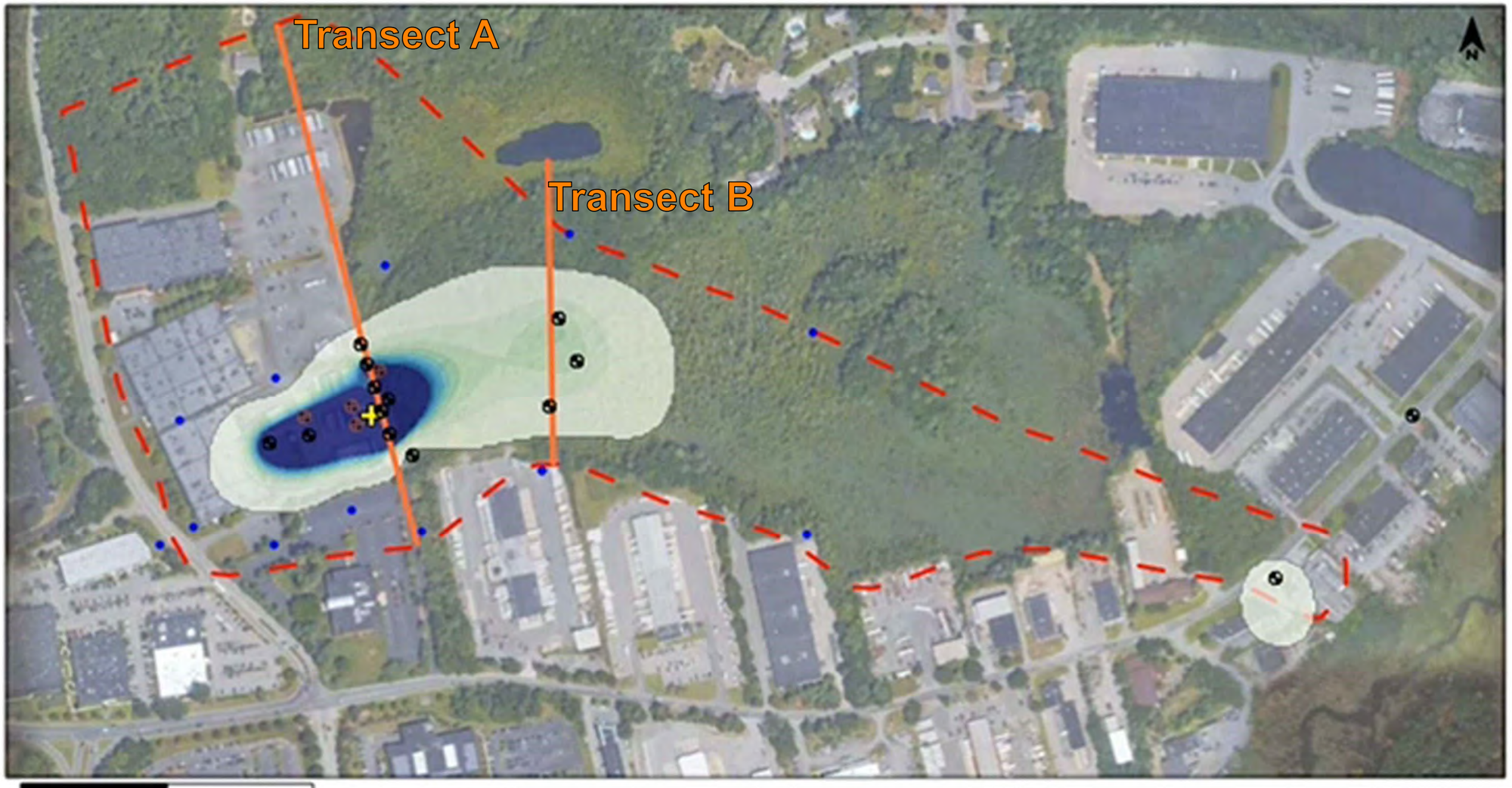

AE28R-2 1,4-Dioxane
Concentration (µg/L)
70
60
50
40
30
20
10
0
2015
2016
2017
2018
2019
2020
2021


STM-8R1 1,4-Dioxane
Concentration (µg/L)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
2015
2016
2017
2018
2019
2020
2021


AE109R-2 1,4-Dioxane
Concentration (µg/L)
8
7
6
5
4
3
2
1
0
2015
2016
2017
2018
2019
2020
2021



Chloroethenes
Middle Bedrock
Sep-2014

Concentration (nmol/L)

4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Transect A

Average Concentration: **21,078 nmol/L**
Mass Flux: **3.11 mol/yr**

Transect B

Average Concentration: **742 nmol/L**
Mass Flux: **0.121 mol/yr**

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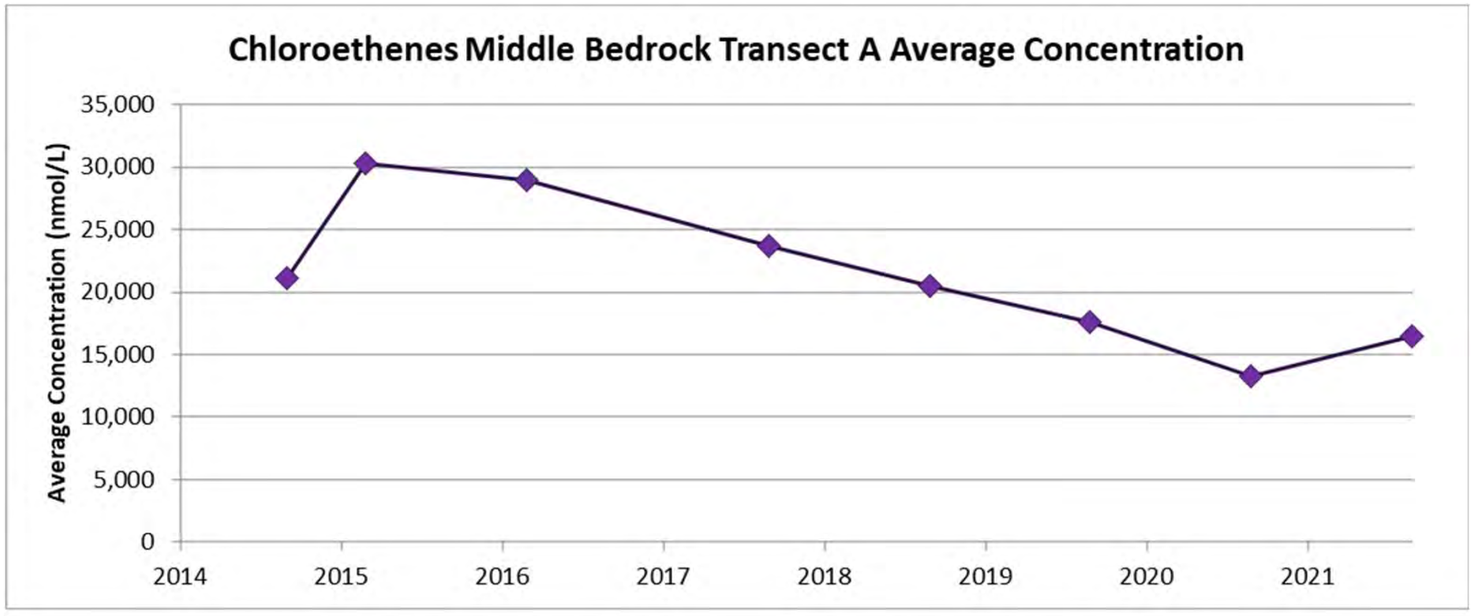
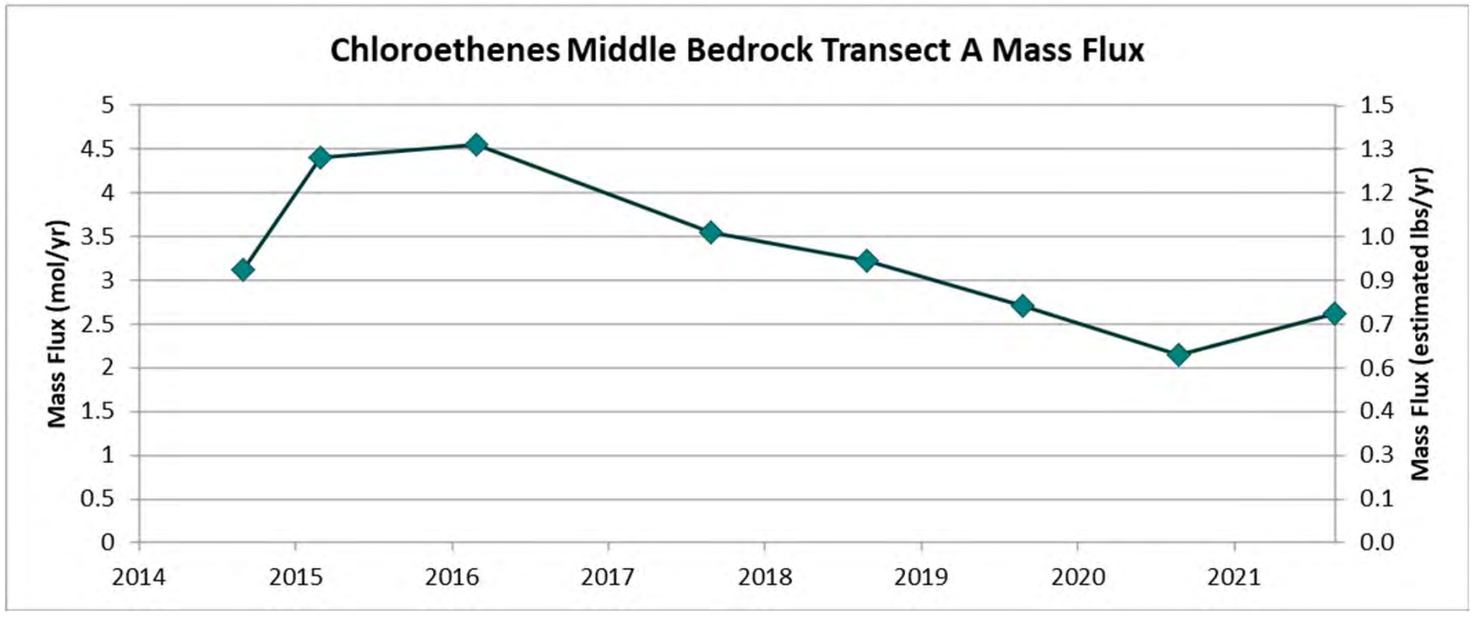

Chloroethenes Middle Bedrock Transect A Average Concentration
Average Concentration (nmol/L)
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Middle Bedrock Transect A Mass Flux
Mass Flux (mol/yr)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Mass Flux (estimated lbs/yr)
1.5
1.3
1.2
1.0
0.9
0.7
0.6
0.4
0.3
0.1
0.0
2014
2015
2016
2017
2018
2019
2020
2021

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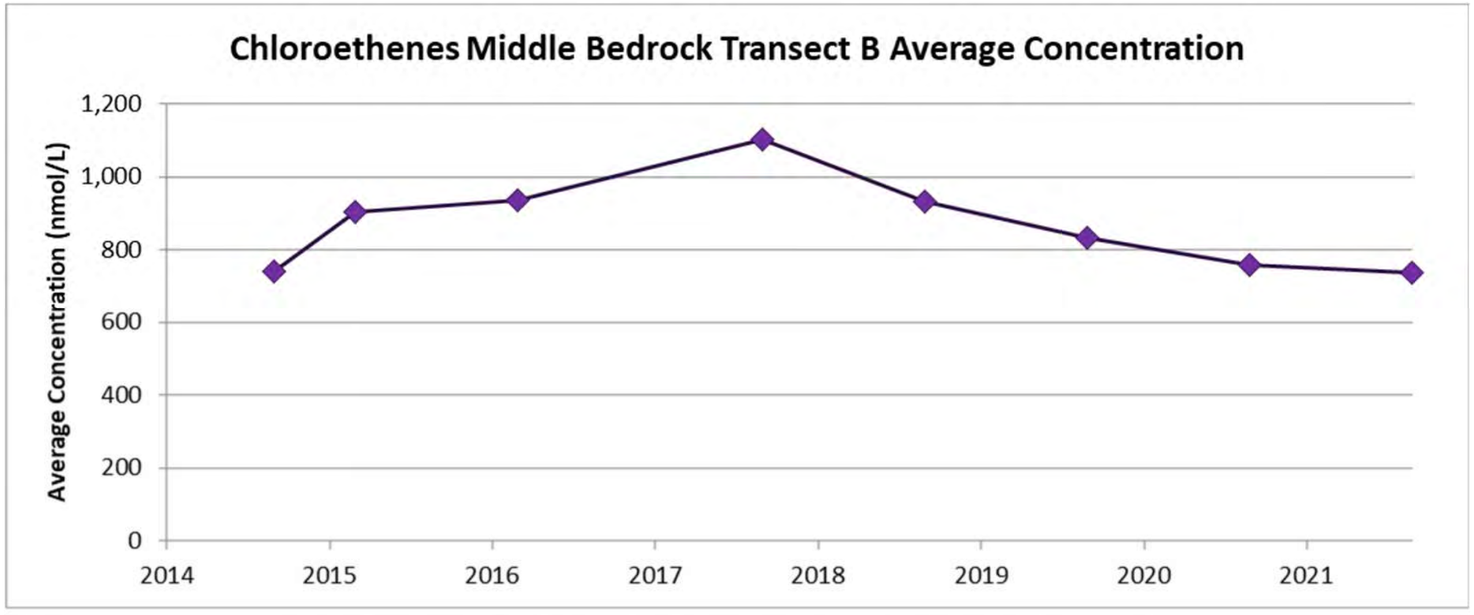
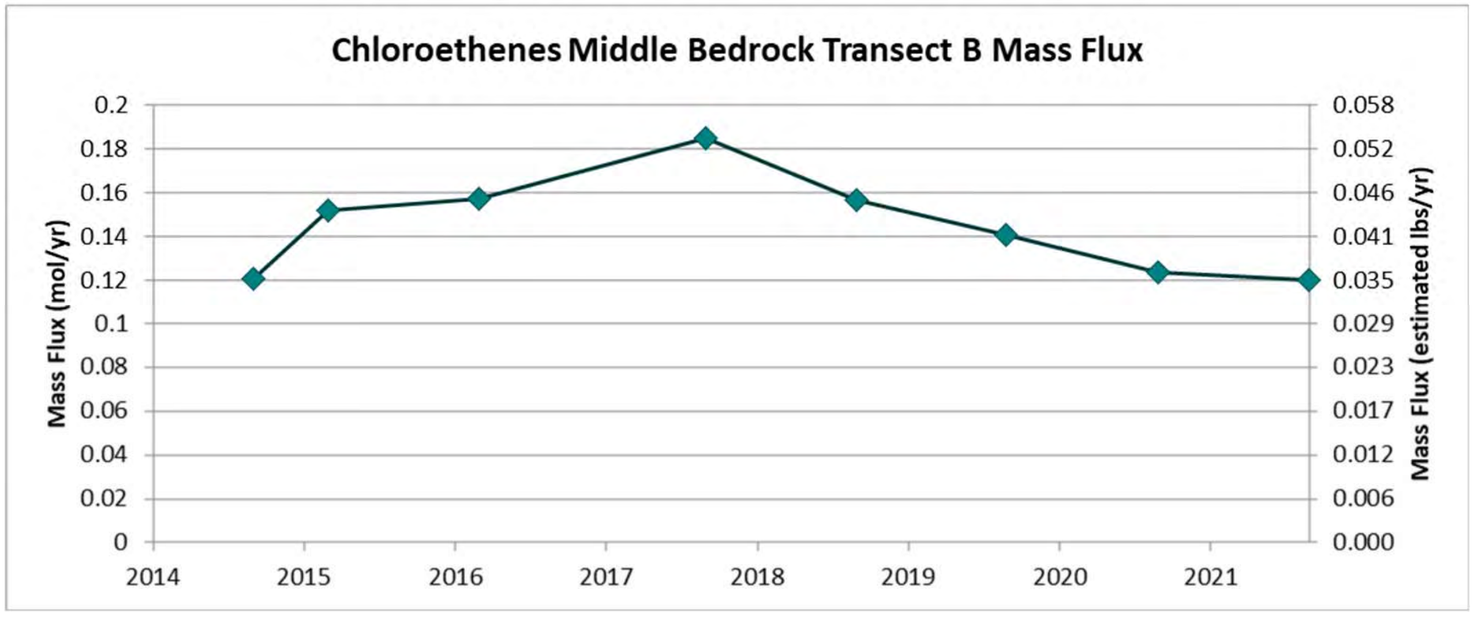
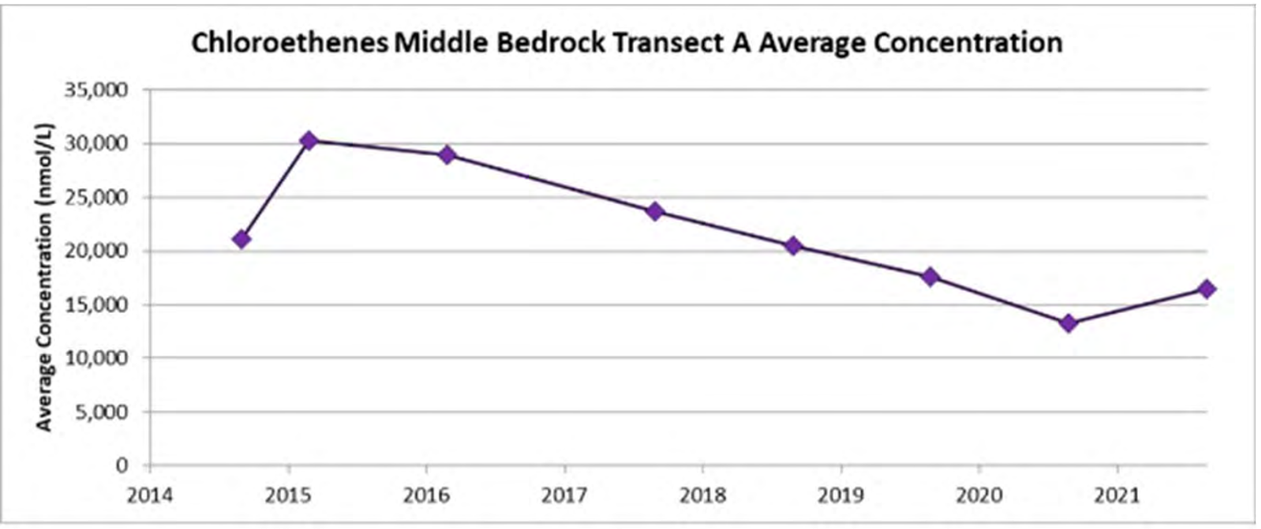
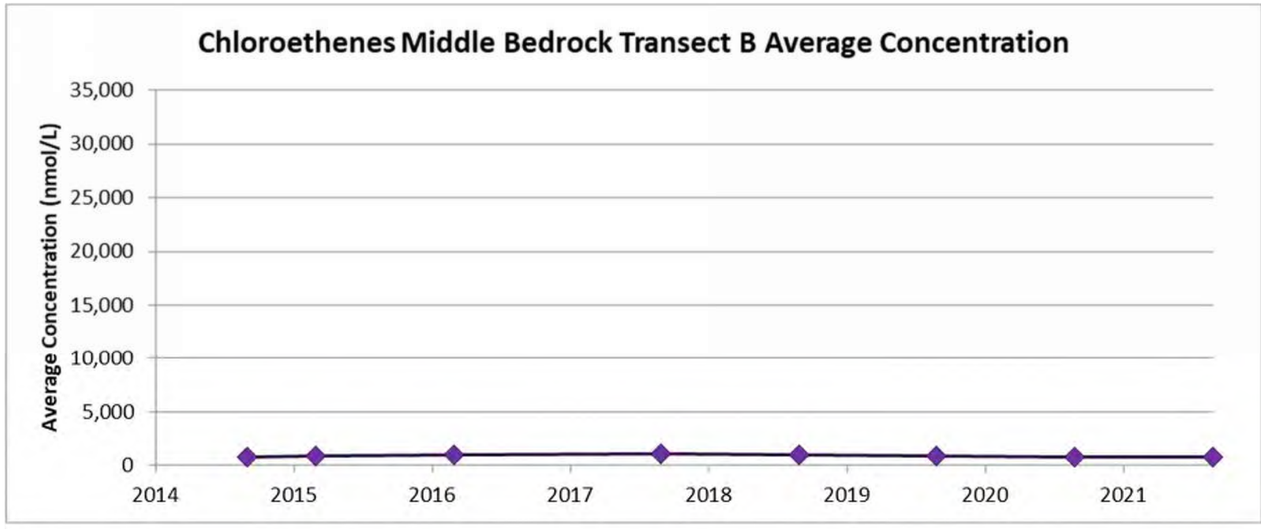
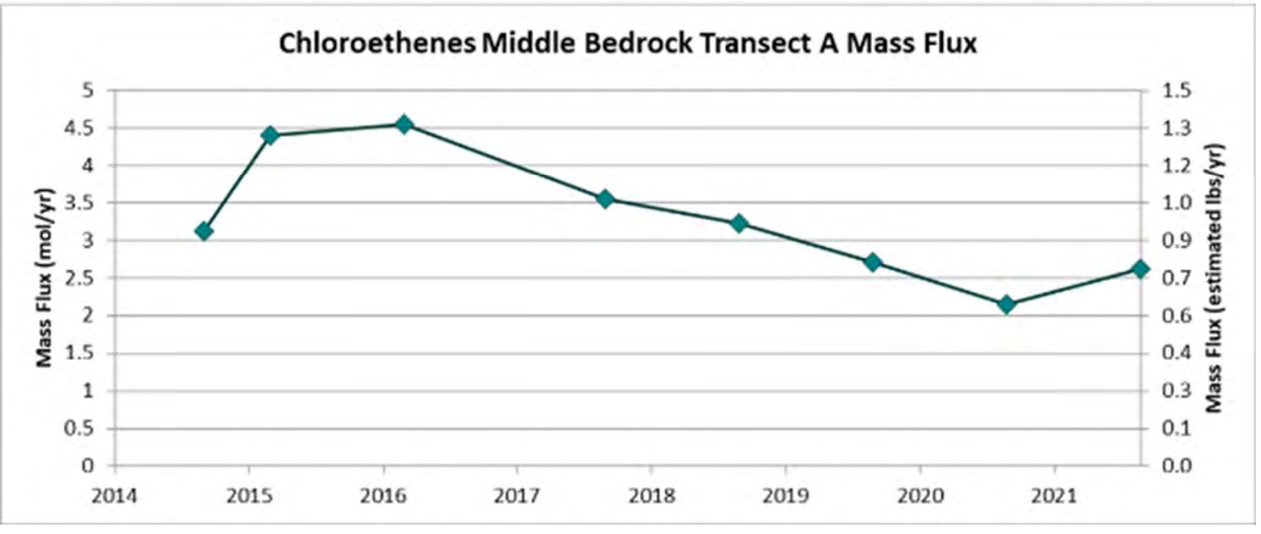

Chloroethenes Middle Bedrock Transect B Average Concentration
Average Concentration (nmol/L)
1,200
1,000
800
600
400
200
0
2014
2015
2016
2017
2018
2019
2020
2021

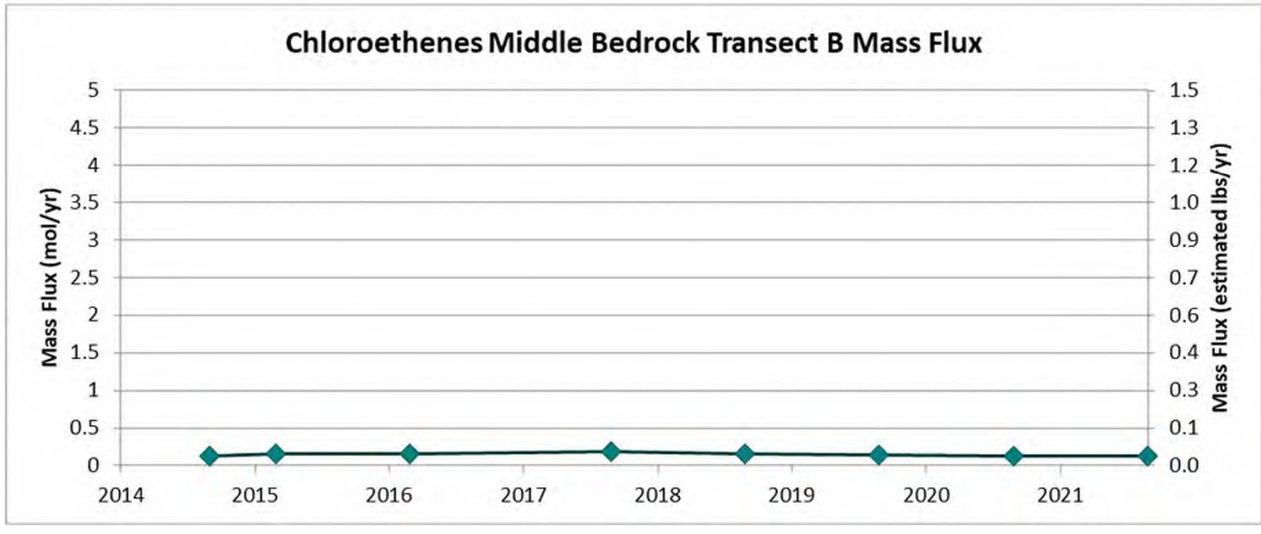

Chloroethenes Middle Bedrock Transect B Mass Flux
Mass Flux (mol/yr)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Mass Flux (estimated lbs/yr)
0.058
0.052
0.046
0.041
0.035
0.029
0.023
0.017
0.012
0.006
0.000
2014
2015
2016
2017
2018
2019
2020
2021

© WSP 2021

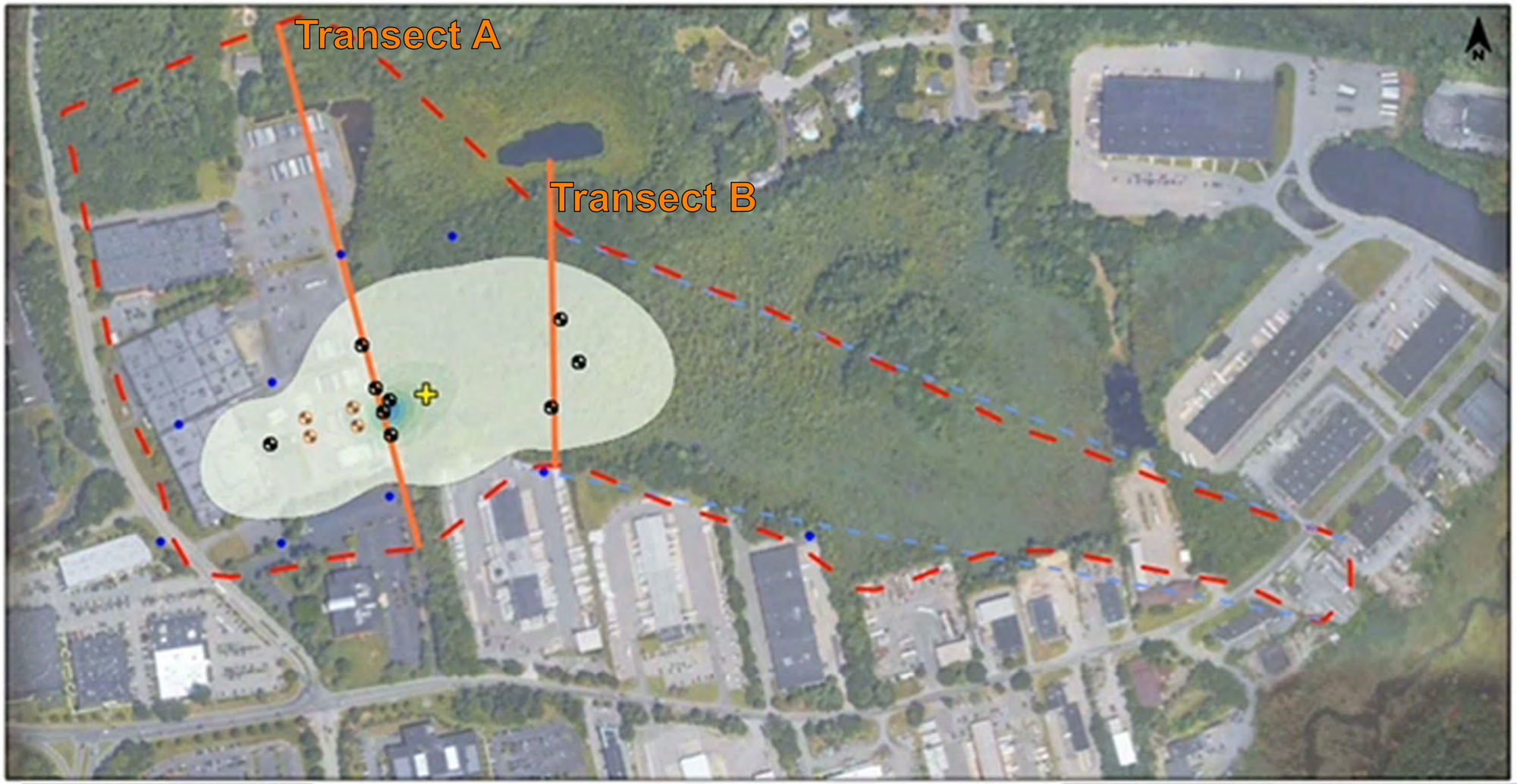

Chloroethenes Middle Bedrock Transect A Average Concentration
Average Concentration (nmol/L)
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Middle Bedrock Transect B Average Concentration
Average Concentration (nmol/L)
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Middle Bedrock Transect A Mass Flux
Mass Flux (mol/yr)
Mass Flux (estimated lbs/yr)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
1.5
1.3
1.2
1.0
0.9
0.7
0.6
0.4
0.3
0.1
0.0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Middle Bedrock Transect B Mass Flux
Mass Flux (mol/yr)
Mass Flux (estimated lbs/yr)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
1.5
1.3
1.2
1.0
0.9
0.7
0.6
0.4
0.3
0.1
0.0
2014
2015
2016
2017
2018
2019
2020
2021

© WSP 2021



1,4-Dioxane
Middle Bedrock
Mar-2015

Concentration (µg/L)

45
40
35
30
25
20
15
10
5
0.3

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary
Control Fence

Transect A

Average Concentration: **6.8 µg/L**
Mass Flux: **0.0019 lbs/yr**

Transect B

Average Concentration: **2.6 µg/L**
Mass Flux: **6.94E-4 lbs/yr**

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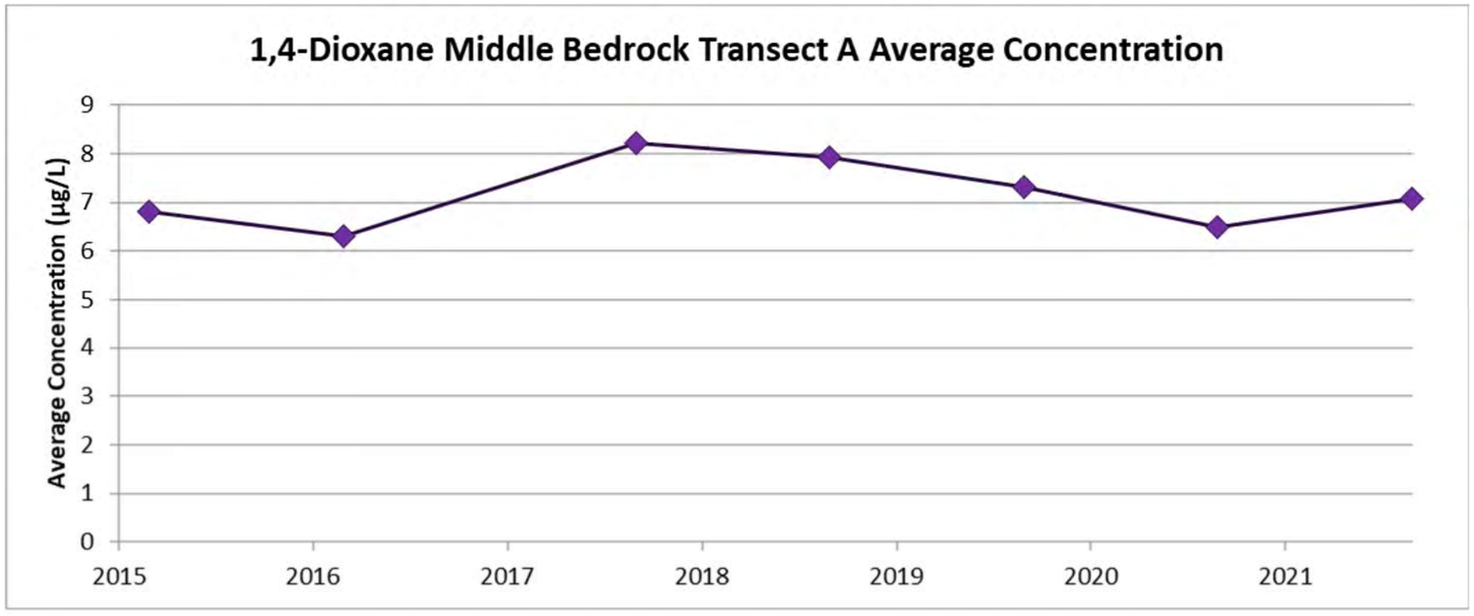
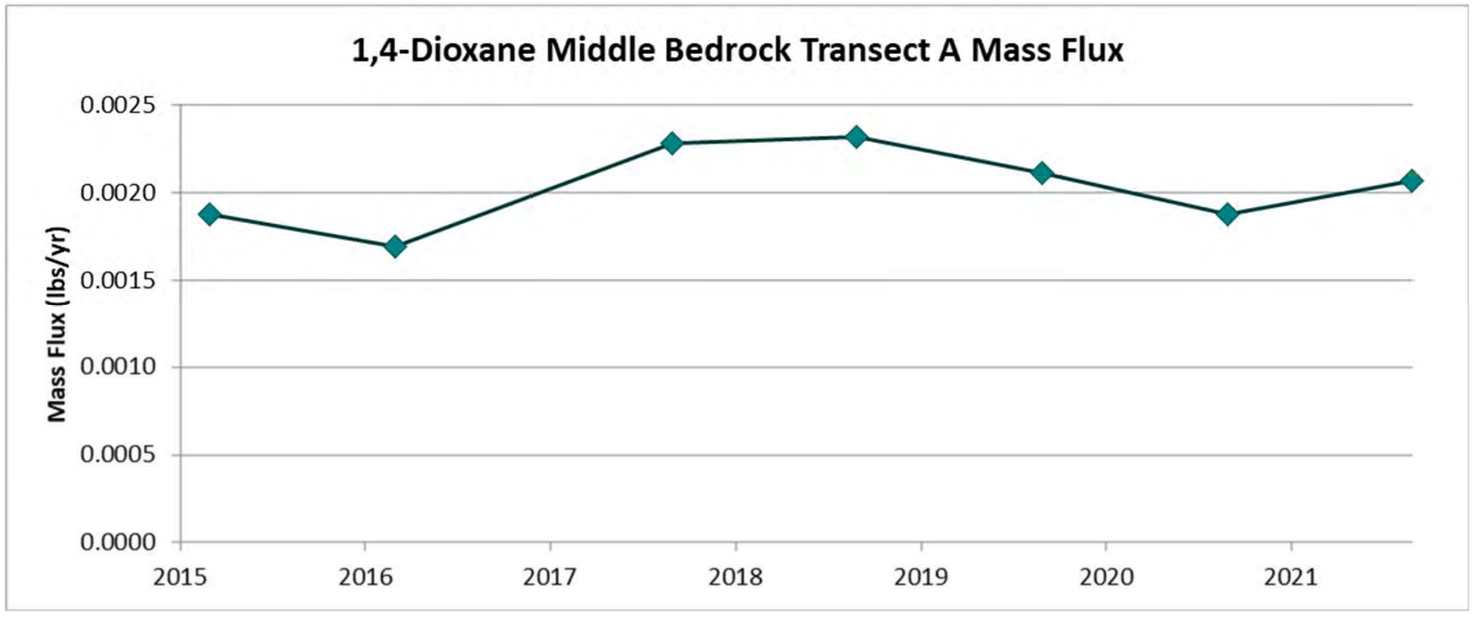

1,4-Dioxane Middle Bedrock Transect A Average Concentration
Average Concentration (µg/L)
9
8
7
6
5
4
3
2
1
0
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Middle Bedrock Transect A Mass Flux
Mass Flux (lbs/yr)
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
2015
2016
2017
2018
2019
2020
2021

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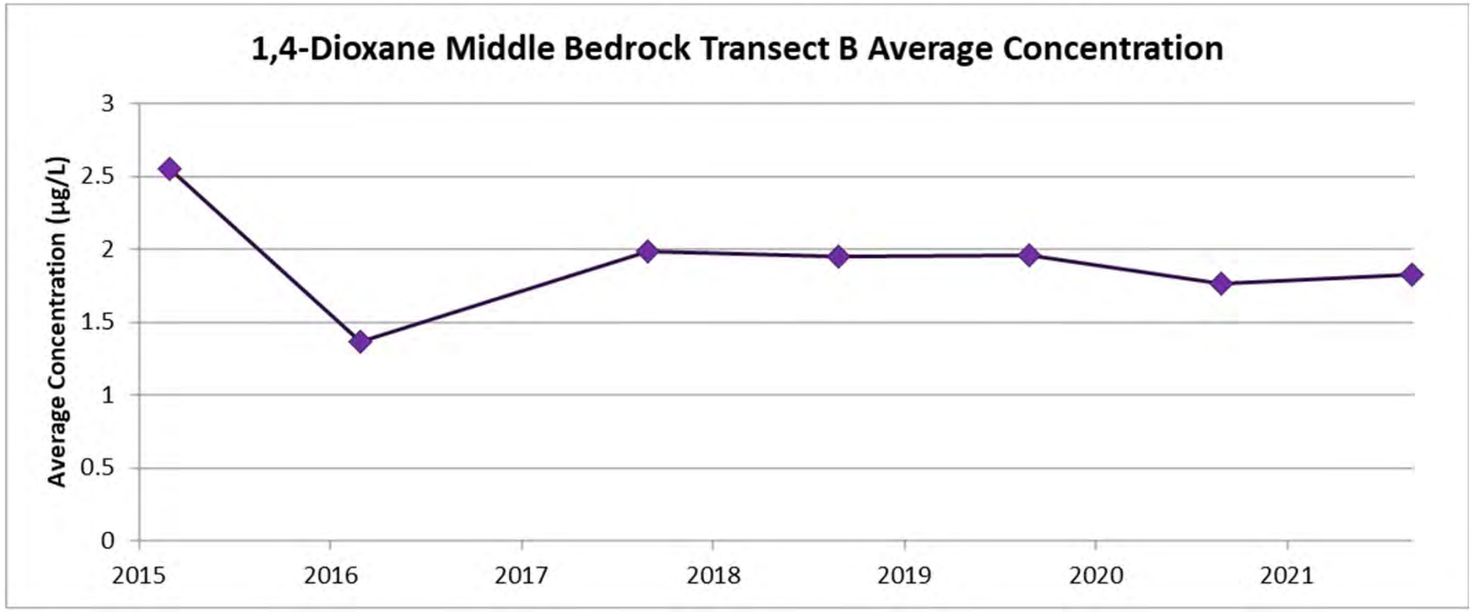
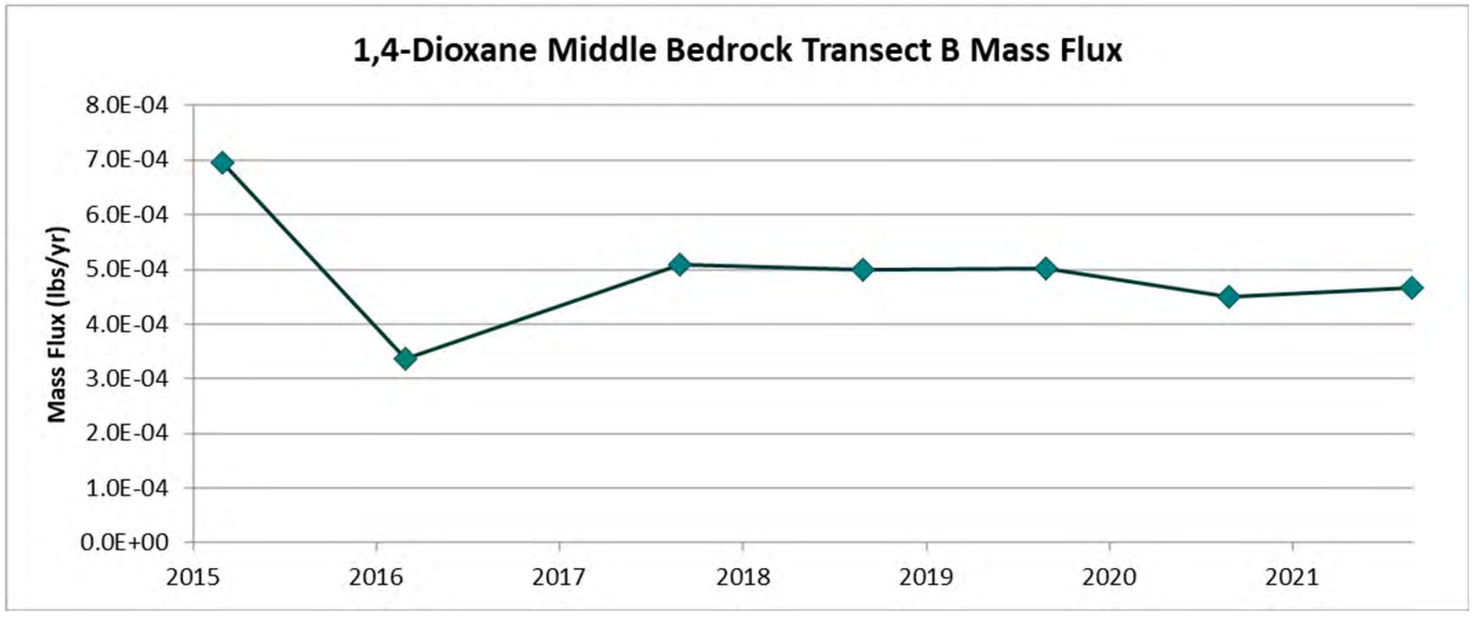

1,4-Dioxane Middle Bedrock Transect B Average Concentration
Average Concentration (µg/L)
3
2.5
2
1.5
1
0.5
0
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Middle Bedrock Transect B Mass Flux
Mass Flux (lbs/yr)
8.0E-04
7.0E-04
6.0E-04
5.0E-04
4.0E-04
3.0E-04
2.0E-04
1.0E-04
0.0E+00
2015
2016
2017
2018
2019
2020
2021

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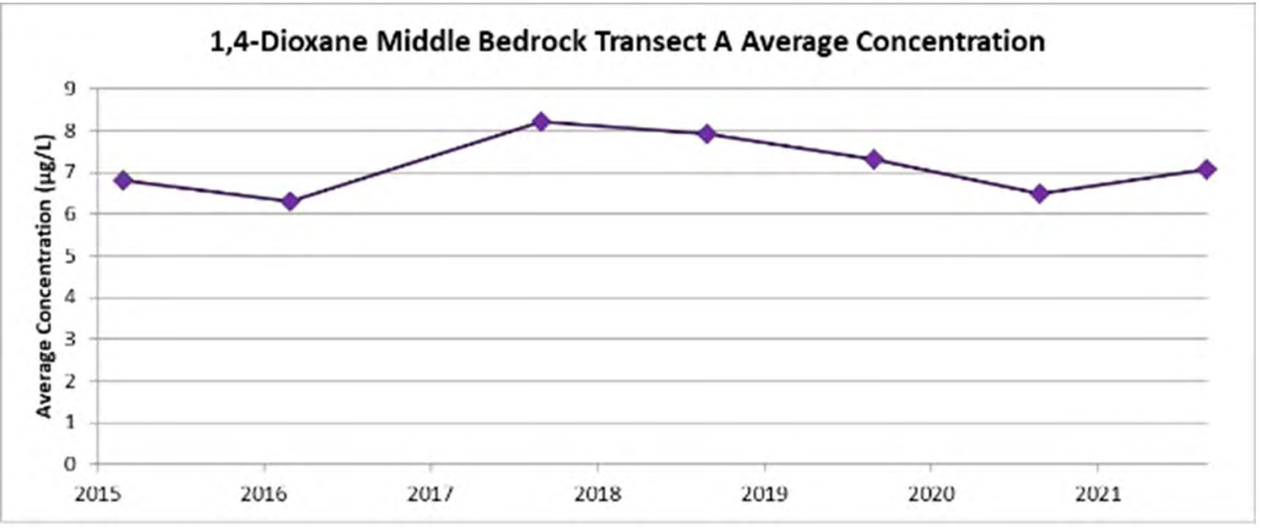
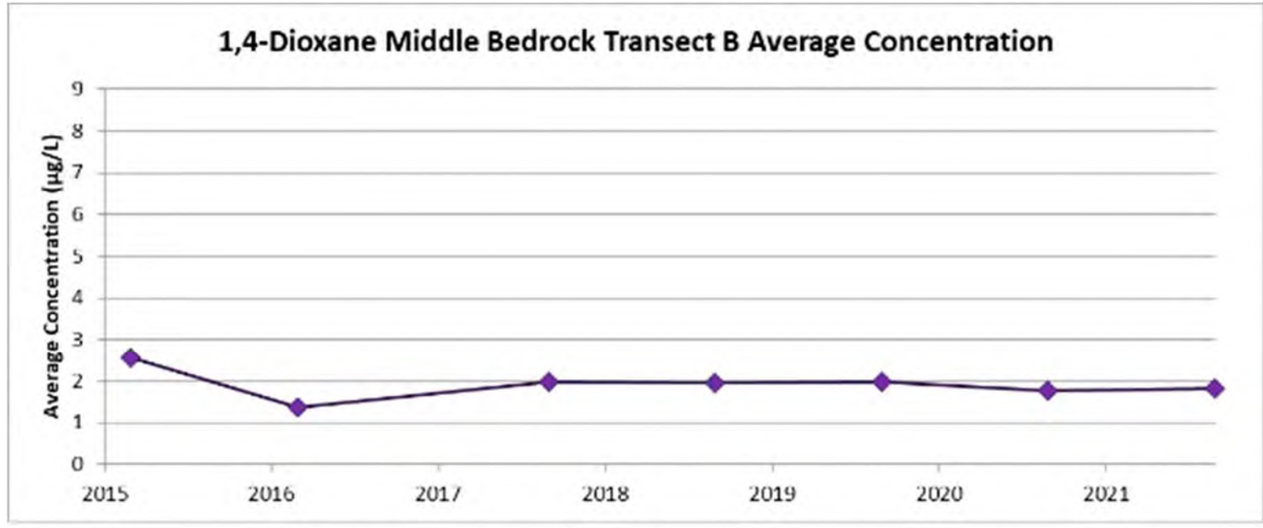
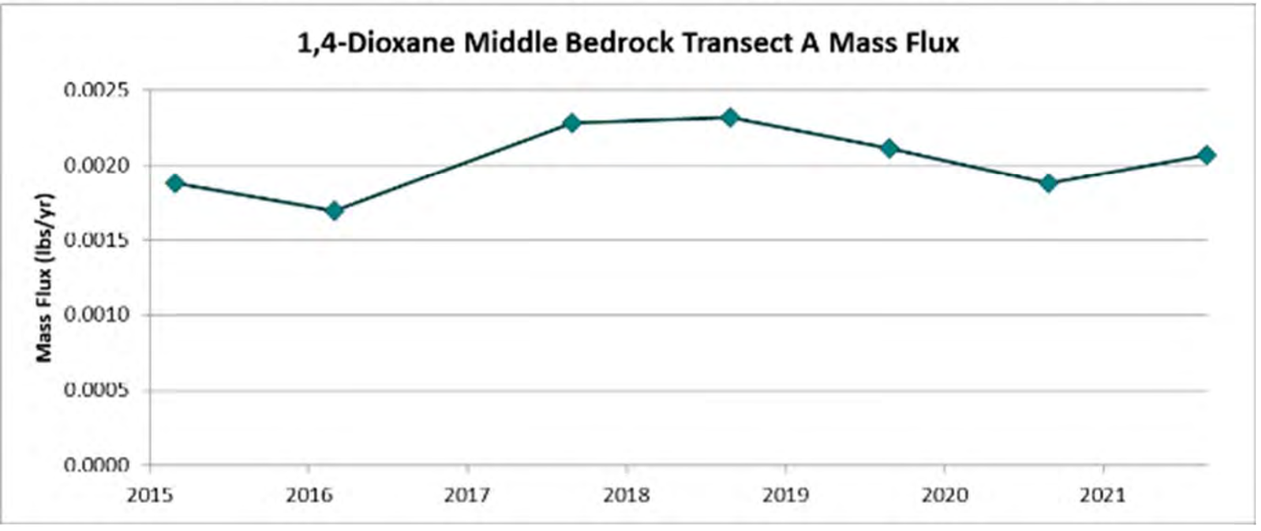
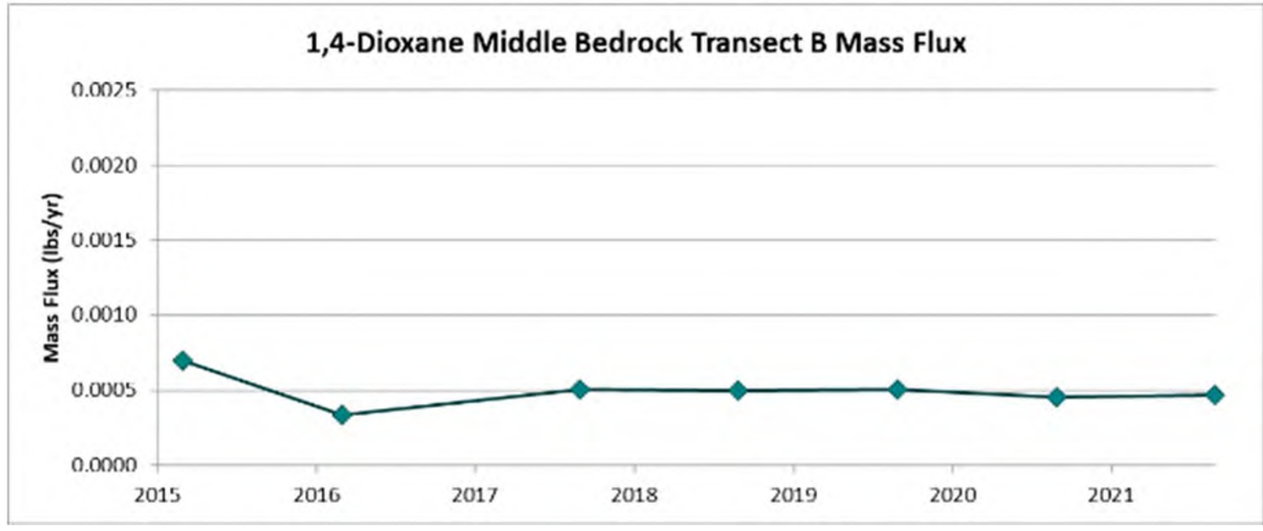

1,4-Dioxane Middle Bedrock Transect A Average Concentration
Average Concentration (µg/L)
0
1
2
3
4
5
6
7
8
9
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Middle Bedrock Transect B Average Concentration
Average Concentration (µg/L)
0
1
2
3
4
5
6
7
8
9
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Middle Bedrock Transect A Mass Flux
Mass Flux (lbs/yr)
0.0000
0.0005
0.0010
0.0015
0.0020
0.0025
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Middle Bedrock Transect B Mass Flux
Mass Flux (lbs/yr)
0.0000
0.0005
0.0010
0.0015
0.0020
0.0025
2015
2016
2017
2018
2019
2020
2021

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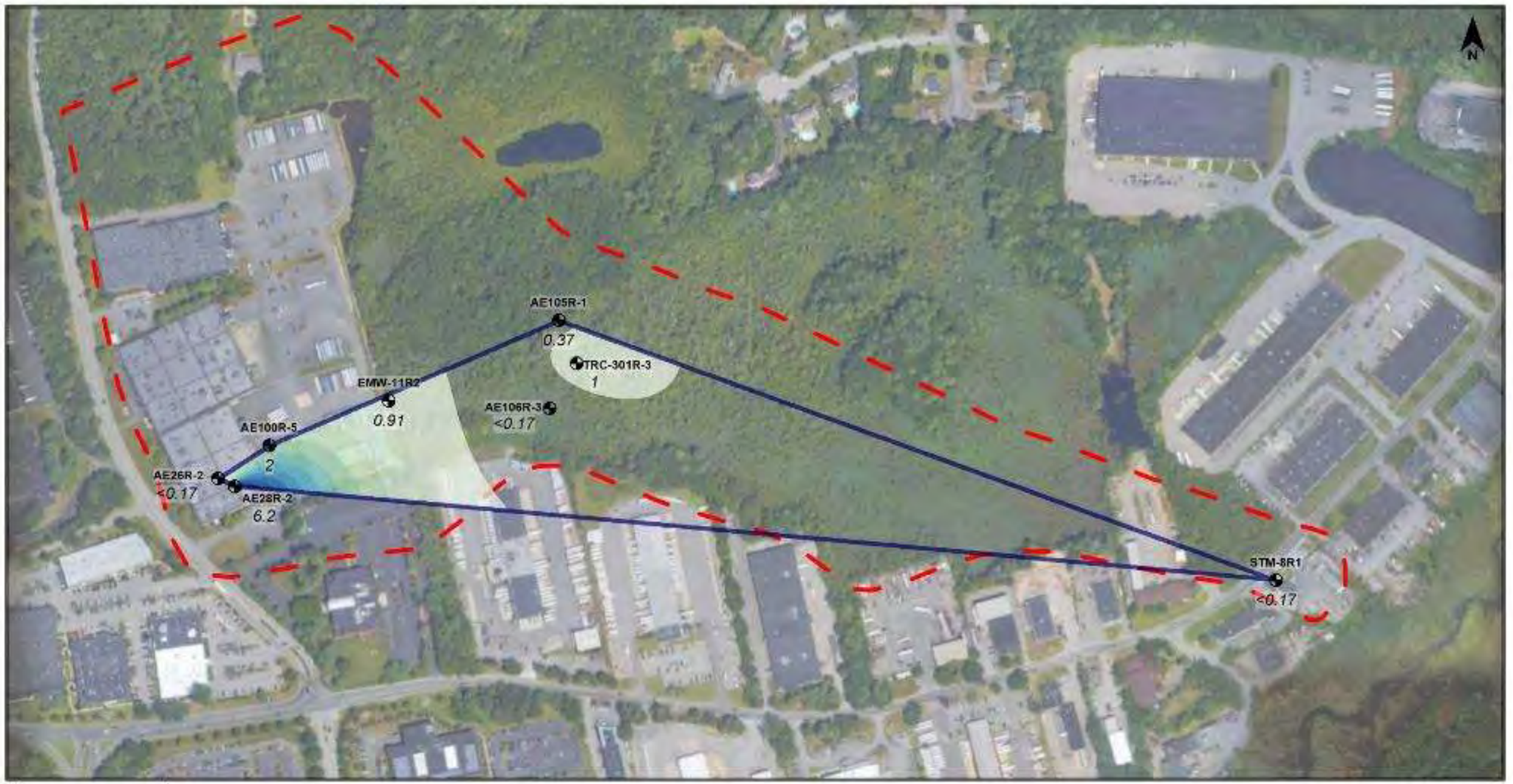

0 ft 450 ft 900 ft

Ethane
Middle Bedrock
Sep-2021

Concentration (µg/L)

5
4.5
4
3.5
3
2.5
2
1.5
1
0.5

LEGEND

AE100R-5 Monitoring Well
2.0 Concentration (µg/L)
MCP Site Boundary

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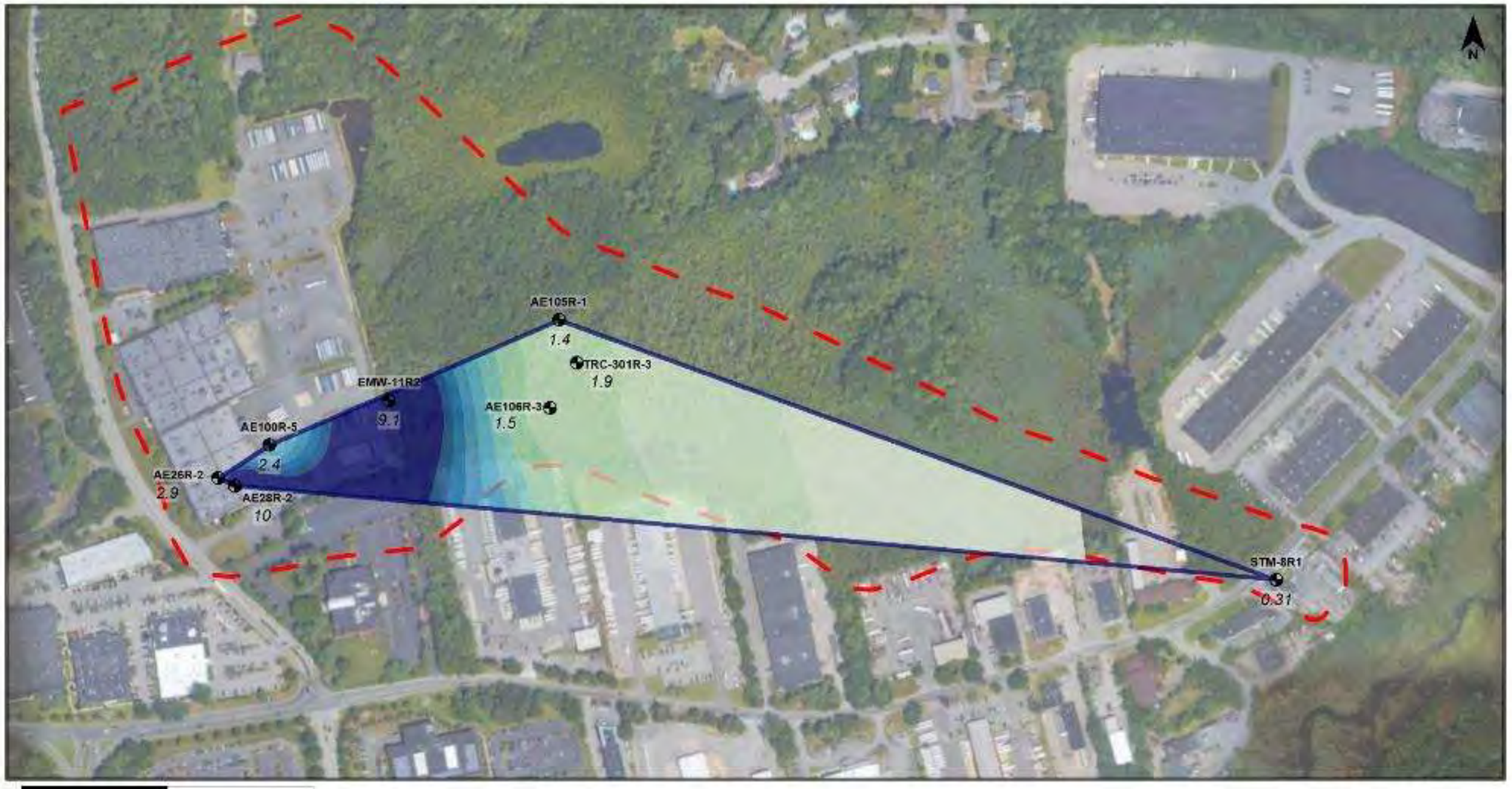

0 ft 450 ft 900 ft

Ethene
Middle Bedrock
Sep-2021

Concentration (µg/L)

5
4.5
4
3.5
3
2.5
2
1.5
1
0.5

LEGEND

AE100R-5 / 2.4 — Monitoring Well, Concentration (µg/L)

MCP Site Boundary

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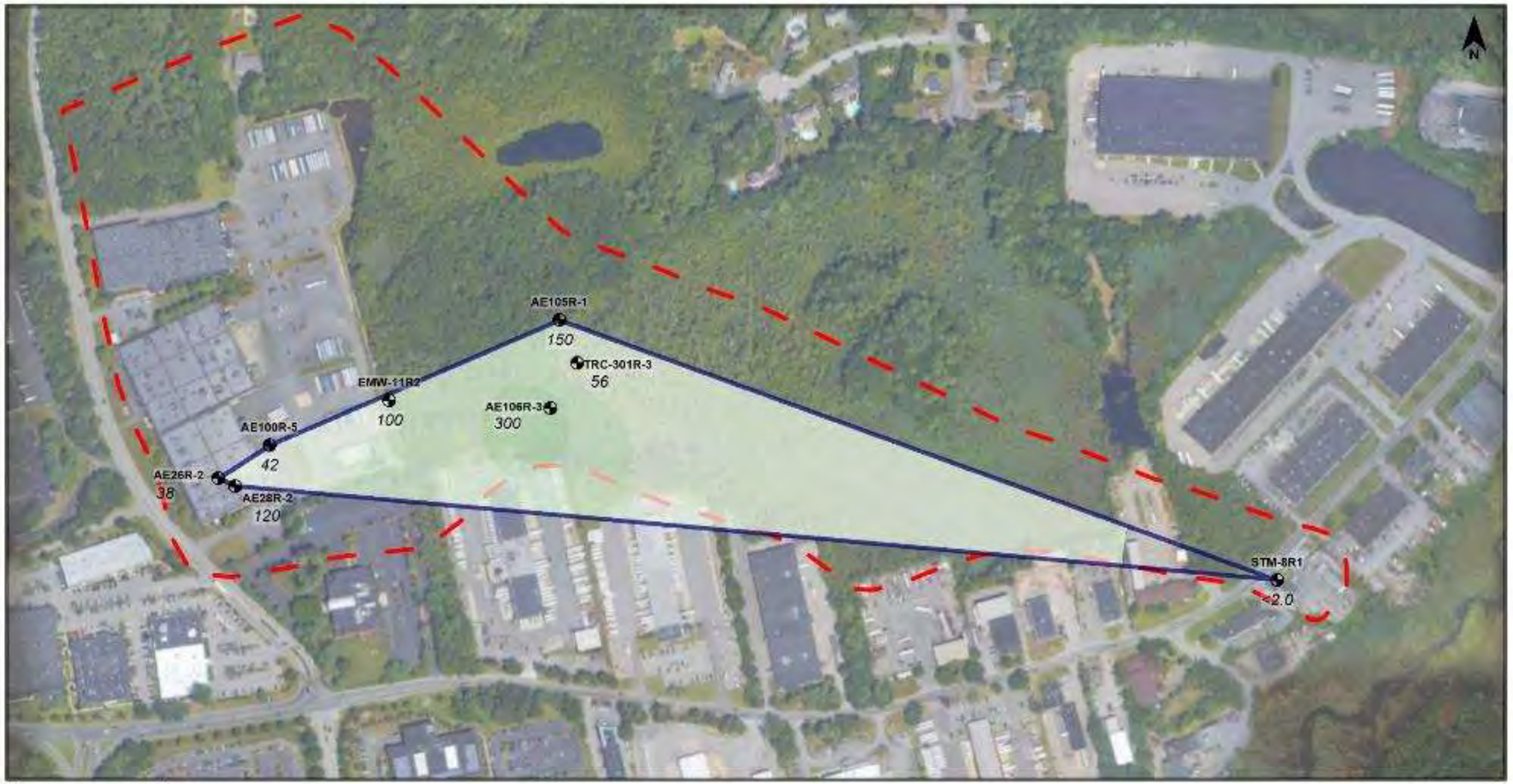

0 ft 450 ft 900 ft

Methane
Middle Bedrock
Sep-2021

Concentration (µg/L)

900
800
700
600
500
400
300
200
100
5

LEGEND

AE100R-5 Monitoring Well

42 Concentration (µg/L)

MCP Site Boundary

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ORP
Middle Bedrock
Sep-2021

ORP (mV)

100
50
25
0
-25
-50
-75
-100
-200
-250

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well — — MCP Site Boundary

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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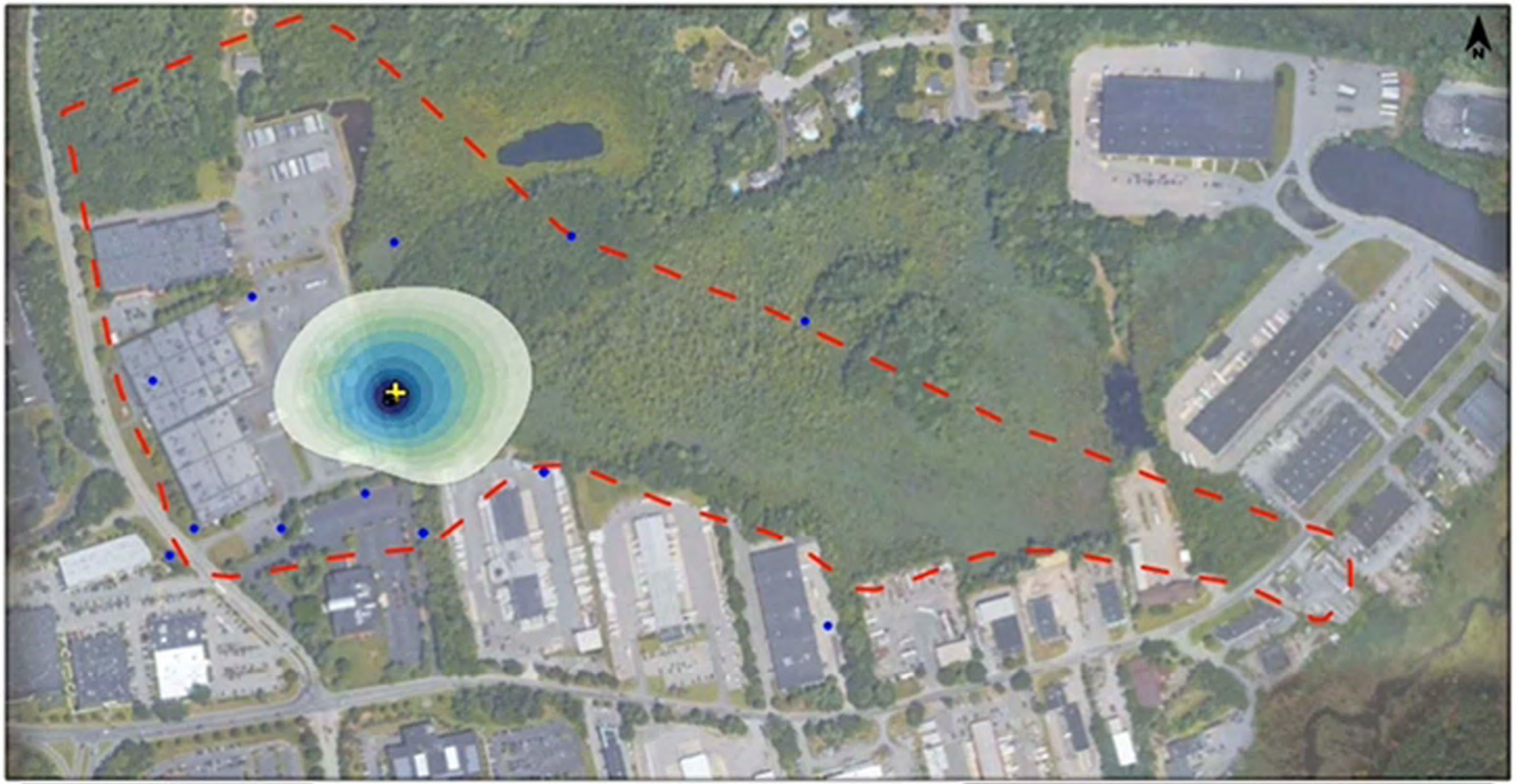

PCE
Lower Bedrock
Sep-1998

Concentration (µg/L)

- 1,000
- 750
- 500
- 250
- 100
- 50
- 25
- 15
- 10
- 5

0 ft 450 ft 900 ft

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **8.7 acres**
Plume Average Concentration: **118 µg/L**
Plume Mass Indicator: **7.9 lbs**

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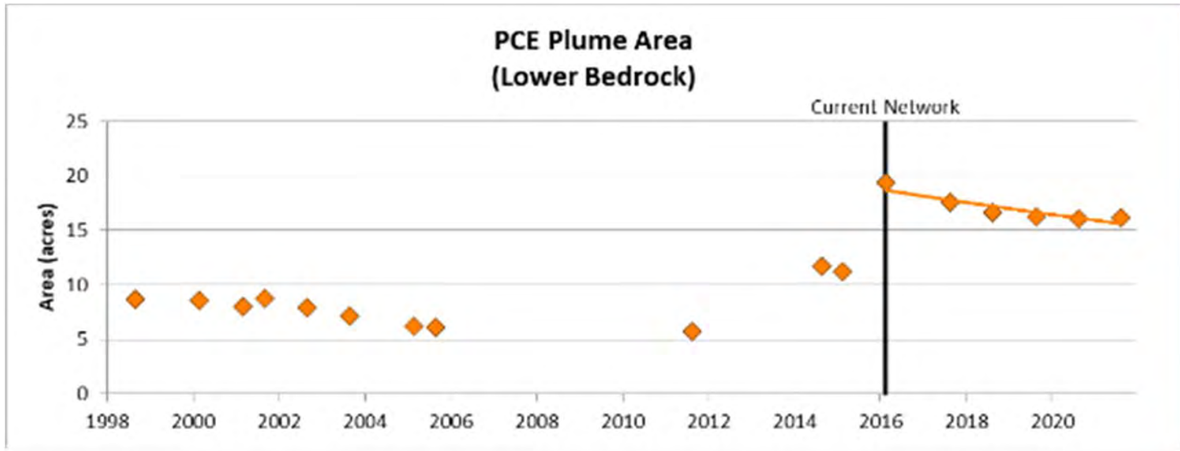
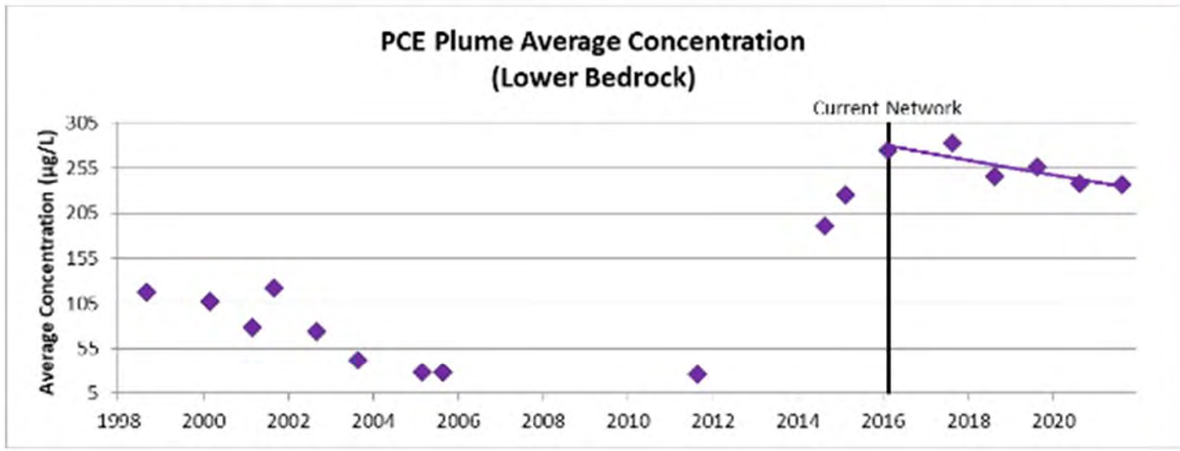
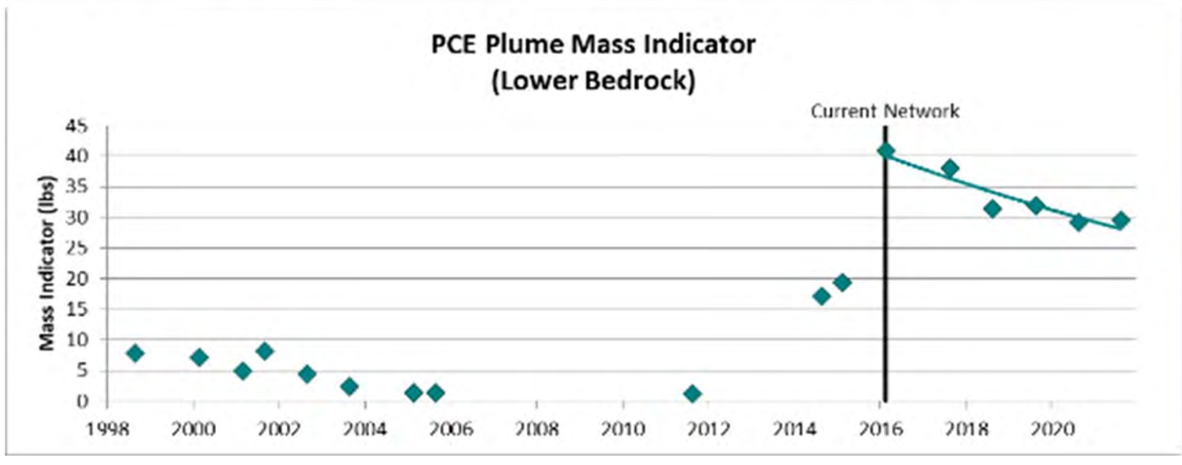


Mar-2016 to Sep-2021
Decreasing Trend
Mann-Kendall: 99% Confidence
Regression: 99% Confidence



Mar-2016 to Sep-2021
Decreasing Trend
Mann-Kendall: 97% Confidence
Regression: 97% Confidence



Mar-2016 to Sep-2021
Decreasing Trend
Mann-Kendall: 97% Confidence
Regression: 99% Confidence

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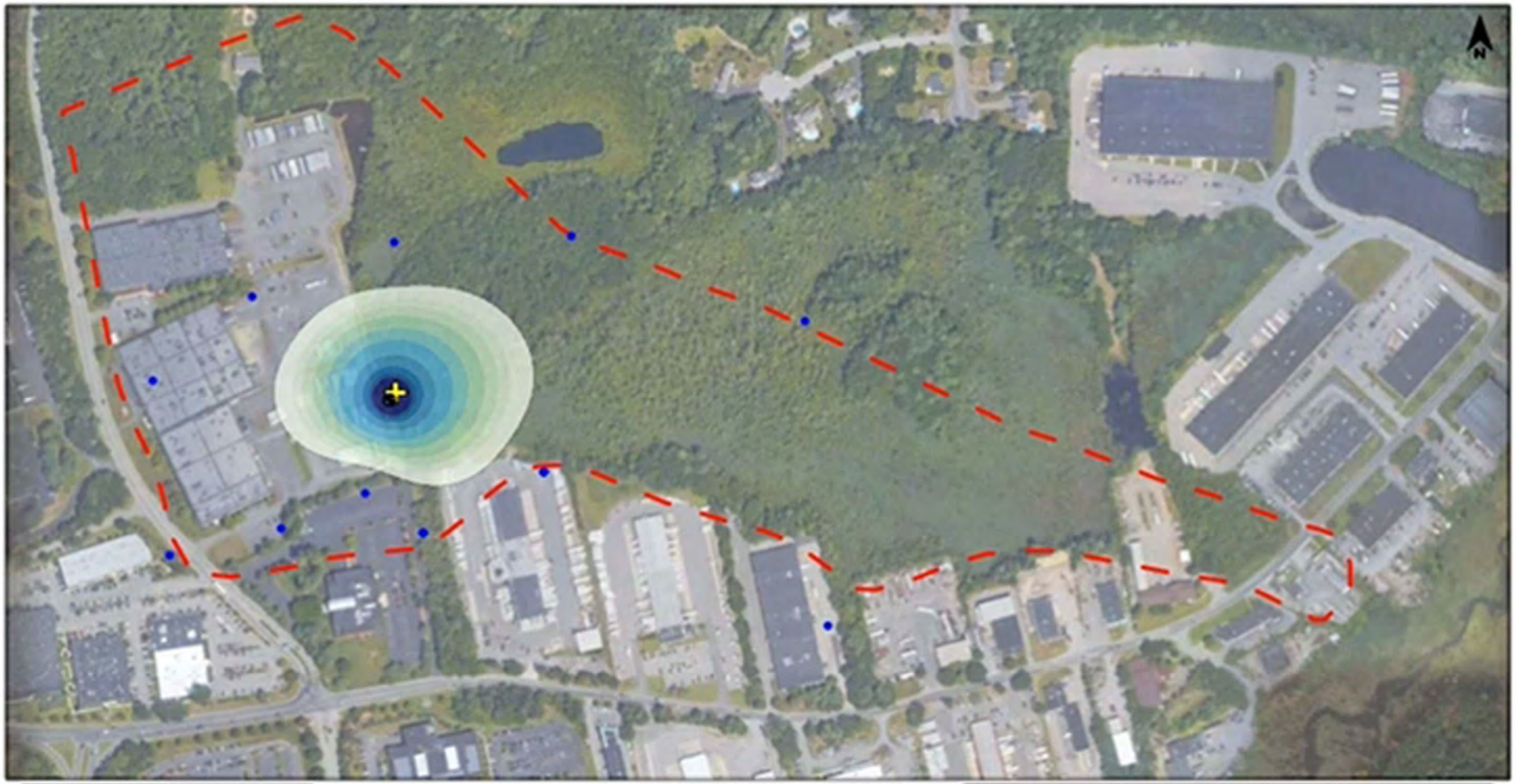

TCE
Lower Bedrock
Sep-1998

Concentration (µg/L)

- 1,000
- 750
- 500
- 250
- 100
- 50
- 25
- 15
- 10
- 5

0 ft 450 ft 900 ft

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **8.8 acres**
Plume Average Concentration: **132 µg/L**
Plume Mass Indicator: **8.9 lbs**

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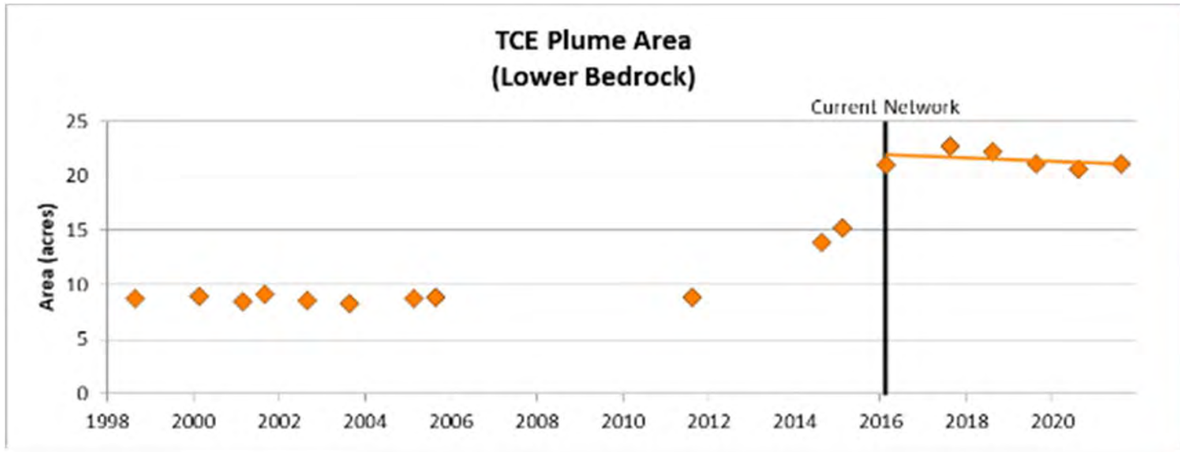
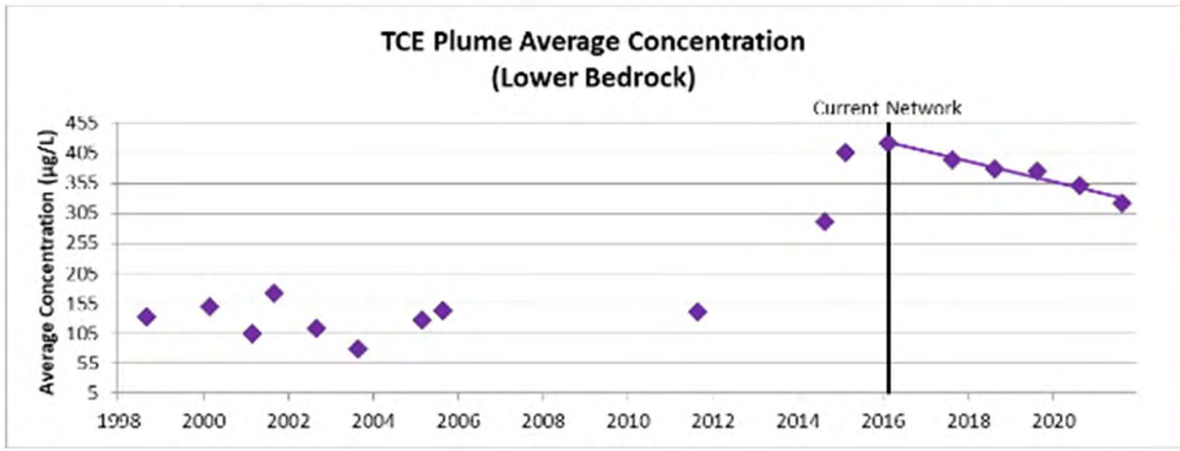
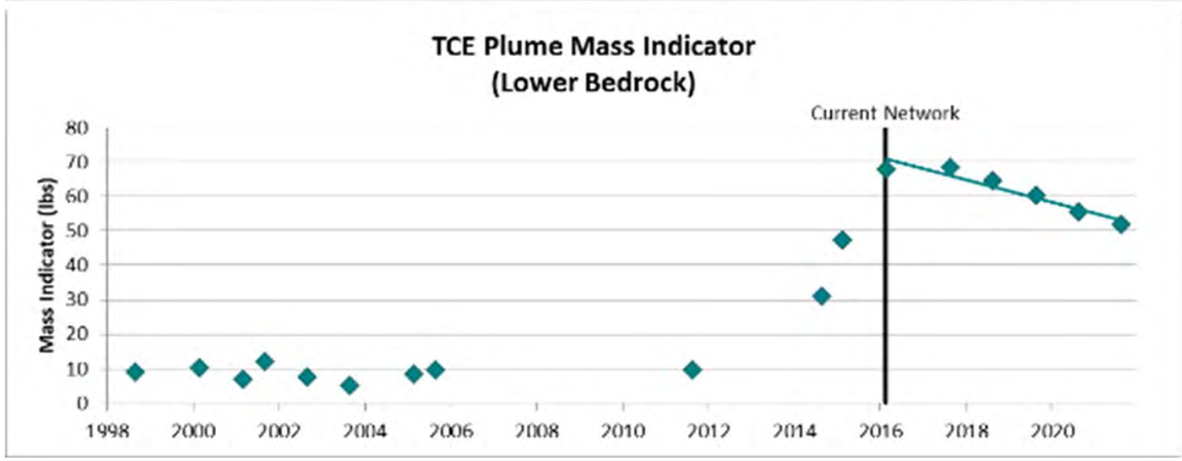


Mar-2016 to Sep-2021
No Trend
Mann-Kendall: 64% Confidence
Regression: 54% Confidence



Mar-2016 to Sep-2021
Decreasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence



Mar-2016 to Sep-2021
Decreasing Trend
Mann-Kendall: 99% Confidence
Regression: >99% Confidence

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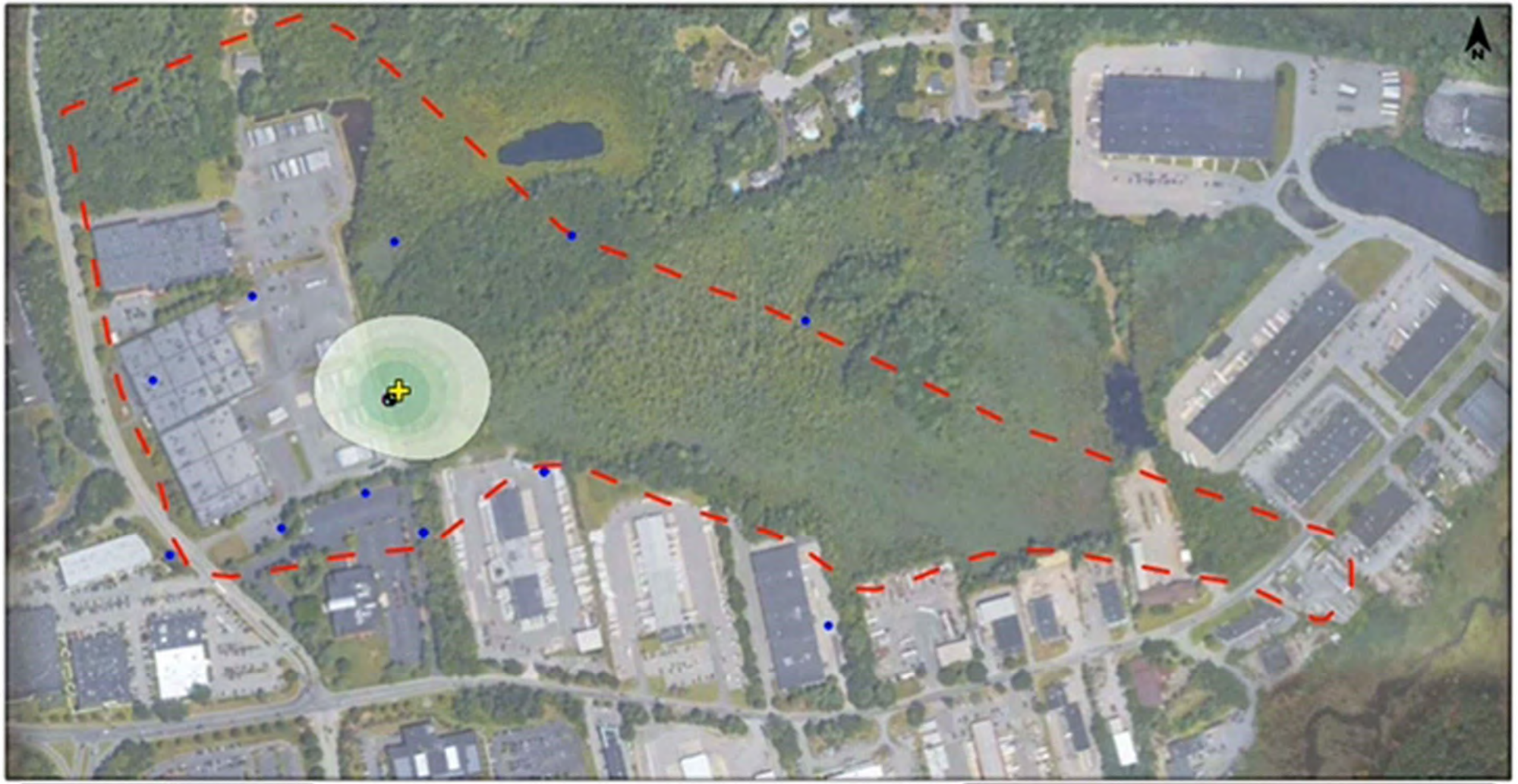

0 ft 450 ft 900 ft

cis-1,2-DCE
Lower Bedrock
Sep-1998

Concentration (µg/L)

1,000
750
500
250
100
MCL 70
25
15
10
5

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Plume Characteristics

Plume Area: **4.4 acres**
Plume Average Concentration: **16.5 µg/L**
Plume Mass Indicator: **0.56 lbs**

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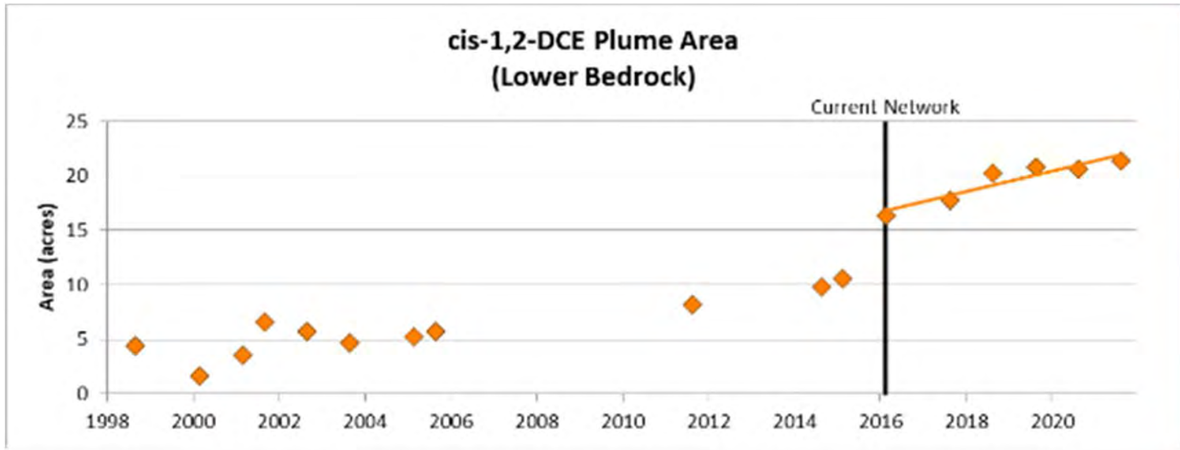
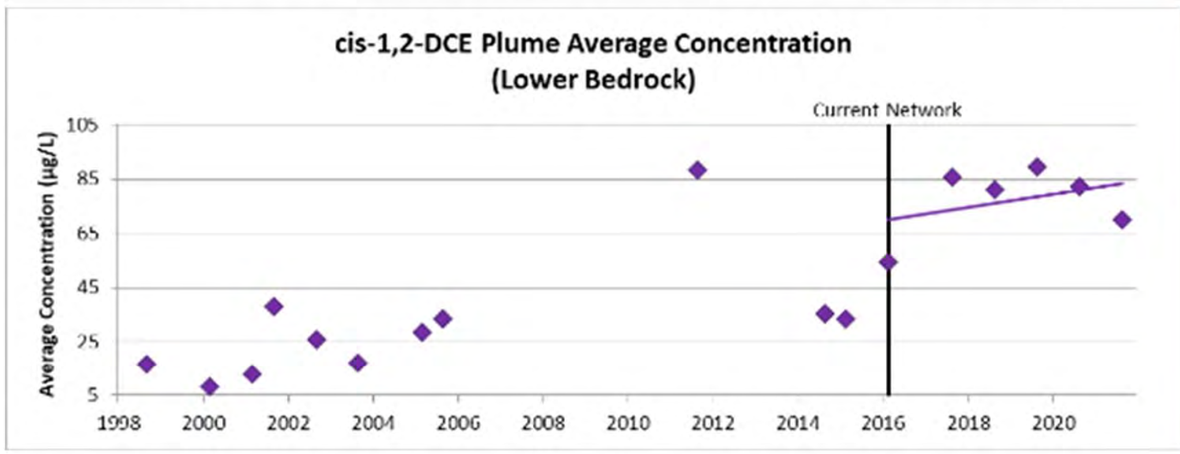
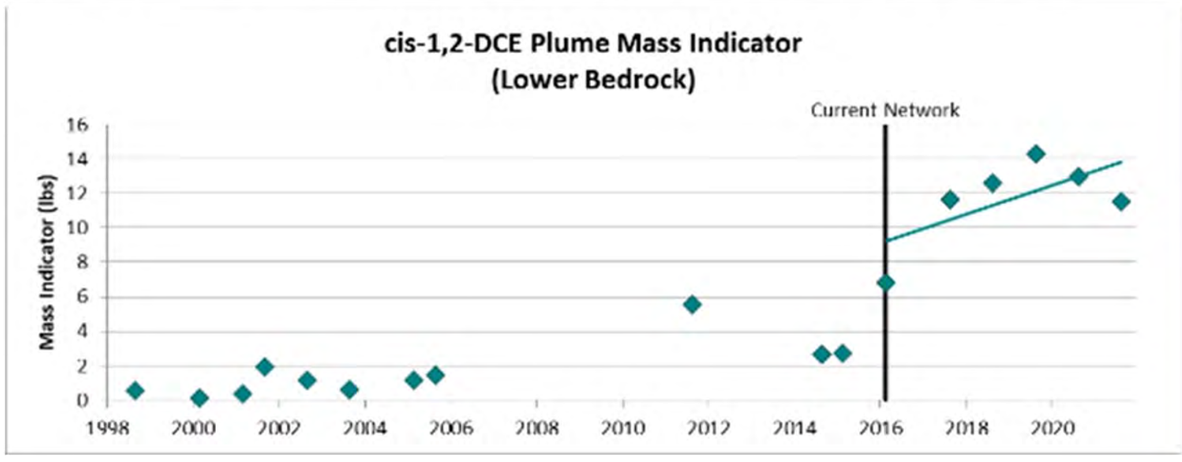


Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: 99% Confidence
Regression: 99% Confidence



Mar-2016 to Sep-2021
No Trend
Mann-Kendall: 50% Confidence
Regression: 55% Confidence



Mar-2016 to Sep-2021
No Trend
Mann-Kendall: 77% Confidence
Regression: 84% Confidence

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0 ft 450 ft 900 ft

Vinyl Chloride
Lower Bedrock
Sep-1998

Concentration (µg/L)

1,000
750
500
250
100
50
25
15
10
2

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Plume Characteristics

Plume Area: **0.041 acres**
Plume Average Concentration: **2.2 µg/L**
Plume Mass Indicator: **0.001 lbs**

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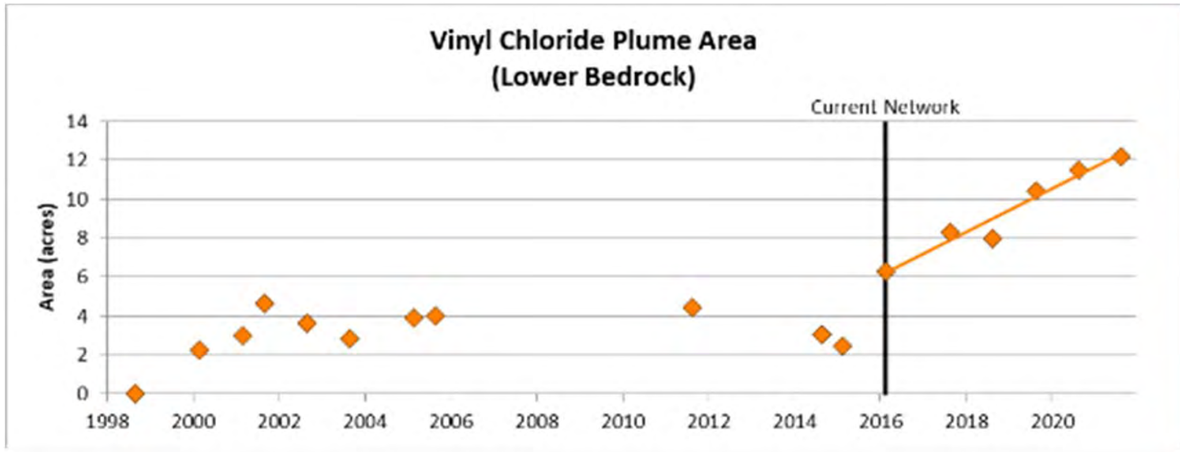
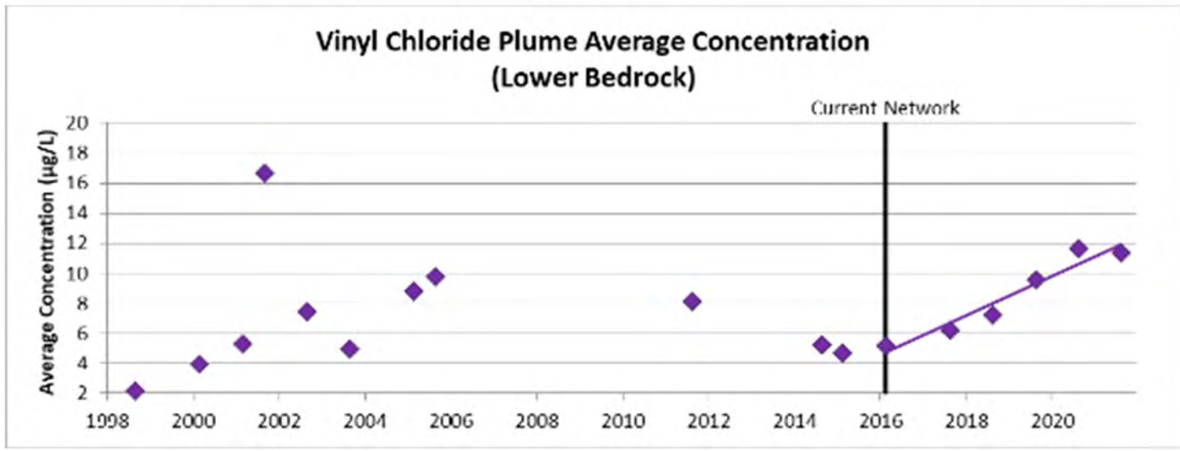
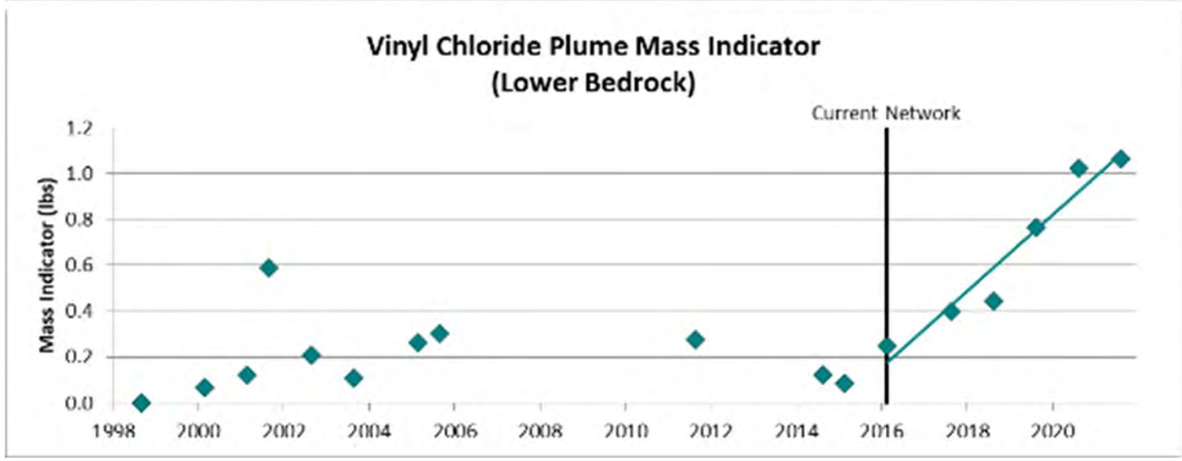


Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: 99% Confidence
Regression: >99% Confidence



Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: 99% Confidence
Regression: >99% Confidence



Mar-2016 to Sep-2021
Increasing Trend
Mann-Kendall: >99% Confidence
Regression: >99% Confidence

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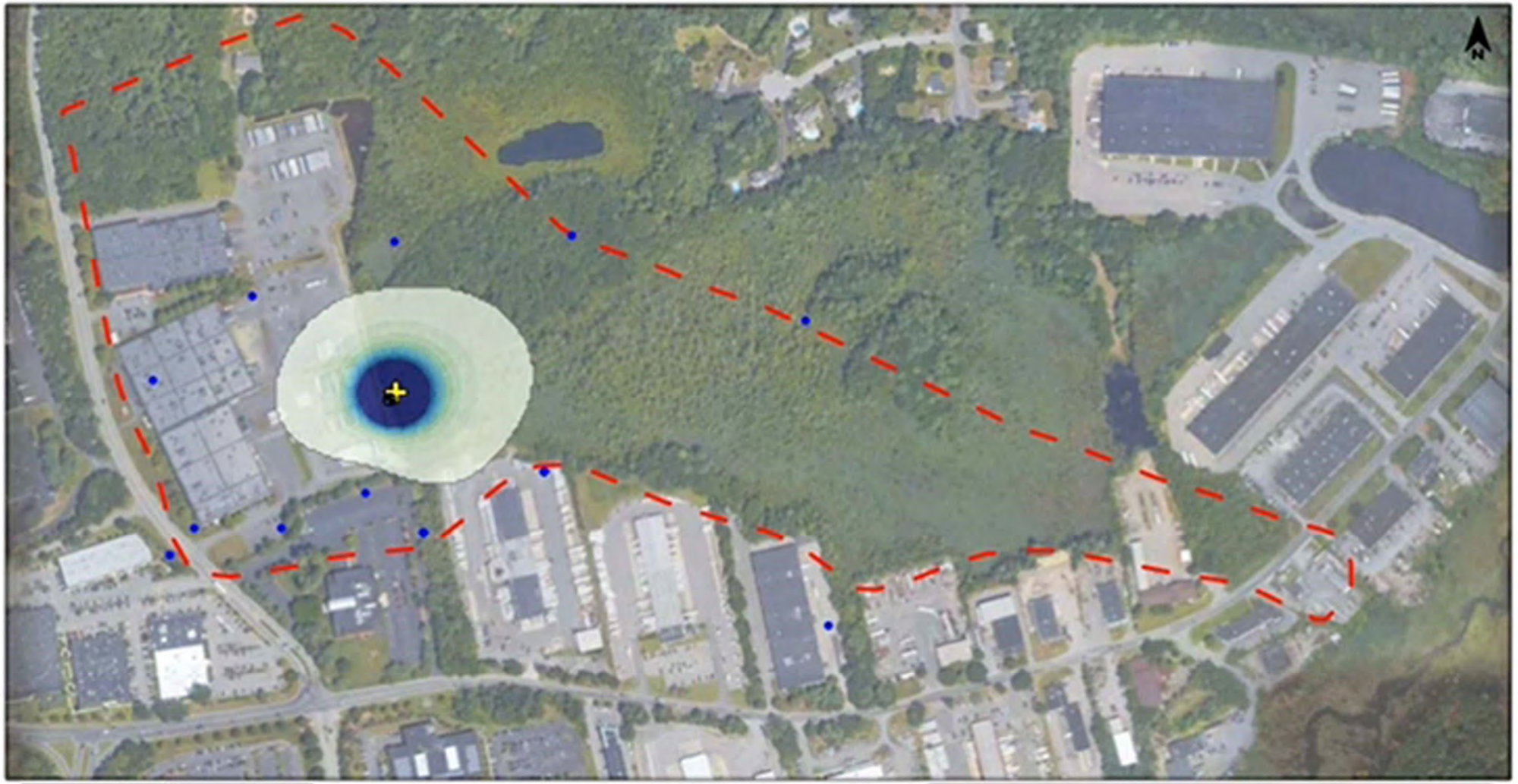

0 ft 450 ft 900 ft

Chloroethenes
Lower Bedrock
Sep-1998

Concentration (nmol/L)

4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Plume Characteristics

Plume Area: **8.5 acres**
Plume Average Concentration: **1,847 nmol/L**
Plume Mass Indicator: **54.8 moles**

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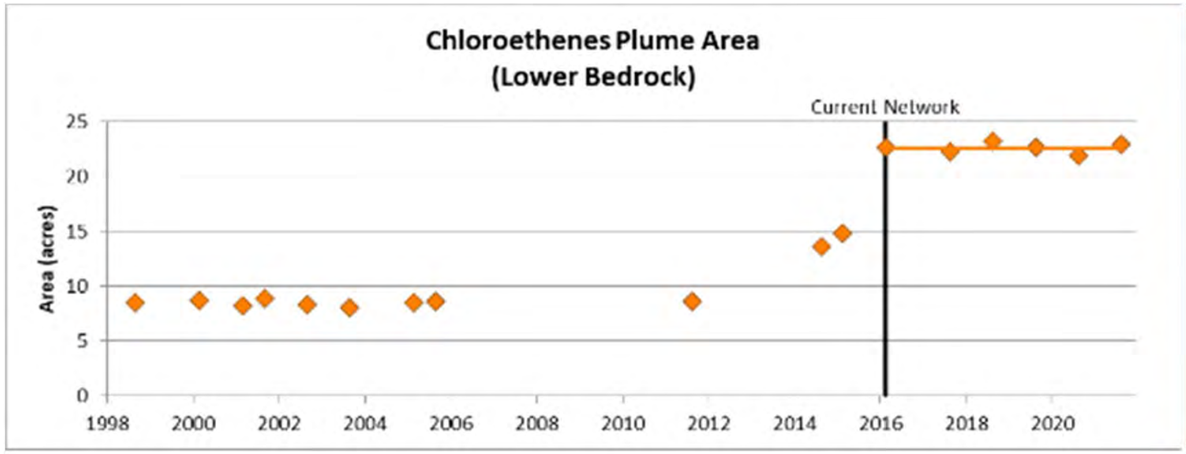
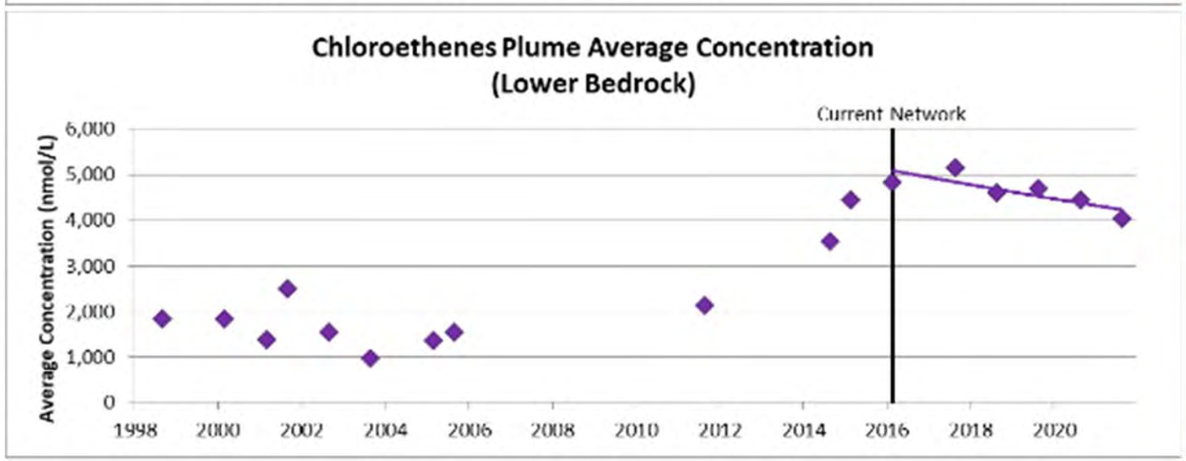
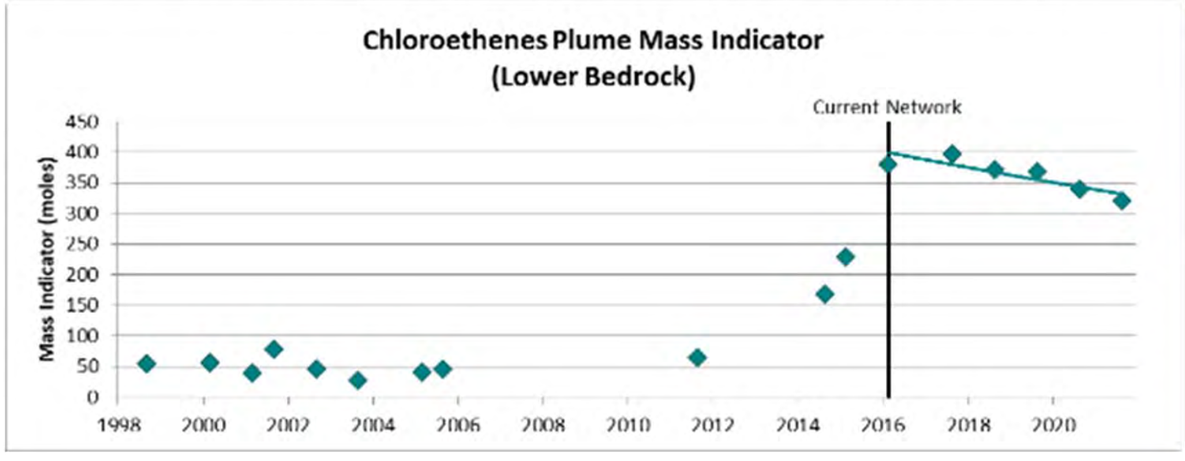


Mar-2016 to Sep-2021
No Trend
Mann-Kendall: 50% Confidence
Regression: 3% Confidence



Mar-2016 to Sep-2021
Decreasing Trend
Mann-Kendall: 97% Confidence
Regression: 96% Confidence



Mar-2016 to Sep-2021
Decreasing Trend
Mann-Kendall: 99% Confidence
Regression: 98% Confidence

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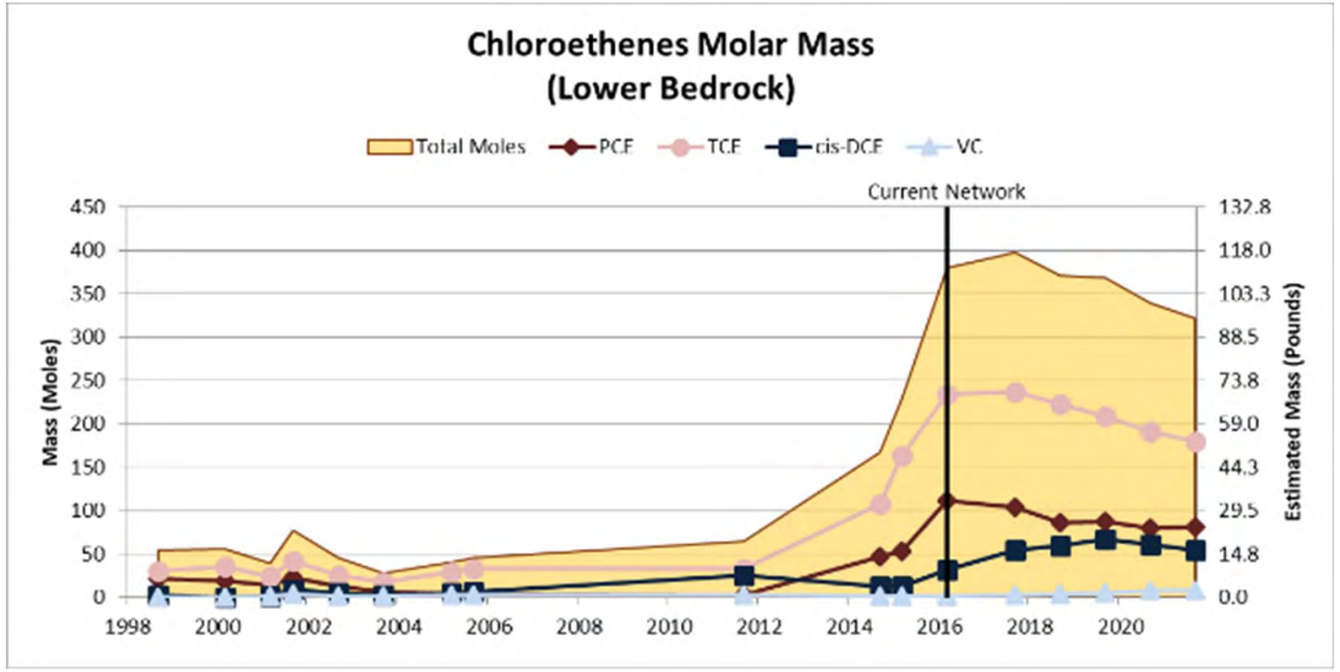
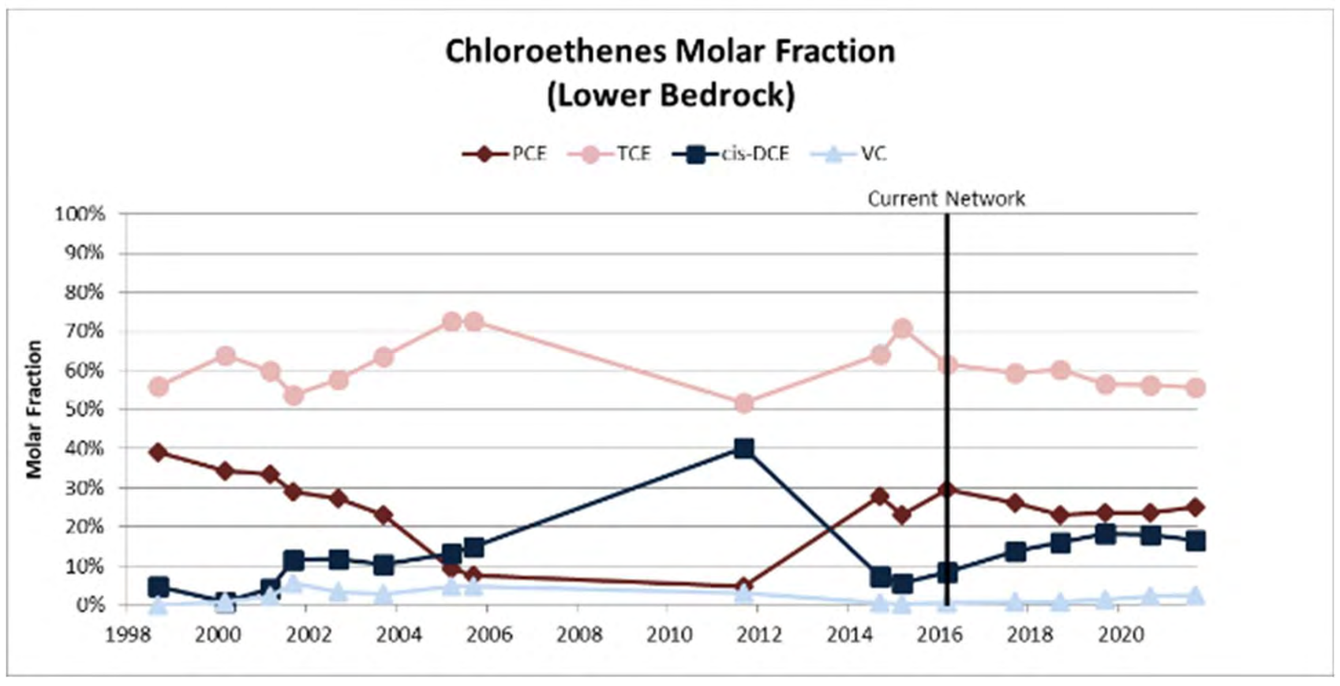

Chloroethenes Molar Mass
(Lower Bedrock)
Total Moles
PCE
TCE
cis-DCE
VC
Current Network
Mass (Moles)
Estimated Mass (Pounds)
450
400
350
300
250
200
150
100
50
0
132.8
118.0
103.3
88.5
73.8
59.0
44.3
29.5
14.8
0.0
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


Chloroethenes Molar Fraction
(Lower Bedrock)
PCE
TCE
cis-DCE
VC
Current Network
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

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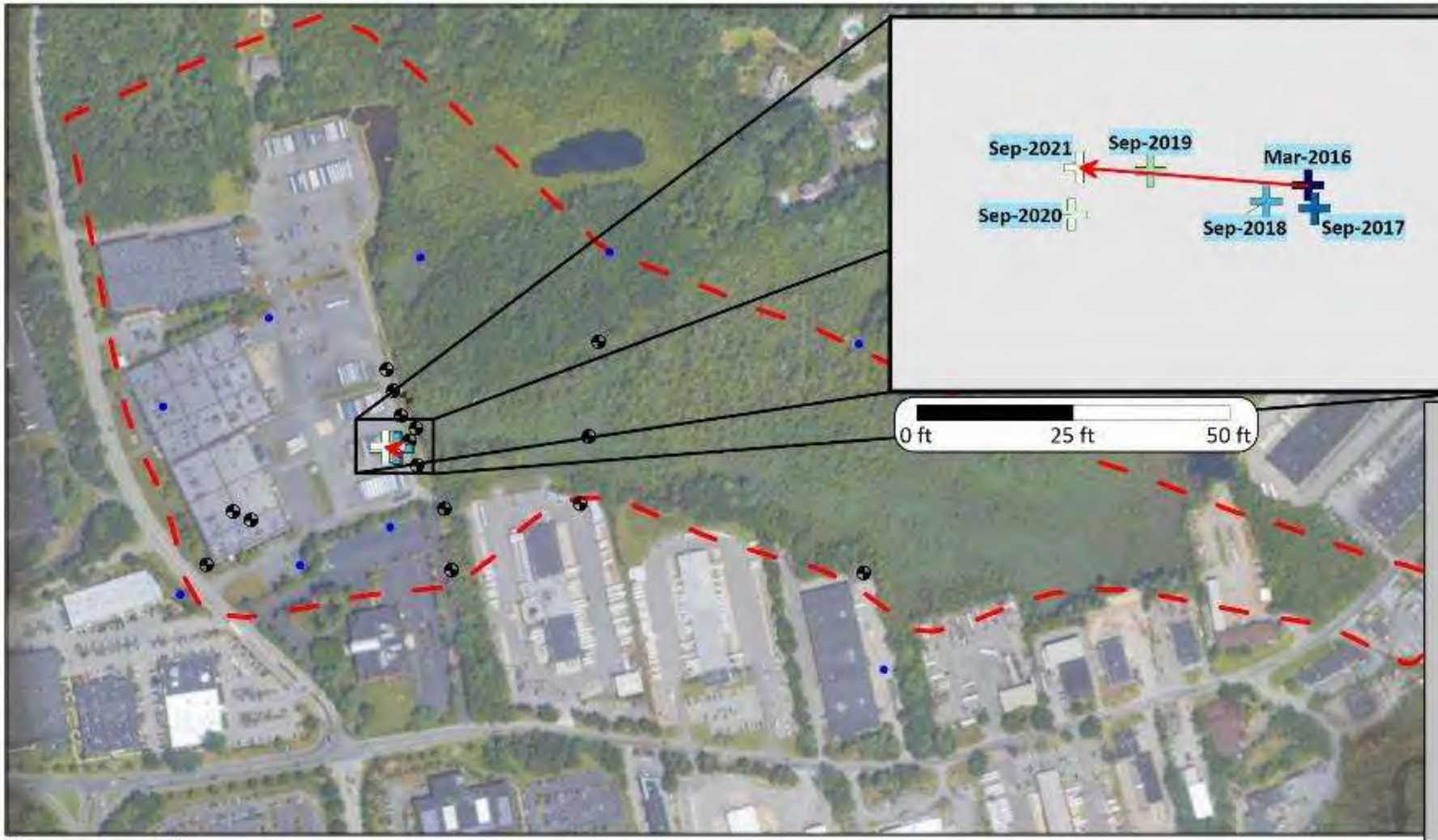
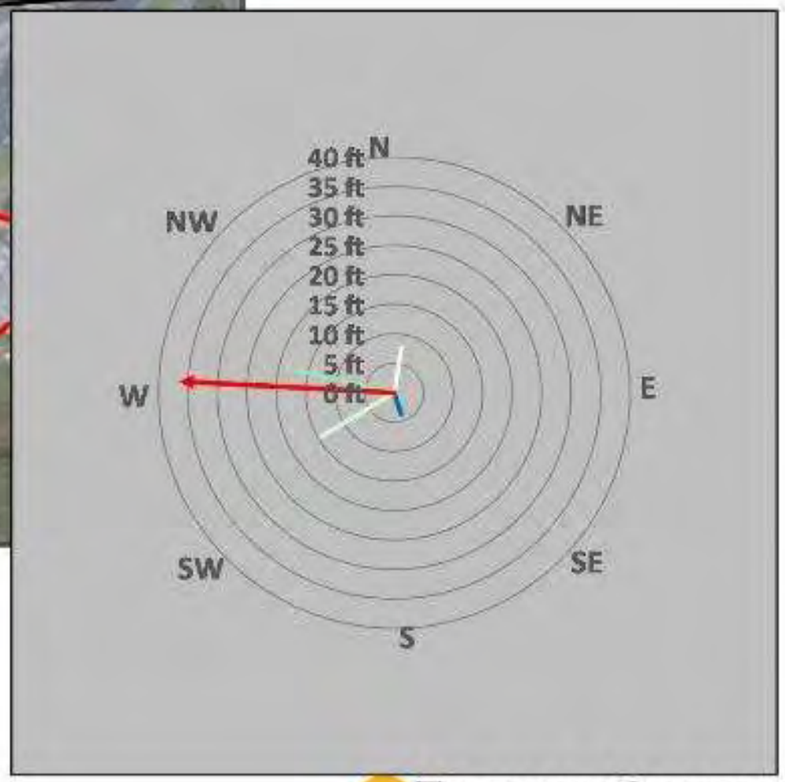
Chloroethenes
Lower Bedrock
Center of Mass





LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Point
- MCP Site Boundary
- Net COM Movement

Center of Mass Scale

Mar-2016 → **Sep-2021**

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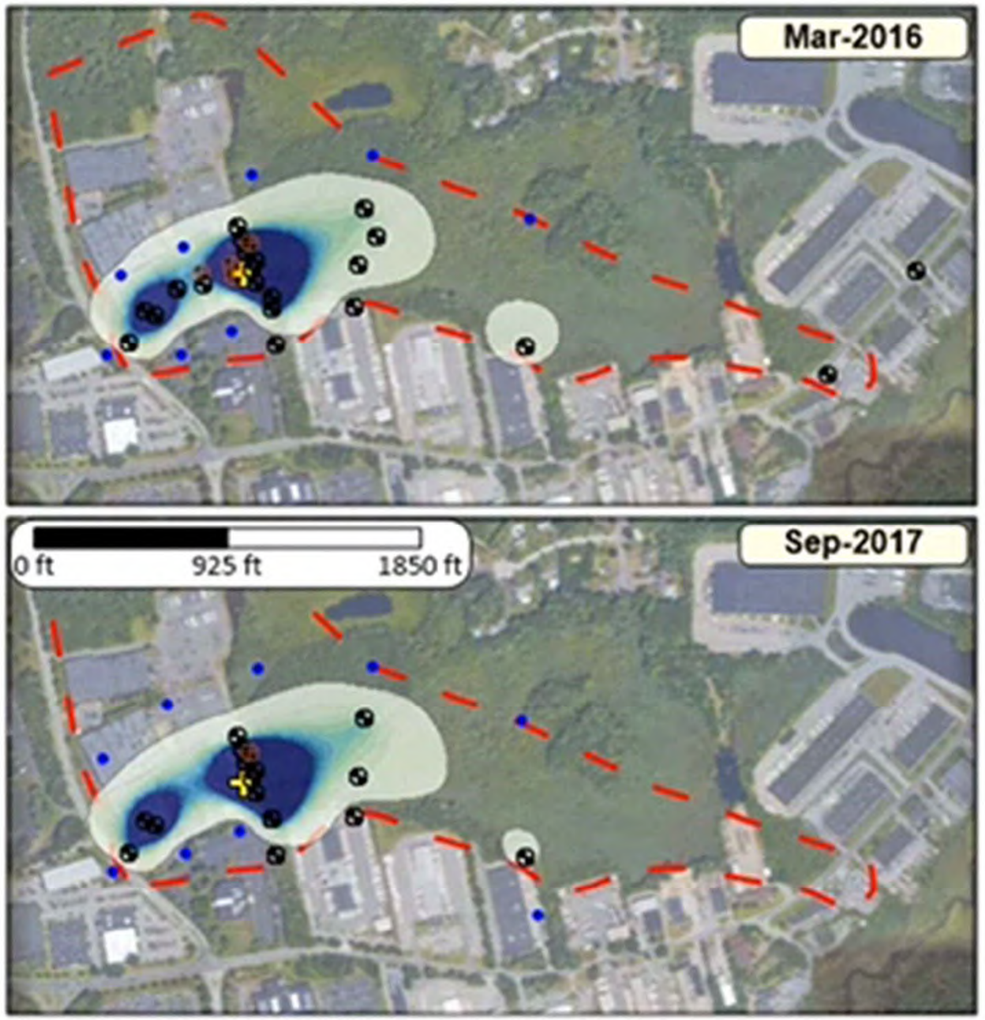


Concentration (nmol/L)

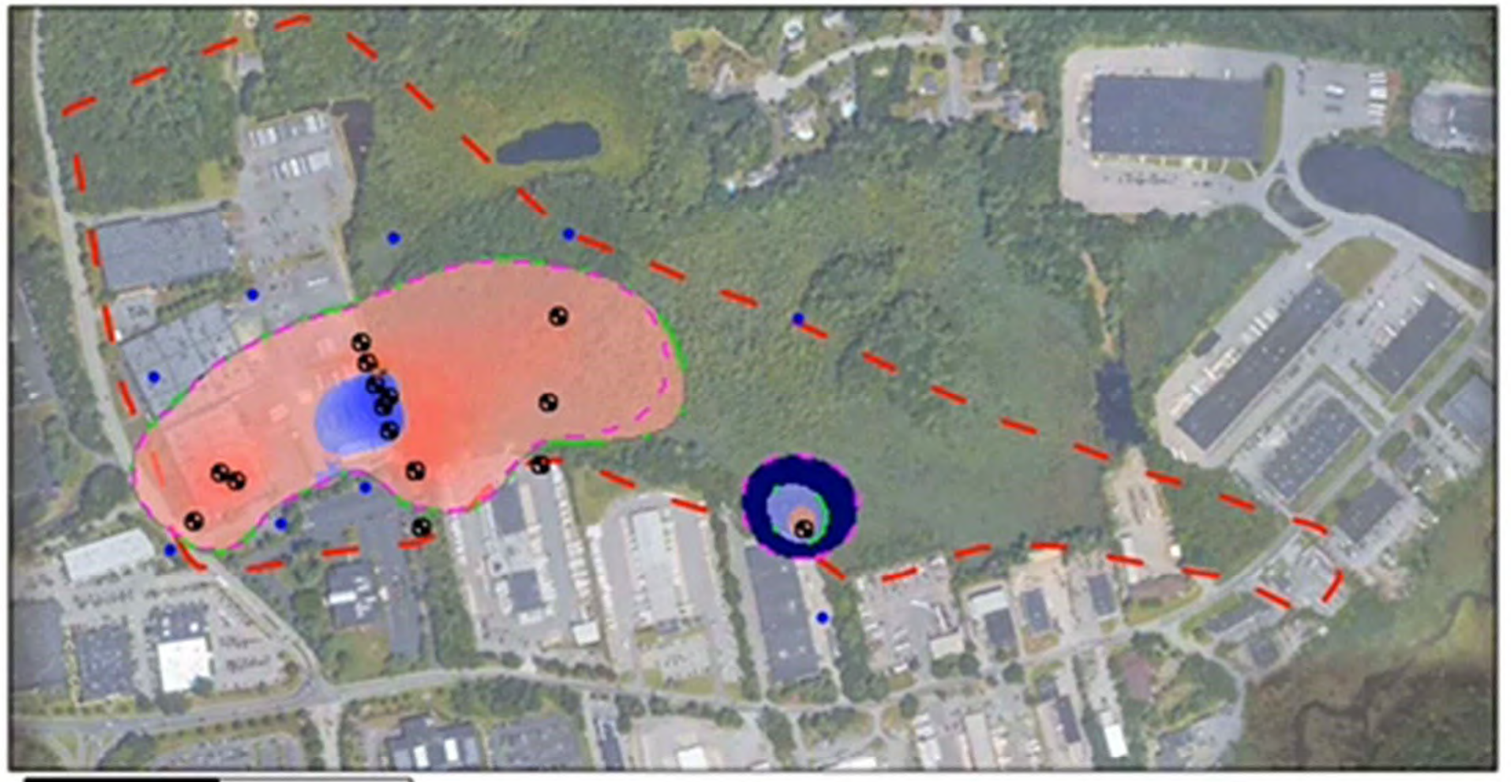
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary
Mar-2016 Plume Boundary
Sep-2017 Plume Boundary

Chloroethenes
Lower Bedrock

Plume Differences Mar-2016 vs Sep-2017



Spatial Change Indicator™

Decrease Increase

Plume Characteristics

Area: **2% Decrease**
Average Concentration: **7% Increase**
Mass Indicator: **5% Increase**
Mass Increase: **34.1 moles Increase**
Mass Decrease: **15.6 moles Decrease**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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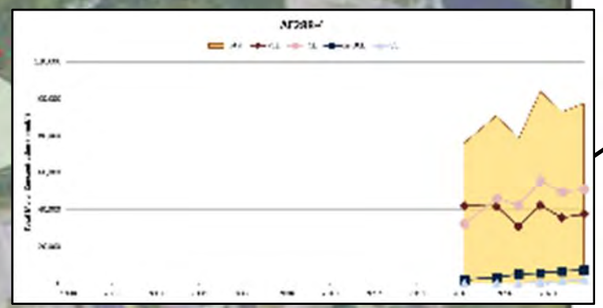
Plume Differences Mar-2016 vs Sep-2021

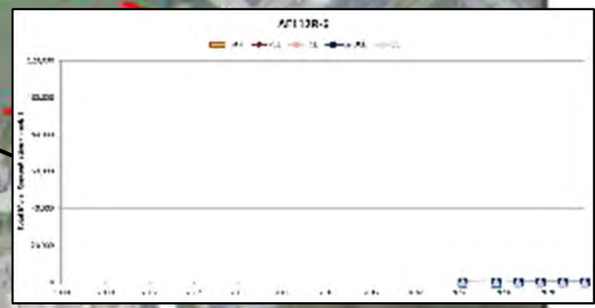
Mar-201











0 ft 925 ft 185

0 ft 600 ft 1200 ft

Concentration (nmol/L)

0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500

Spatial Change Indicator™

Decrease — Increase

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Mar-2016 Plume Boundary
- Sep-2021 Plume Boundary

Plume Characteristics

Area: **1% Increase**
Average Concentration: **16% Decrease**
Mass Indicator: **15% Decrease**
Mass Increase: **22.5 moles Increase**
Mass Decrease: **80.5 moles Decrease**

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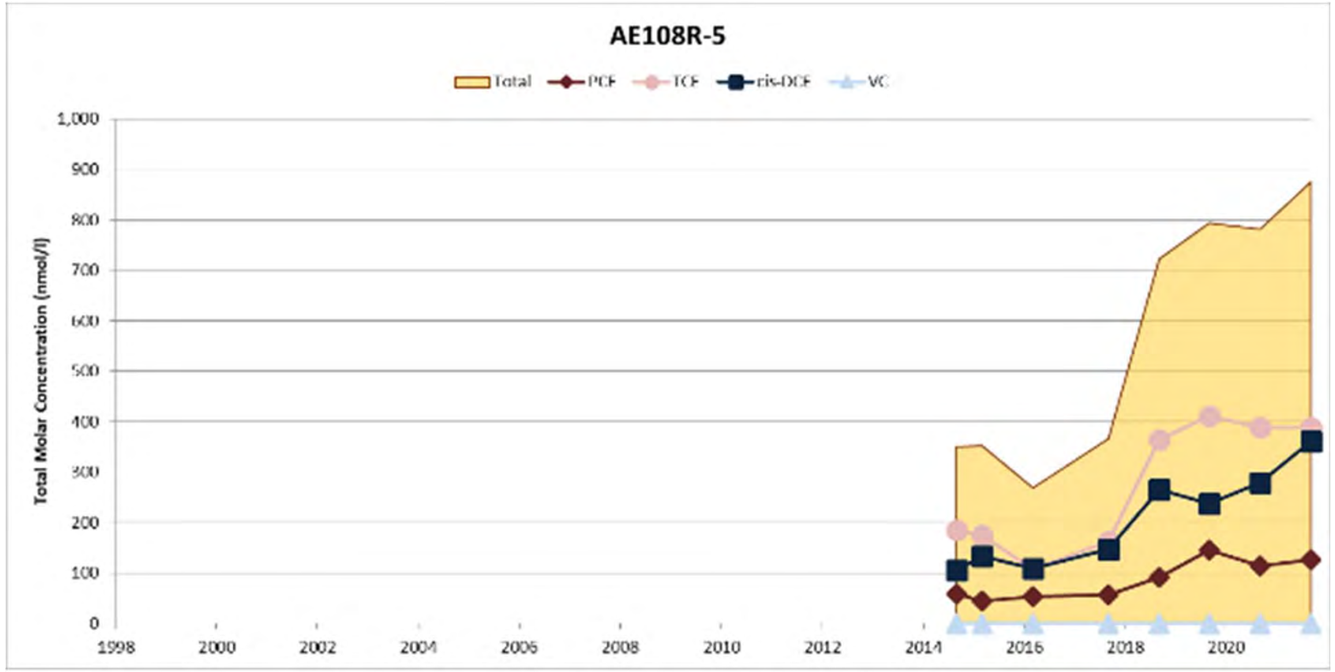
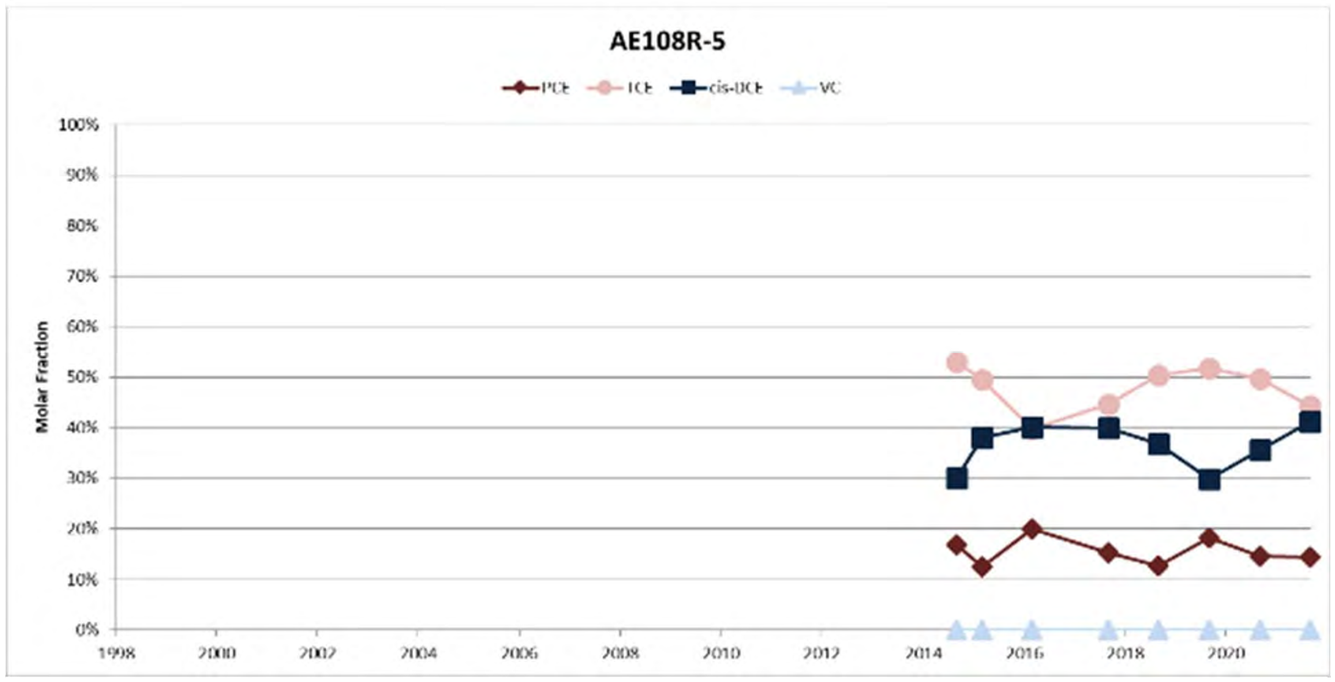
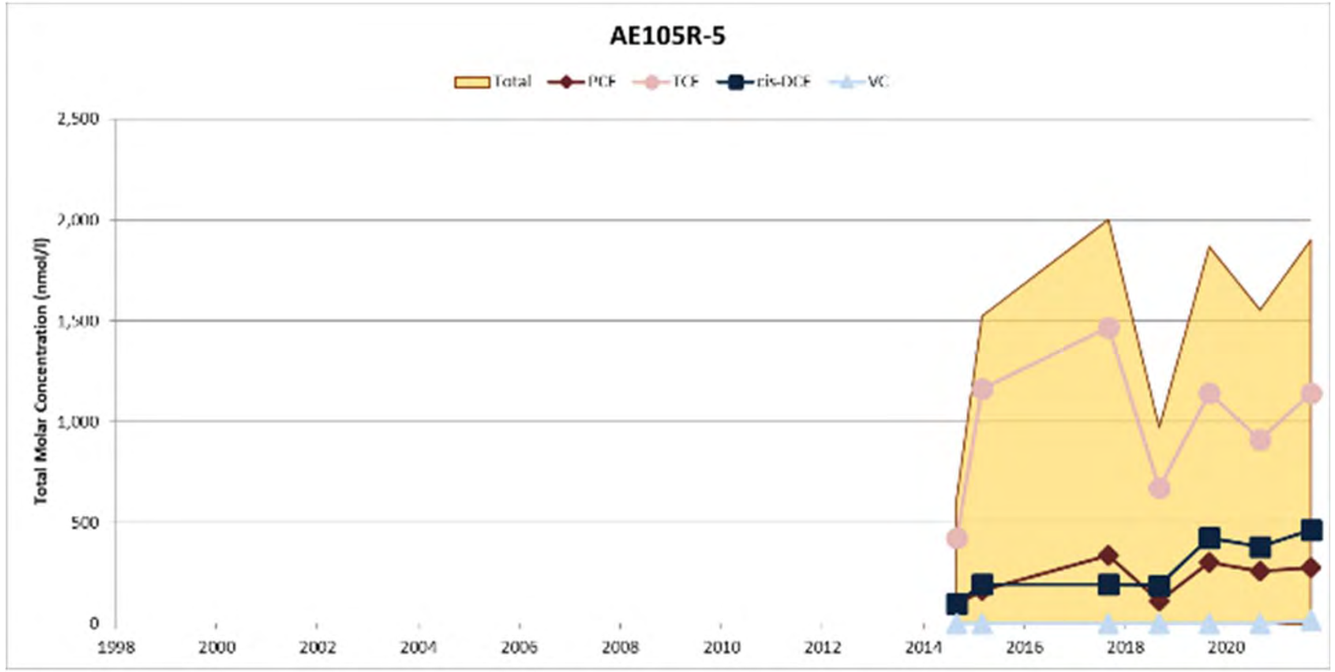
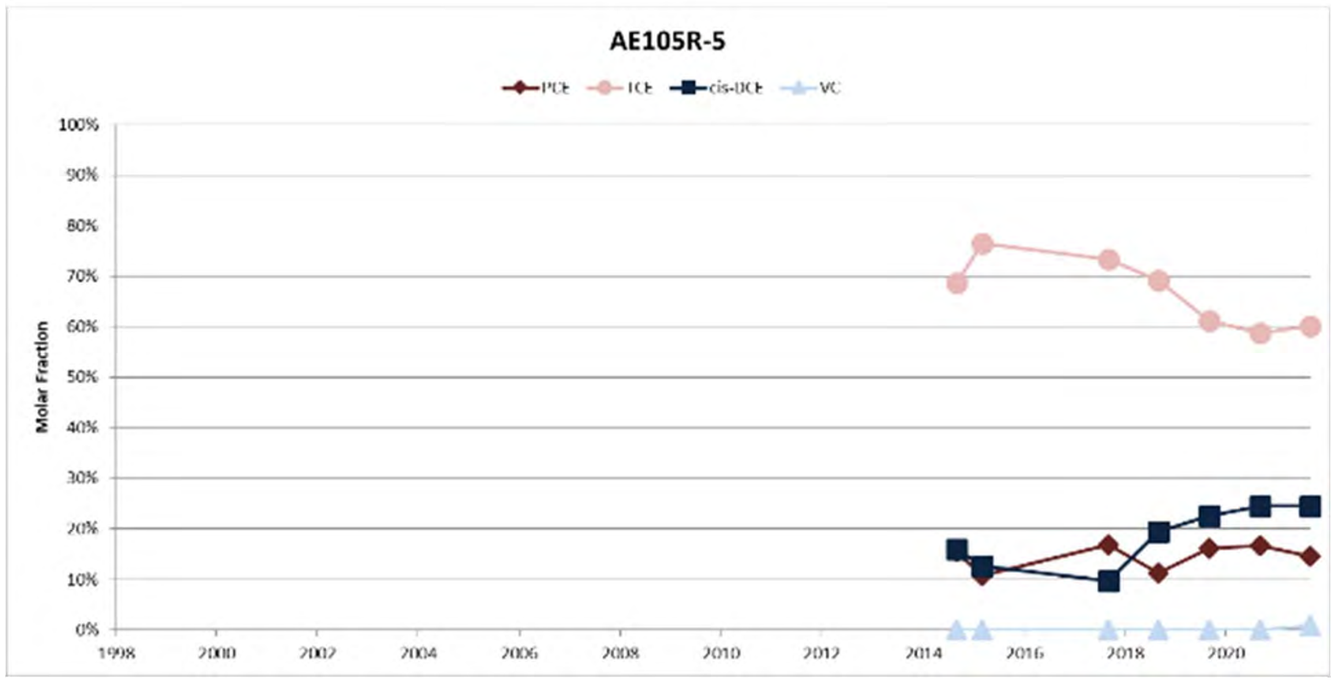

AE108R-5
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
1,000
900
800
700
600
500
400
300
200
100
0
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

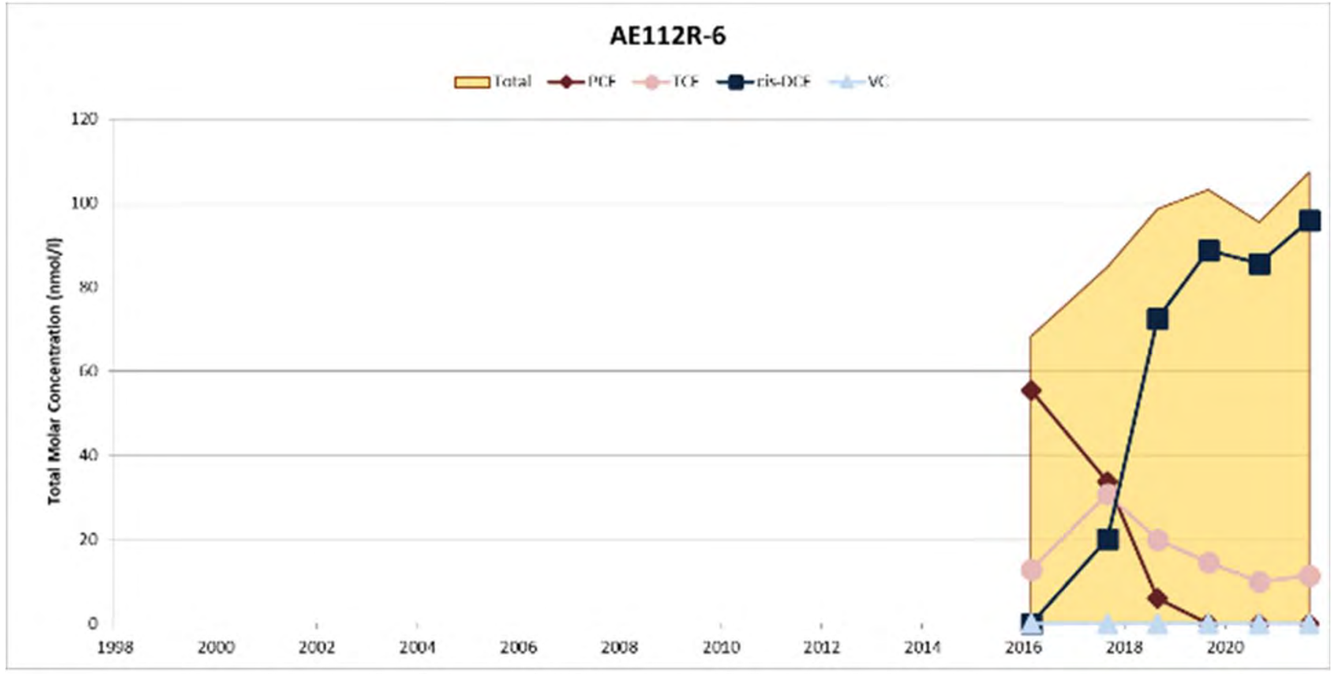

AE108R-5
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

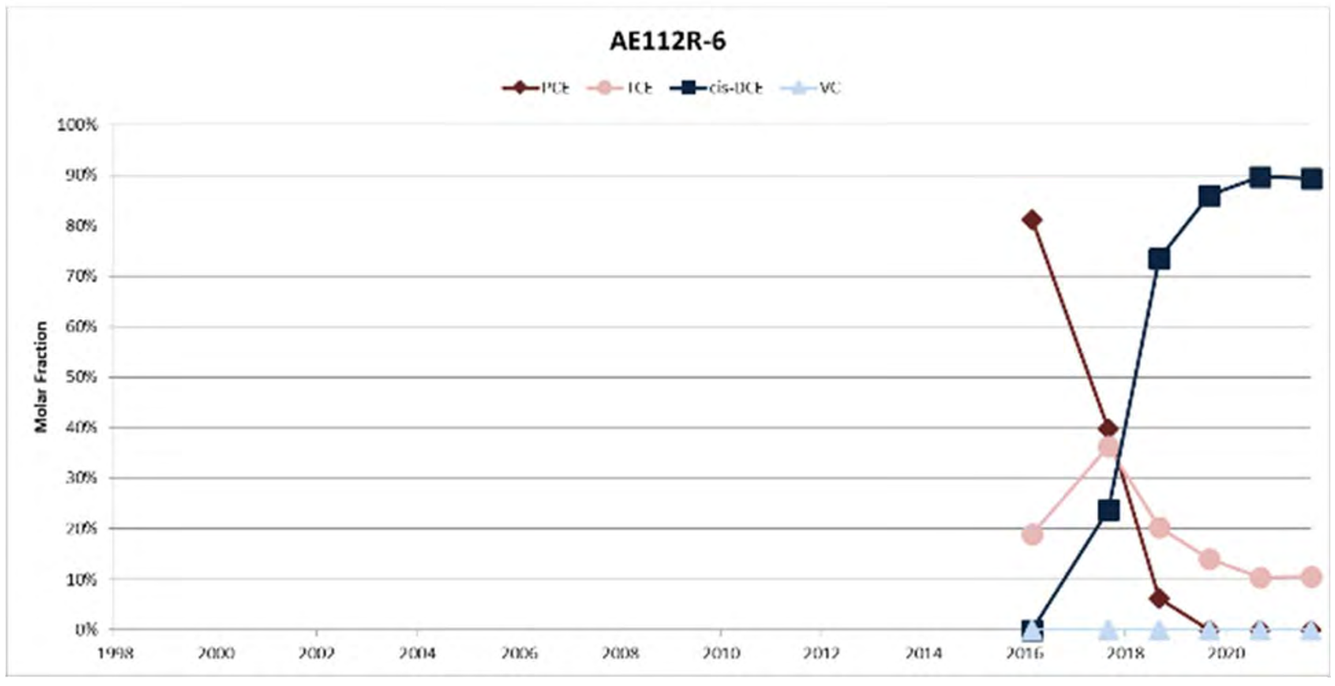
© WSP 2021


AE105R-5
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
2,500
2,000
1,500
1,000
500
0
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

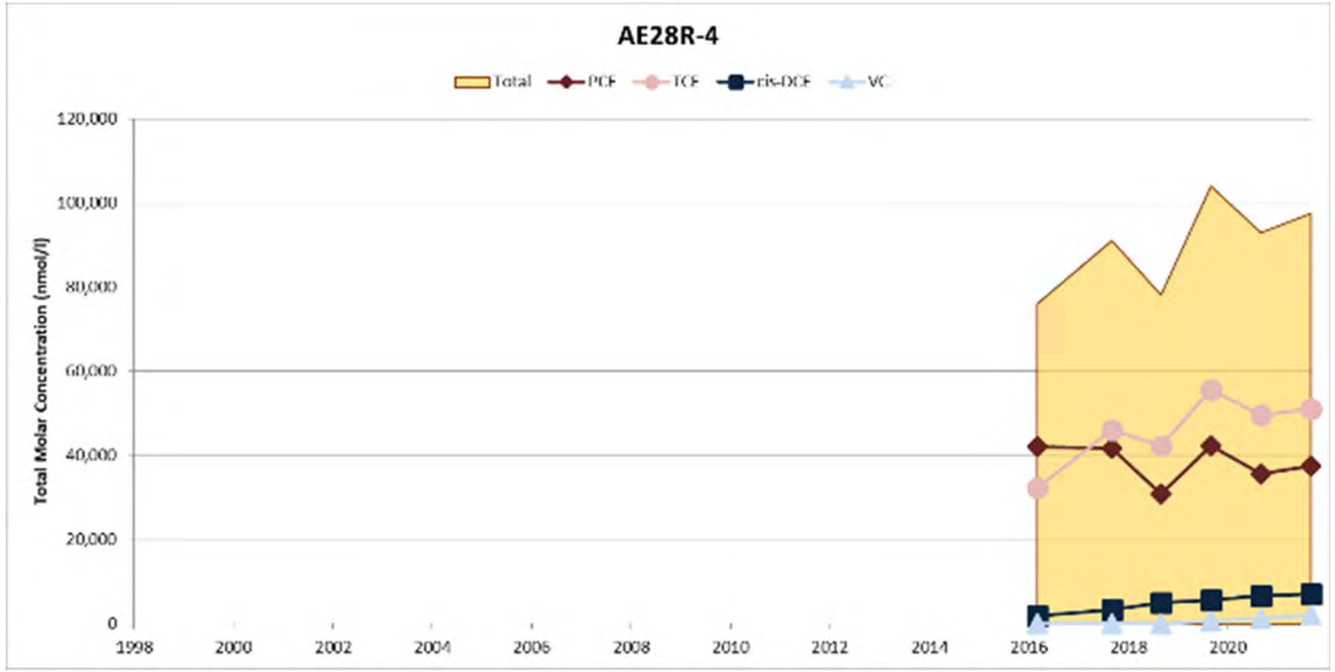

AE105R-5
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

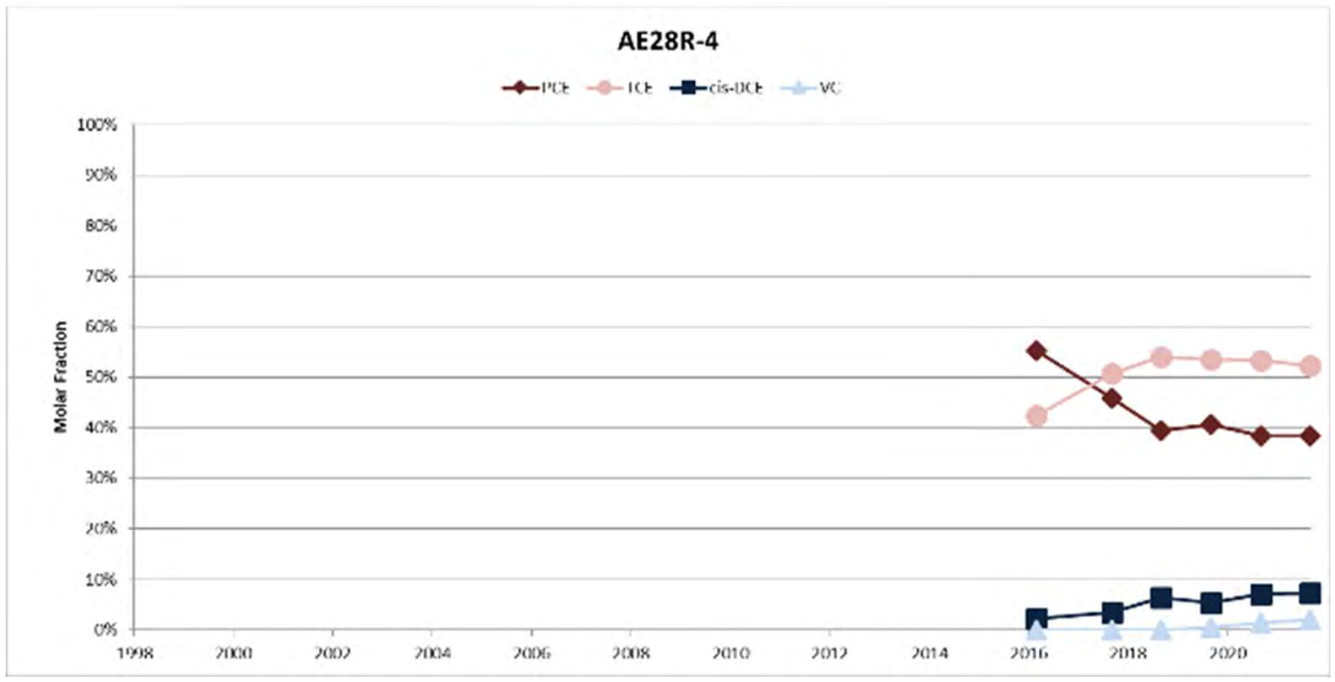
© WSP 2021


AE112R-6
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
120
100
80
60
40
20
0
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE112R-6
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

© WSP 2021


AE28R-4
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
120,000
100,000
80,000
60,000
40,000
20,000
0
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE28R-4
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

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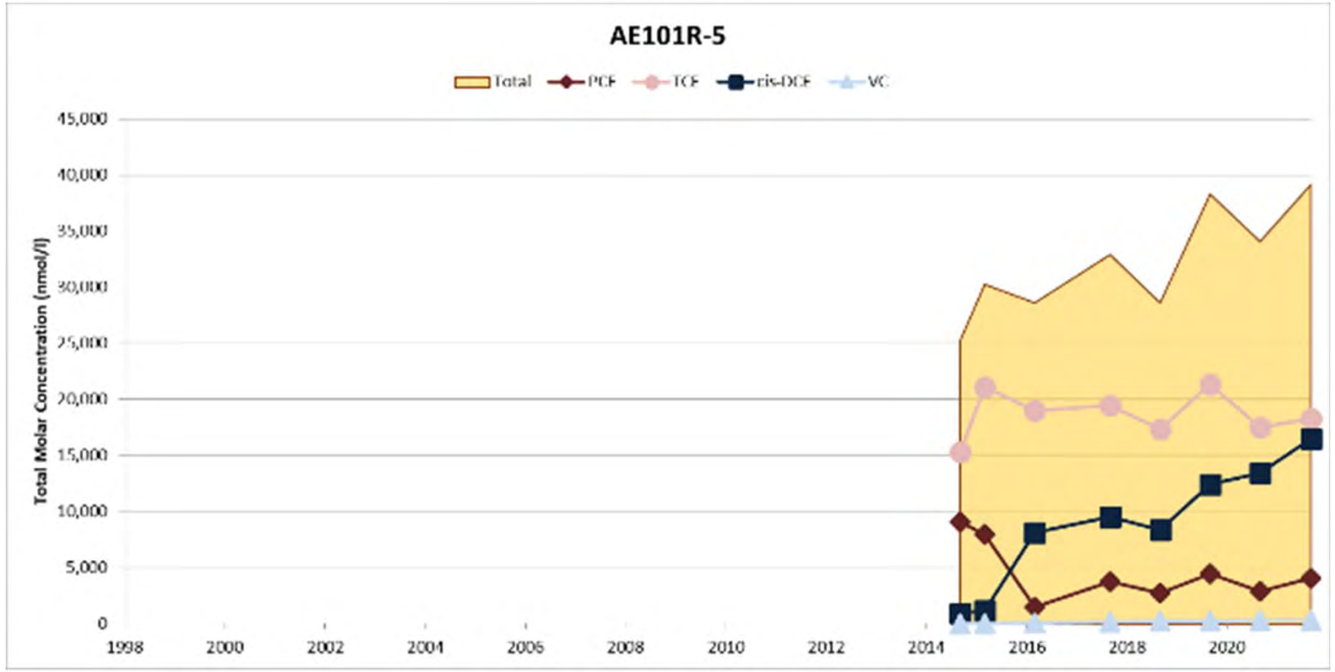
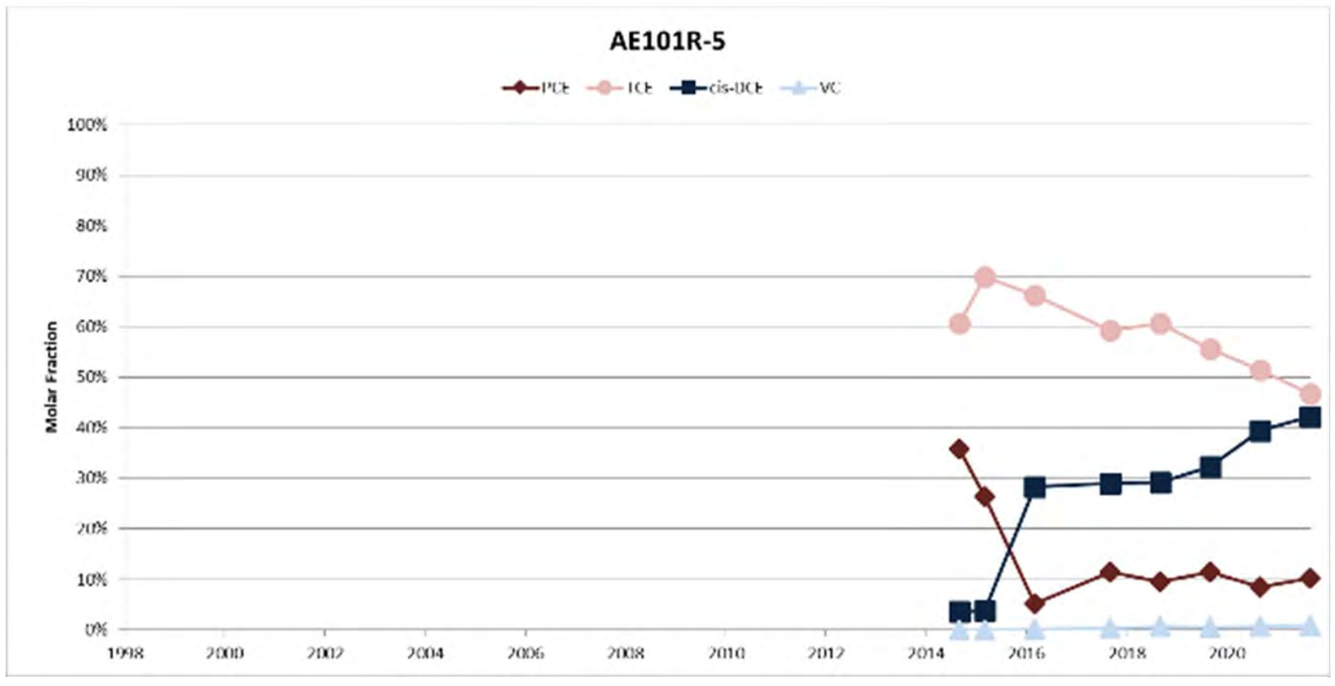
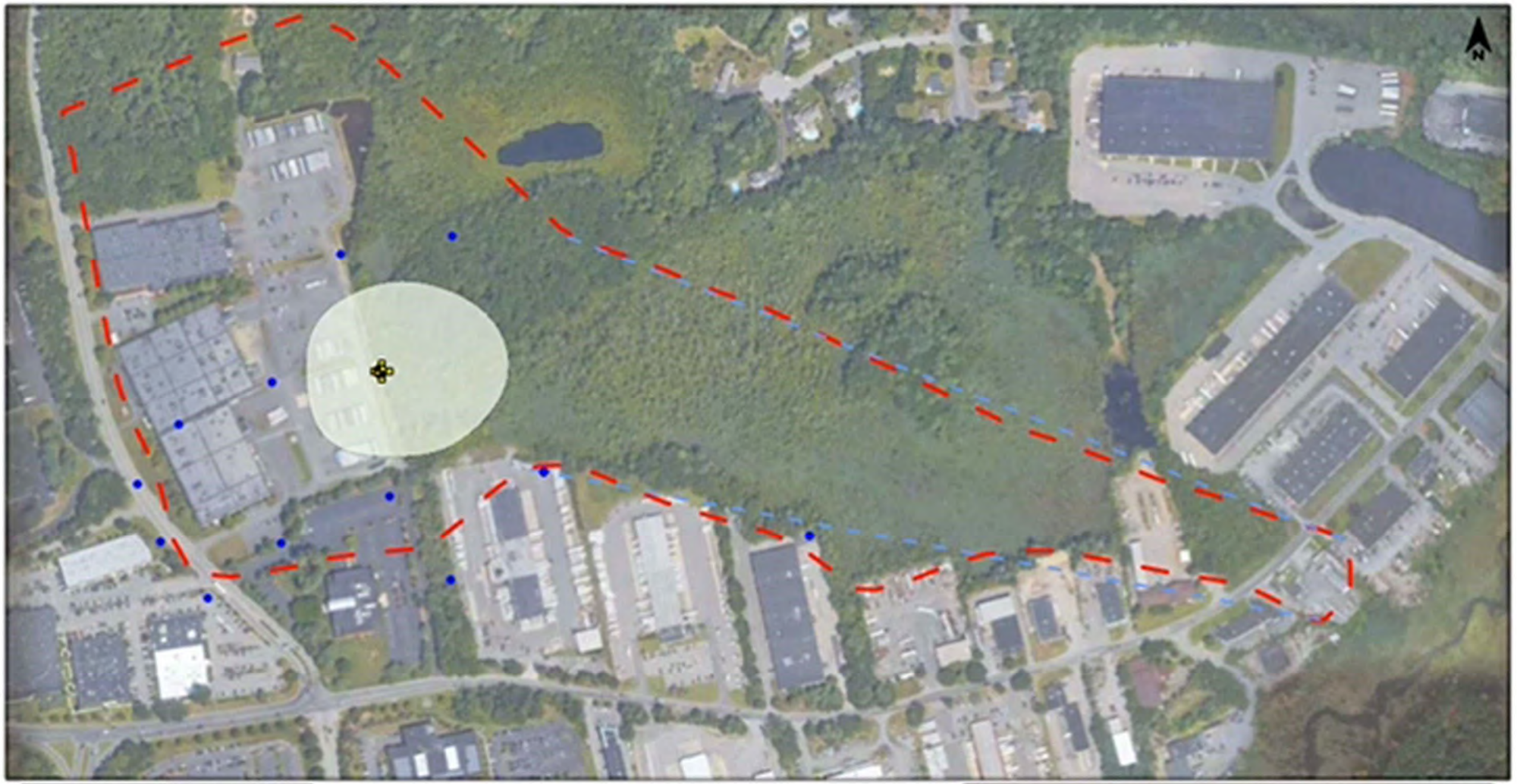

AE101R-5
Total
PCE
TCE
cis-DCE
VC
Total Molar Concentration (nmol/l)
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


AE101R-5
PCE
TCE
cis-DCE
VC
Molar Fraction
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

© WSP 2021



1,4-Dioxane
Lower Bedrock
Sep-2009

Concentration (µg/L)

- 45
- 40
- 35
- 30
- 25
- 20
- 15
- 10
- 5
- 0.3

0 ft 450 ft 900 ft

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Control Fence

Plume Characteristics

Plume Area: **0.007 acres**
Plume Average Concentration: **5.2 µg/L**
Plume Mass Indicator: **0.000 lbs**

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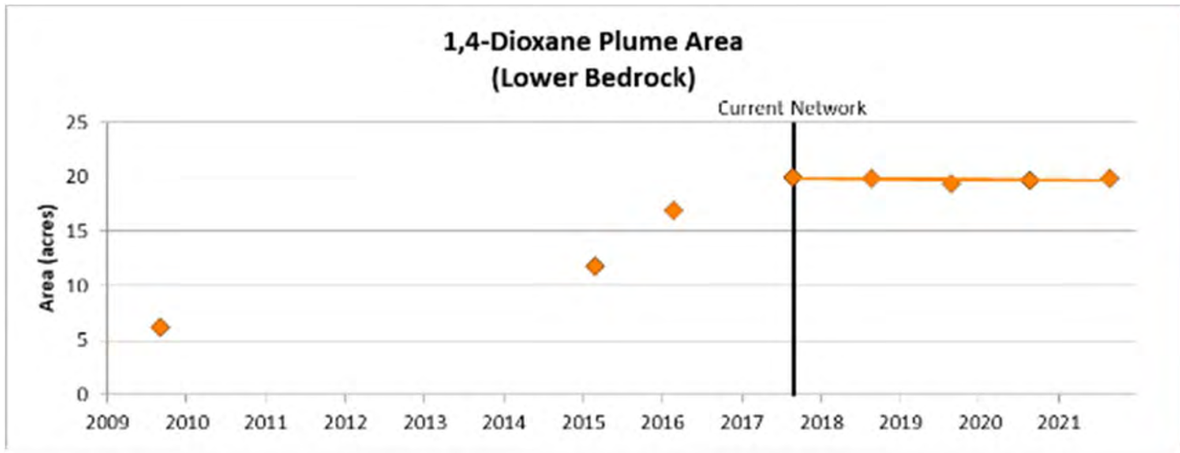
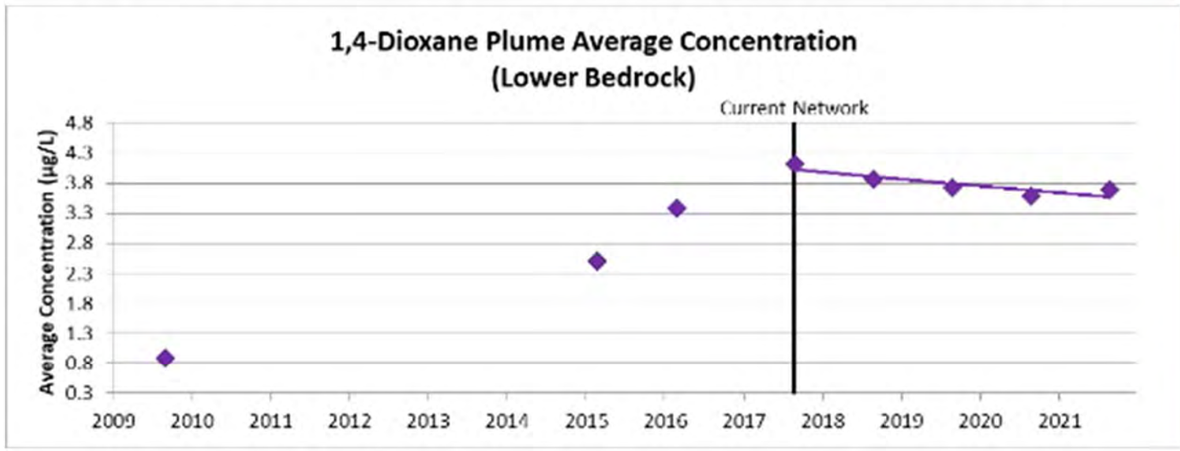
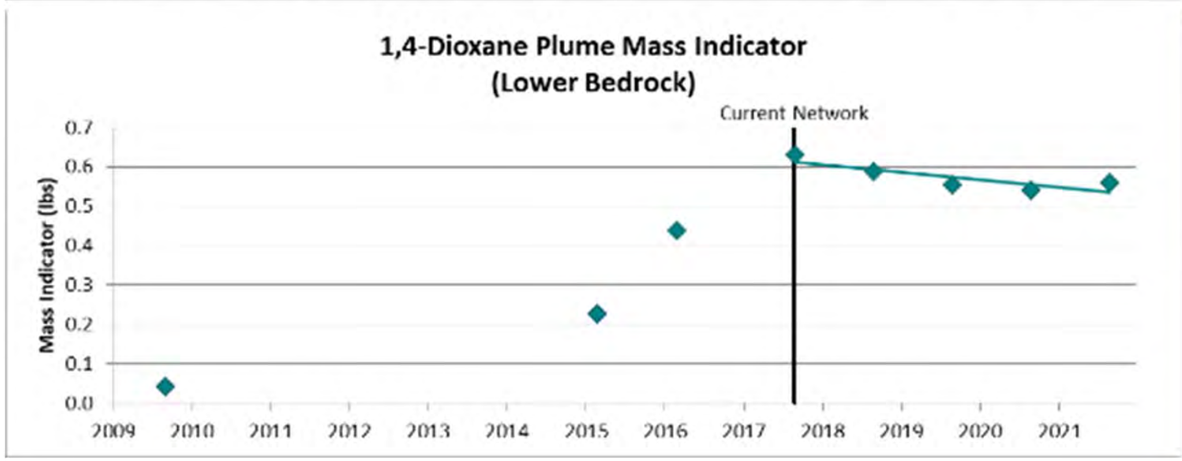


Sep-2017 to Sep-2021
No Trend
Mann-Kendall: 76% Confidence
Regression: 46% Confidence



Sep-2017 to Sep-2021
Decreasing Trend
Mann-Kendall: 96% Confidence
Regression: 95% Confidence



Sep-2017 to Sep-2021
No Trend/Decreasing Trend
Mann-Kendall: 88% Confidence
Regression: 93% Confidence

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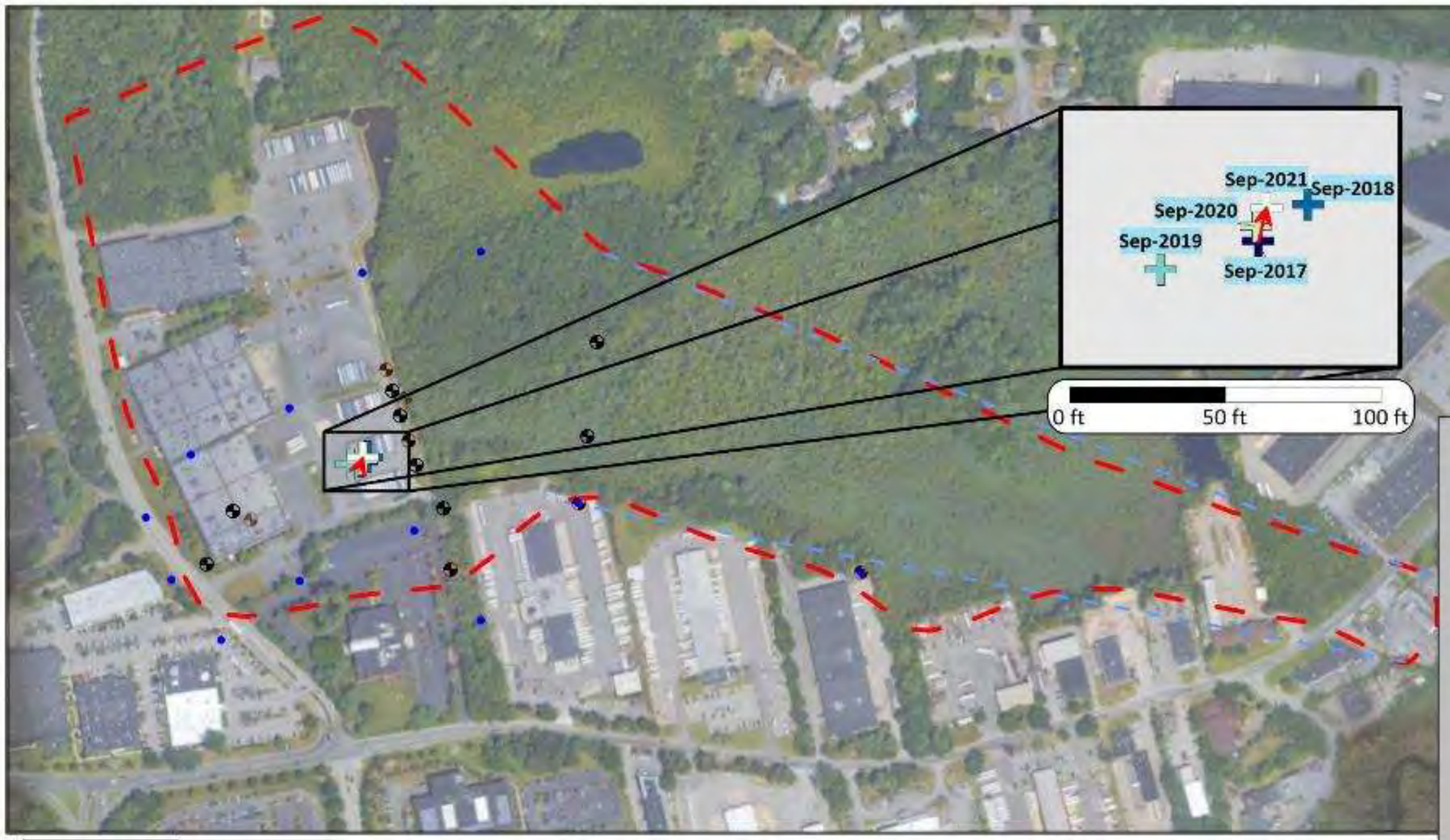
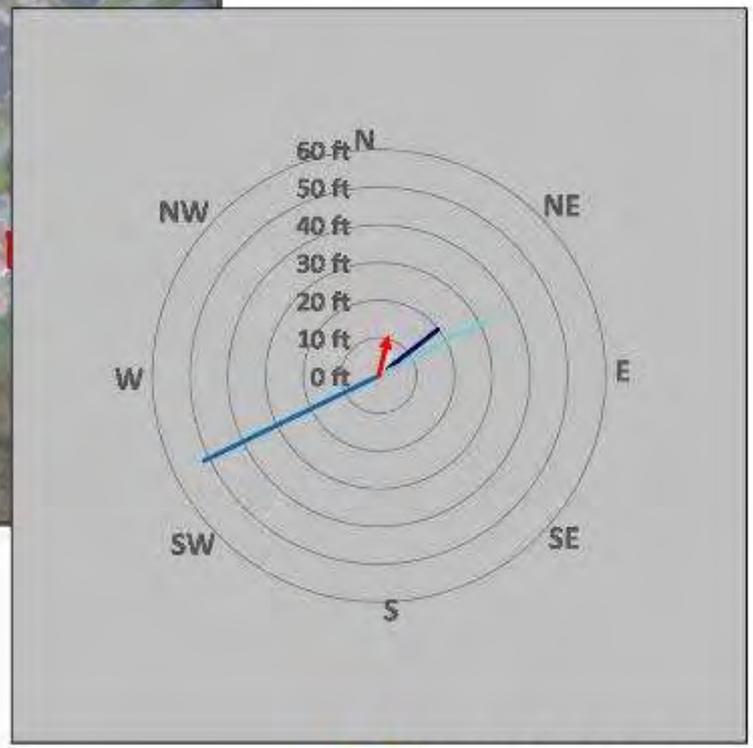
1,4-Dioxane
Lower Bedrock
Center of Mass





Center of Mass Scale

Sep-2017 → **Sep-2021**

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Point
- MCP Site Boundary
- Net COM Movement
- Control Fence

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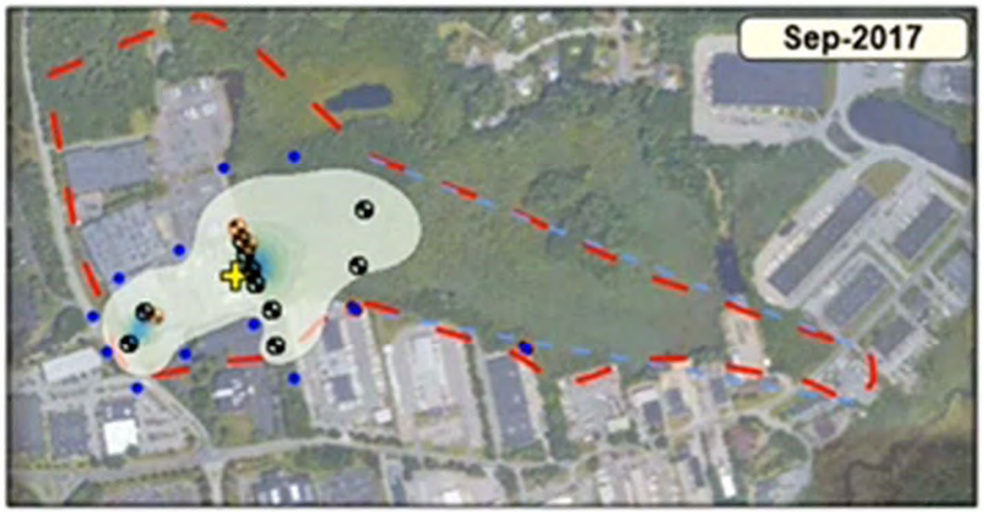
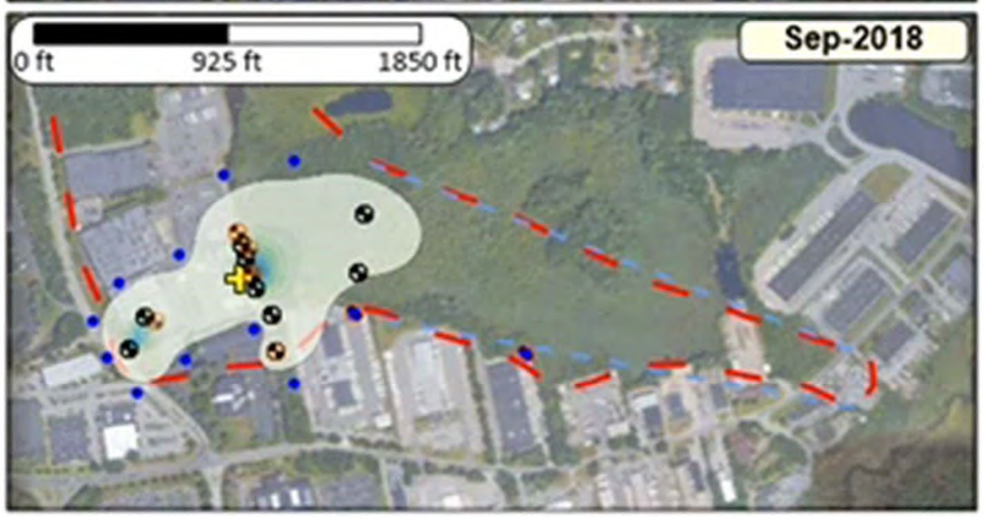
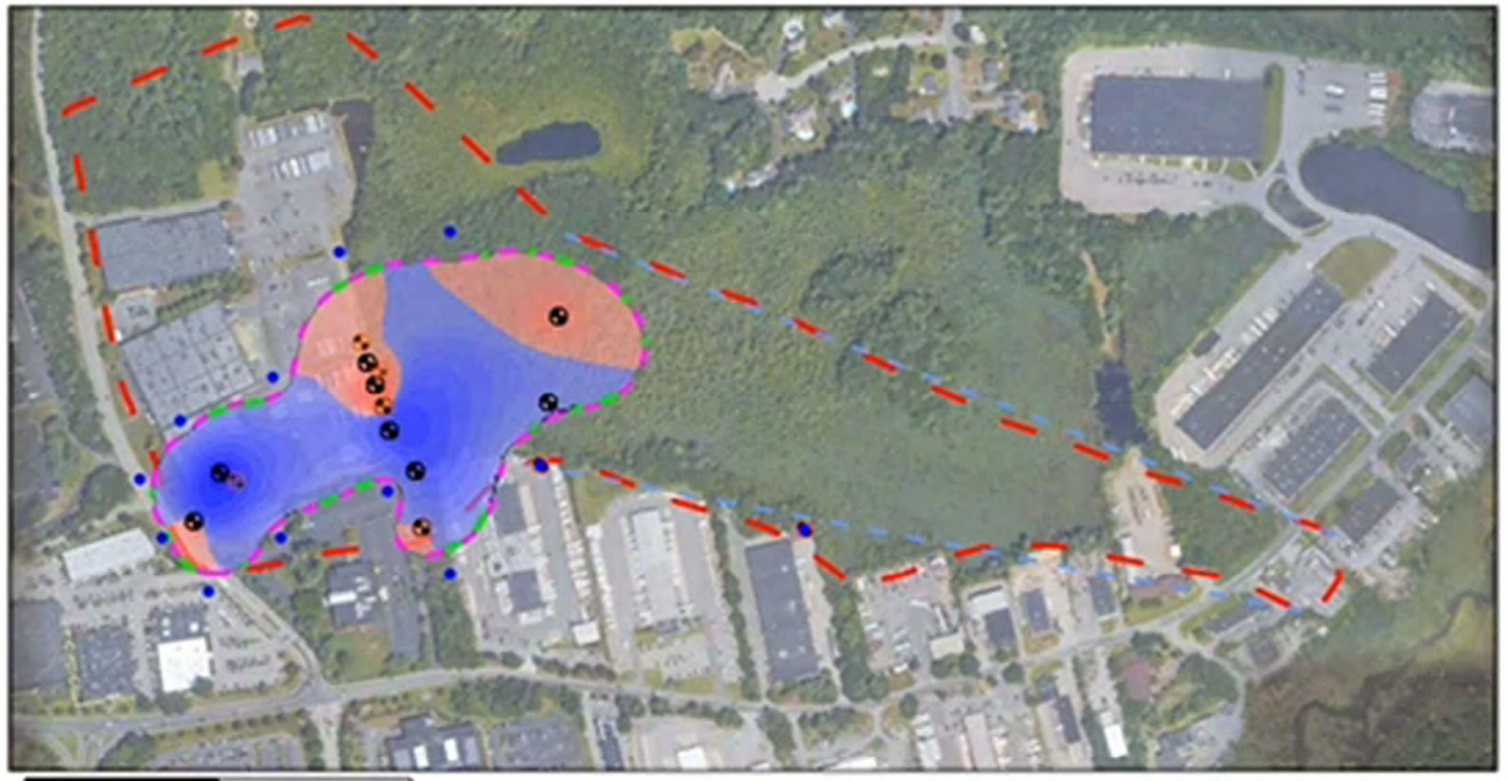
1,4-Dioxane
Lower Bedrock

Plume Differences Sep-2017 vs Sep-2018







Concentration (µg/L)

0.3 5 10 15 20 25 30 35 40 45

Spatial Change Indicator™

Decrease — Increase

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Fence
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2017 Plume Boundary
- Sep-2018 Plume Boundary

Plume Characteristics

Area: **1% Decrease**
Average Concentration: **6% Decrease**
Mass Indicator: **7% Decrease**
Mass Increase: **0.00 lbs Increase**
Mass Decrease: **0.04 lbs Decrease**

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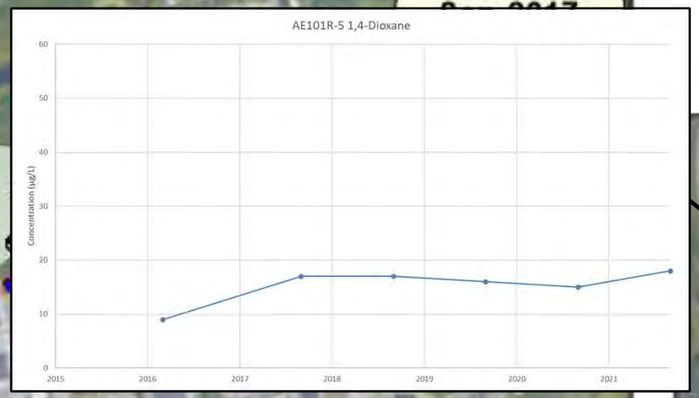
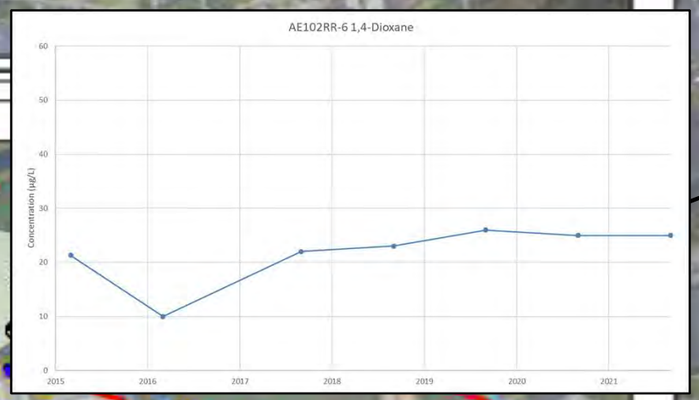
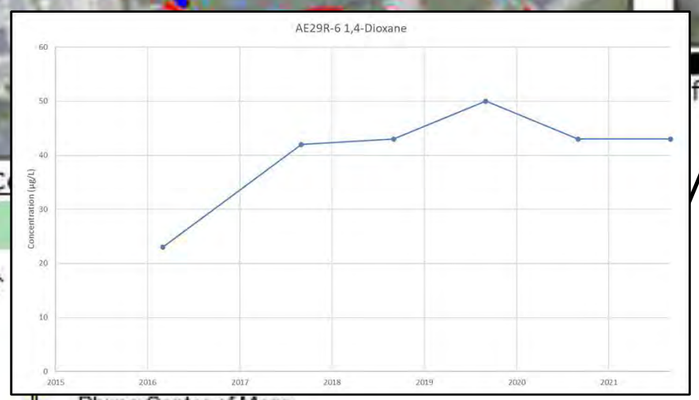
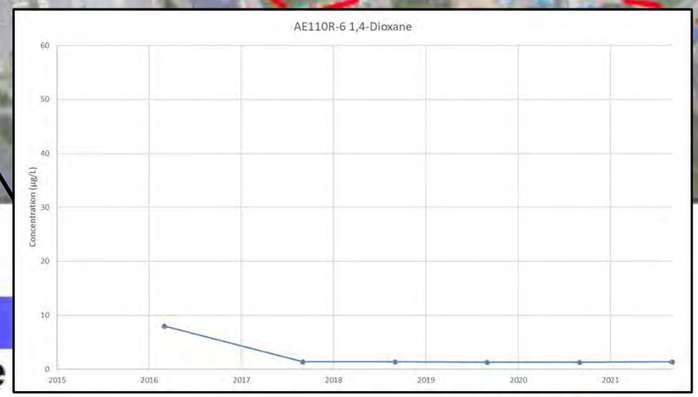
1,4-Dioxane
Lower Bedrock

Plume Differences Sep-2017 vs Sep-2021









0 ft 925 ft

ft 600 ft 1200 ft

0.3 5 10 15

Decrease

LEGEND

- MW-4 Monitoring Well
- MW-5 Hanging Well
- Control Fence
- Plume Center of Mass
- Control Point
- MCP Site Boundary
- Sep-2017 Plume Boundary
- Sep-2021 Plume Boundary

Plume Characteristics

Area: **1% Decrease**
Average Concentration: **11% Decrease**
Mass Indicator: **11% Decrease**
Mass Increase: **0.00 lbs Increase**
Mass Decrease: **0.08 lbs Decrease**

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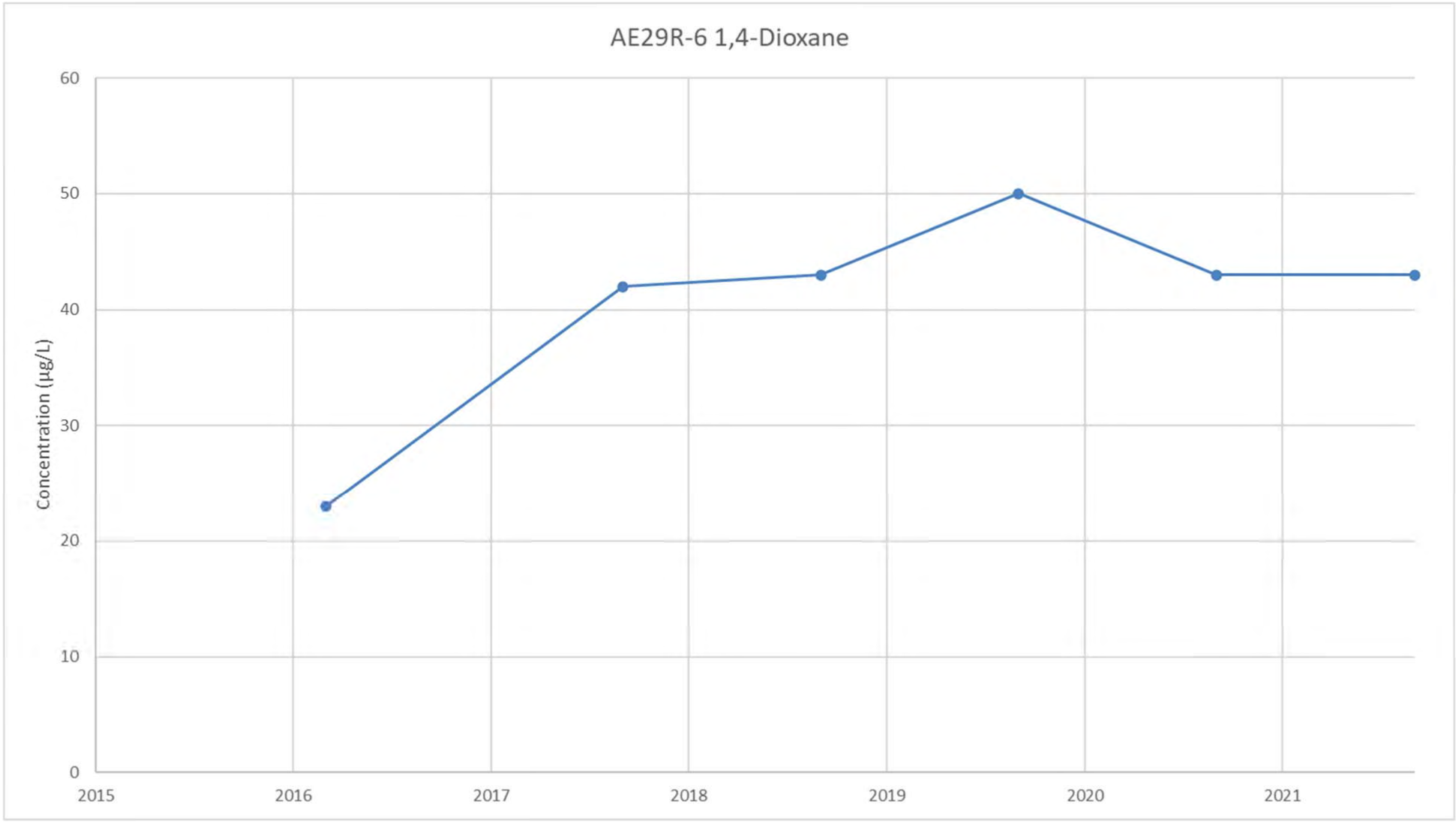
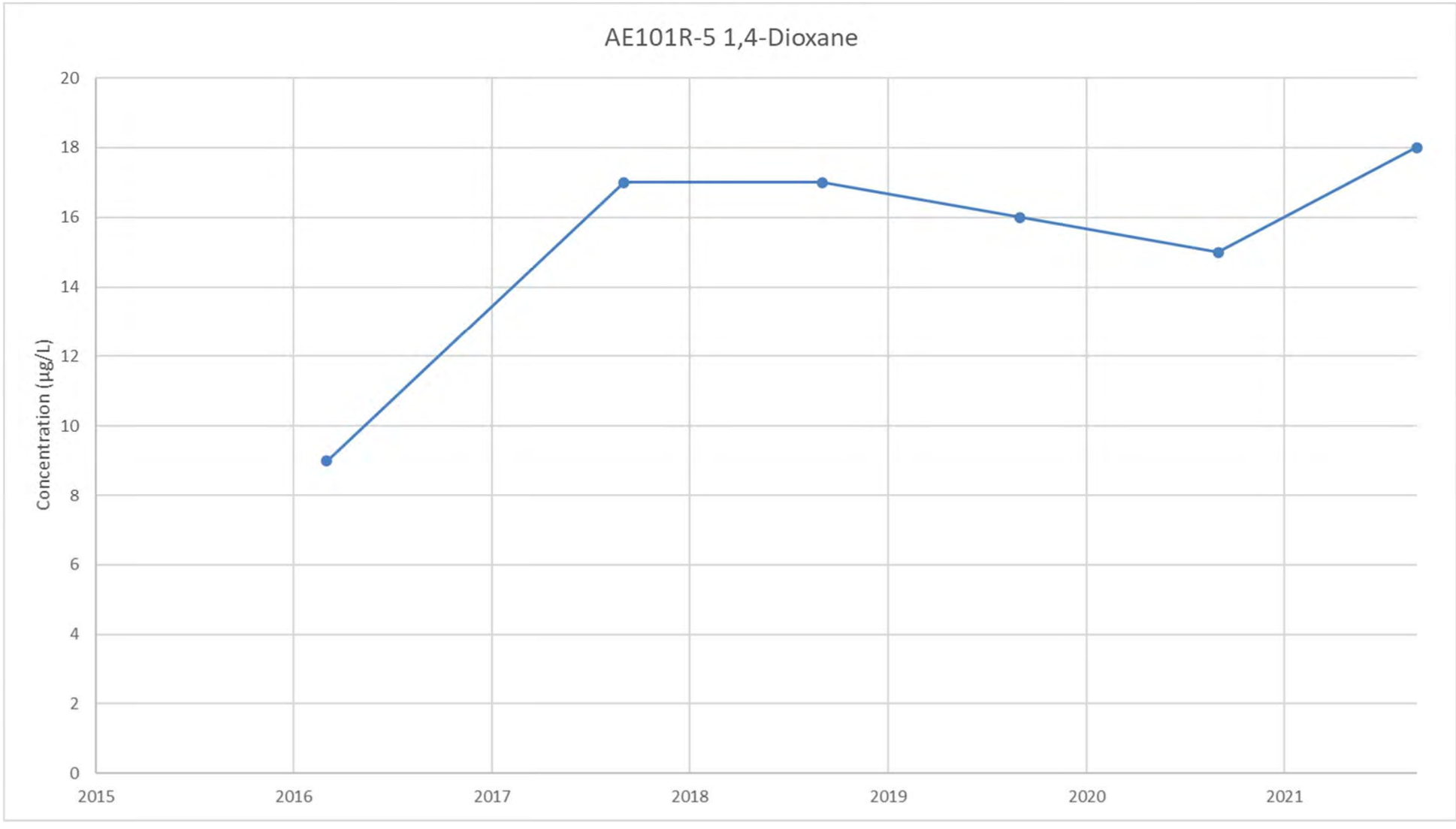
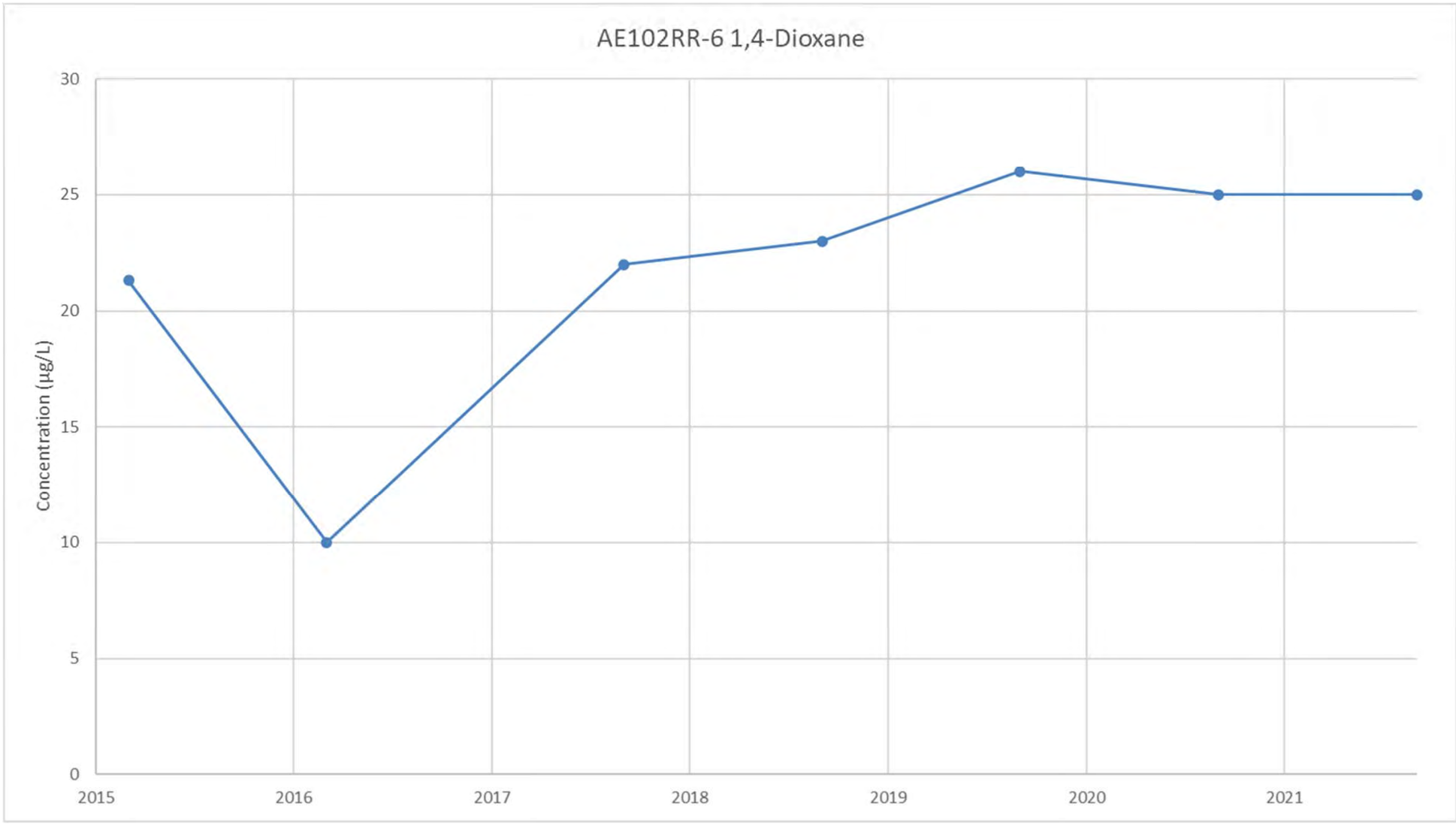
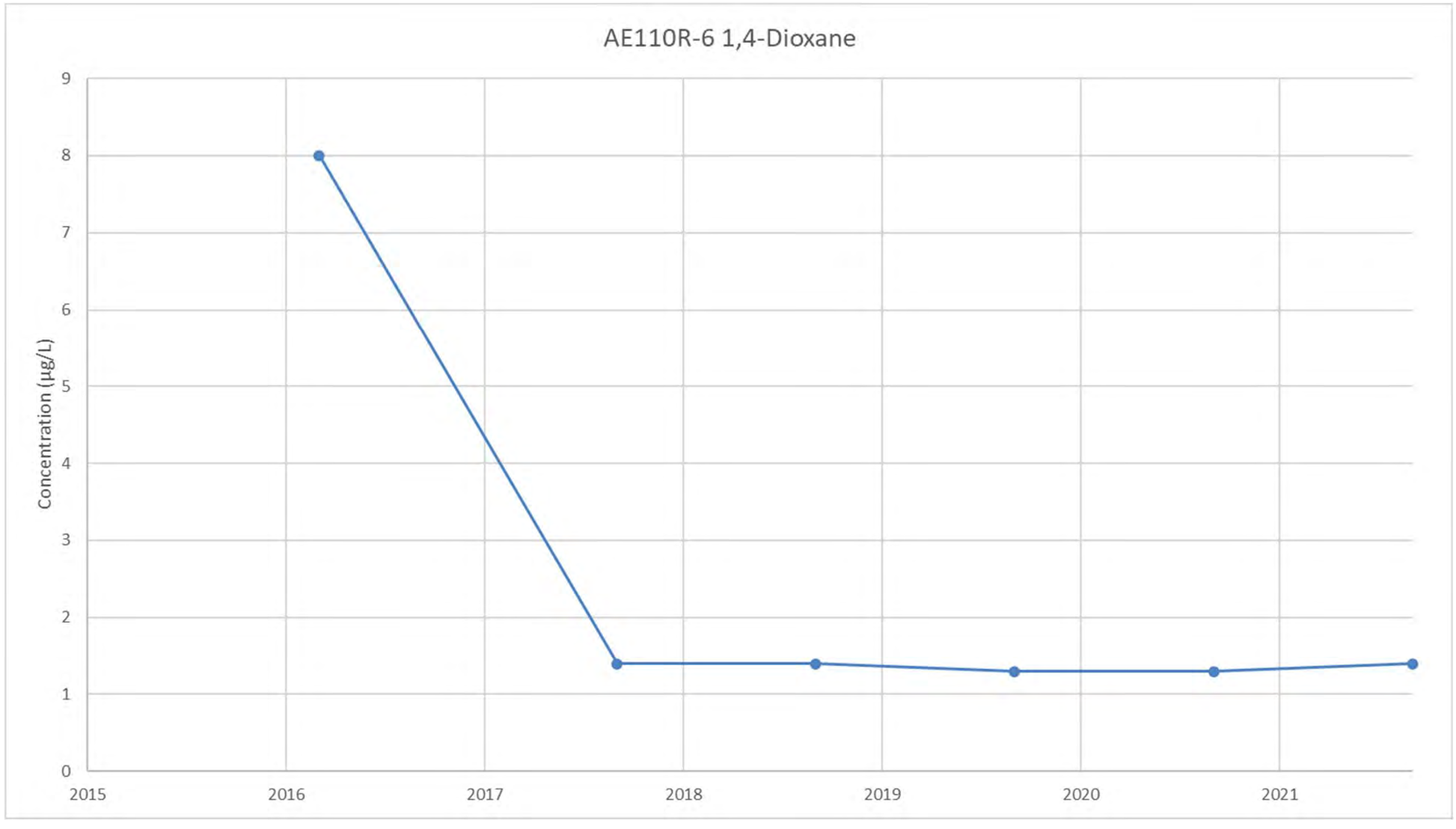
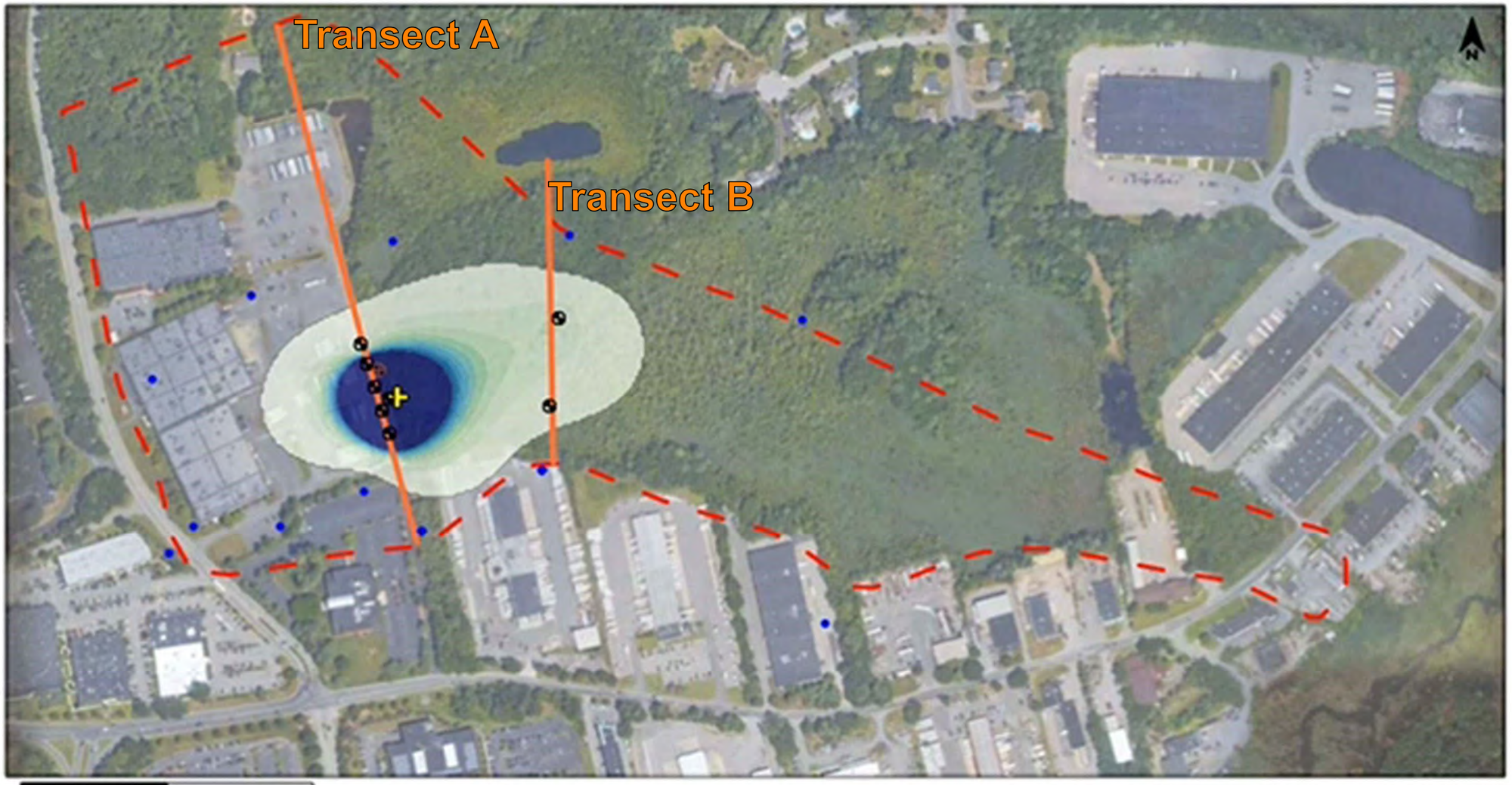

AE29R-6 1,4-Dioxane
Concentration (µg/L)
60
50
40
30
20
10
0
2015
2016
2017
2018
2019
2020
2021


AE101R-5 1,4-Dioxane
Concentration (µg/L)
20
18
16
14
12
10
8
6
4
2
0
2015
2016
2017
2018
2019
2020
2021


AE102RR-6 1,4-Dioxane
Concentration (µg/L)
30
25
20
15
10
5
0
2015
2016
2017
2018
2019
2020
2021


AE110R-6 1,4-Dioxane
Concentration (µg/L)
9
8
7
6
5
4
3
2
1
0
2015
2016
2017
2018
2019
2020
2021



Chloroethenes
Lower Bedrock
Sep-2014

Concentration (nmol/L)

4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Transect A

Average Concentration: **21,336 nmol/L**
Mass Flux: **7.7 mol/yr**

Transect B

Average Concentration: **468 nmol/L**
Mass Flux: **0.15 mol/yr**

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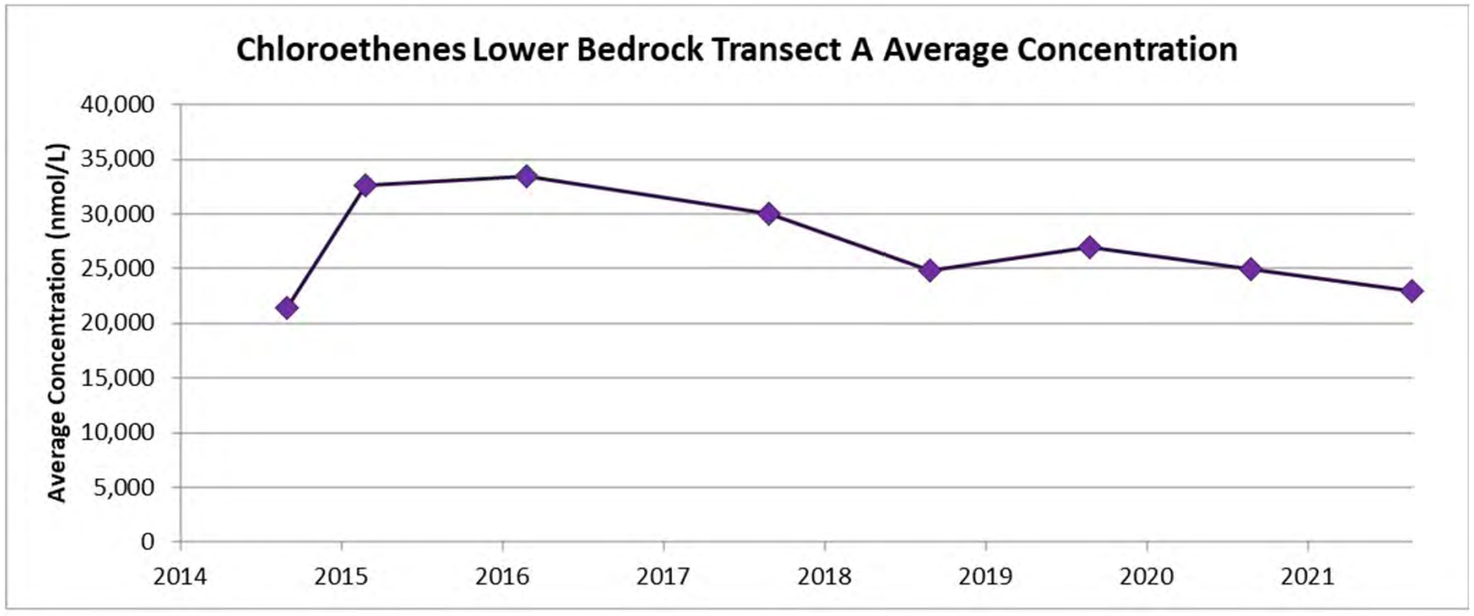
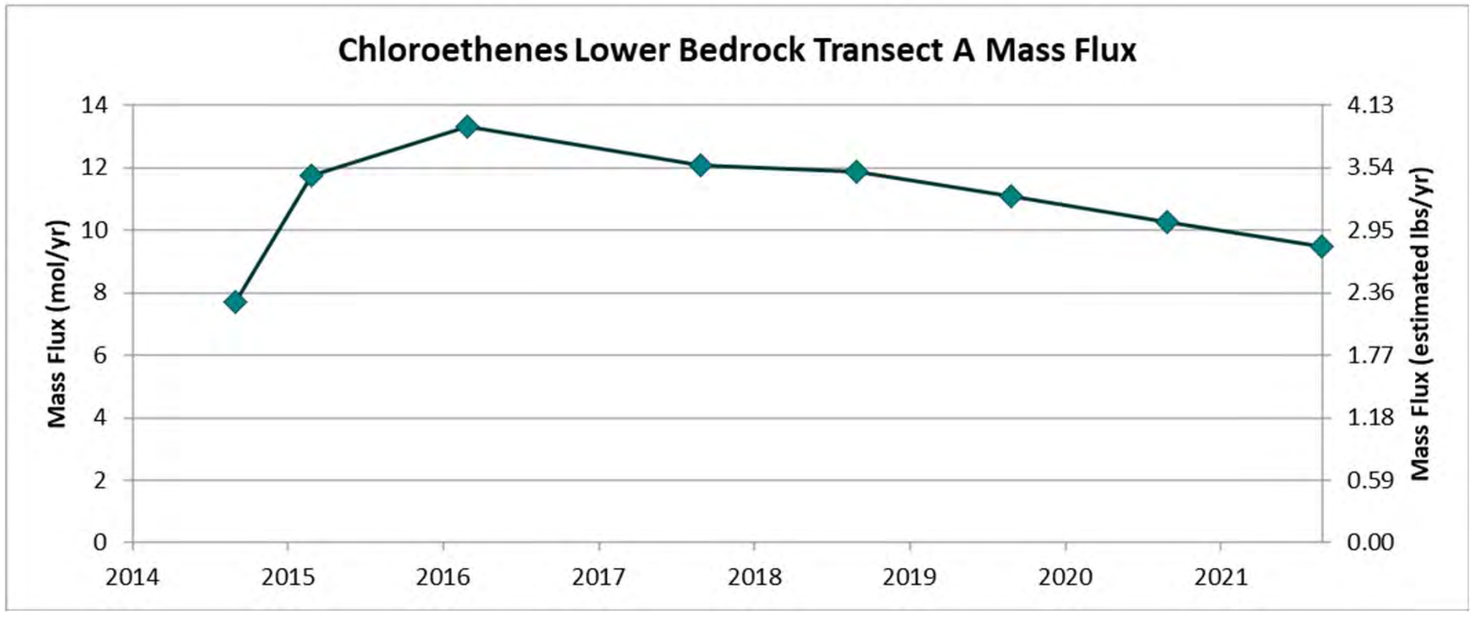

Chloroethenes Lower Bedrock Transect A Average Concentration
Average Concentration (nmol/L)
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Lower Bedrock Transect A Mass Flux
Mass Flux (mol/yr)
14
12
10
8
6
4
2
0
Mass Flux (estimated lbs/yr)
4.13
3.54
2.95
2.36
1.77
1.18
0.59
0.00
2014
2015
2016
2017
2018
2019
2020
2021

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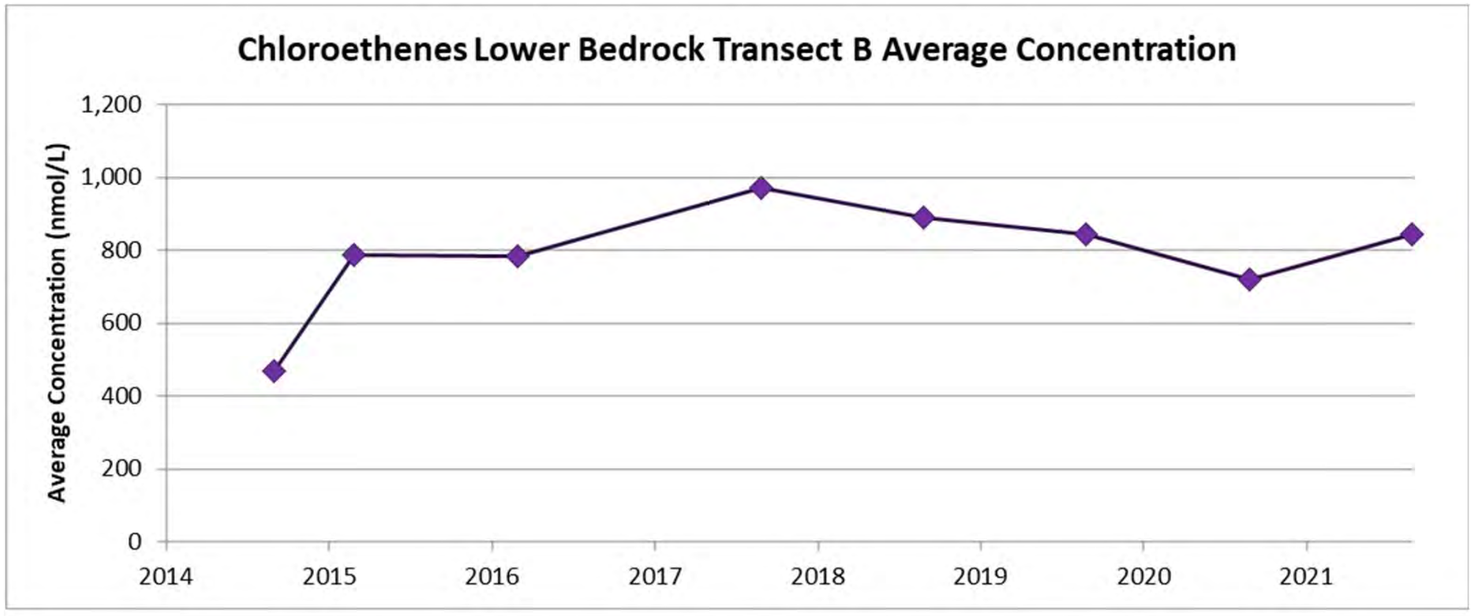
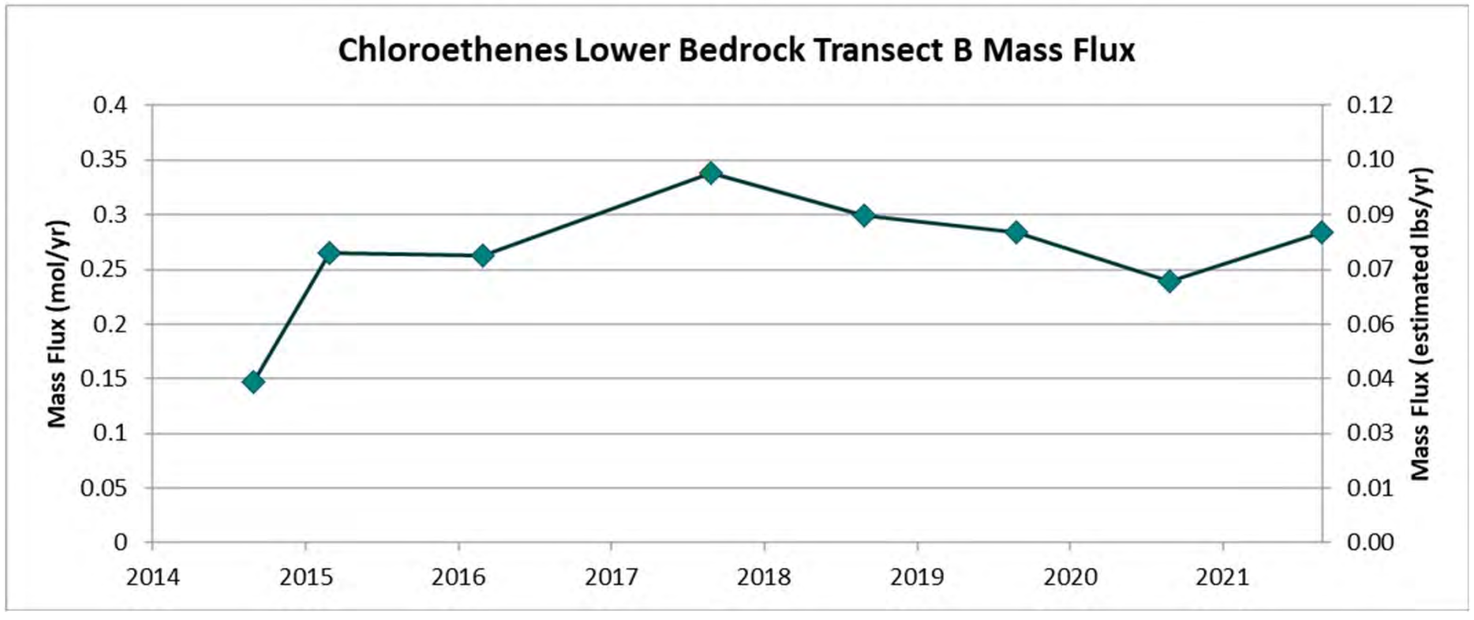

Chloroethenes Lower Bedrock Transect B Average Concentration
Average Concentration (nmol/L)
1,200
1,000
800
600
400
200
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Lower Bedrock Transect B Mass Flux
Mass Flux (mol/yr)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Mass Flux (estimated lbs/yr)
0.12
0.10
0.09
0.07
0.06
0.04
0.03
0.01
0.00
2014
2015
2016
2017
2018
2019
2020
2021

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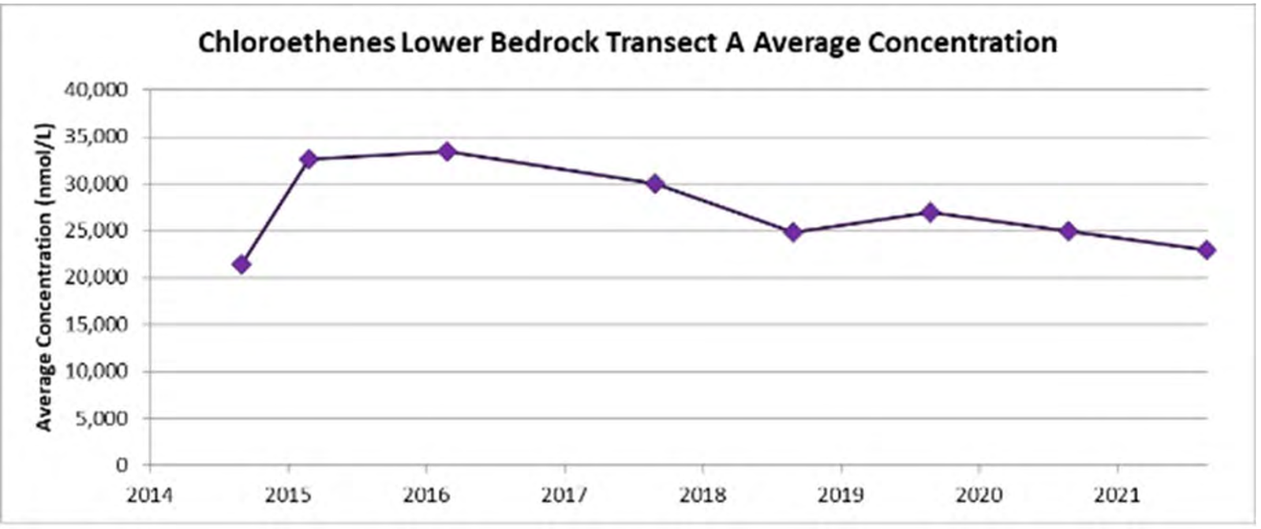
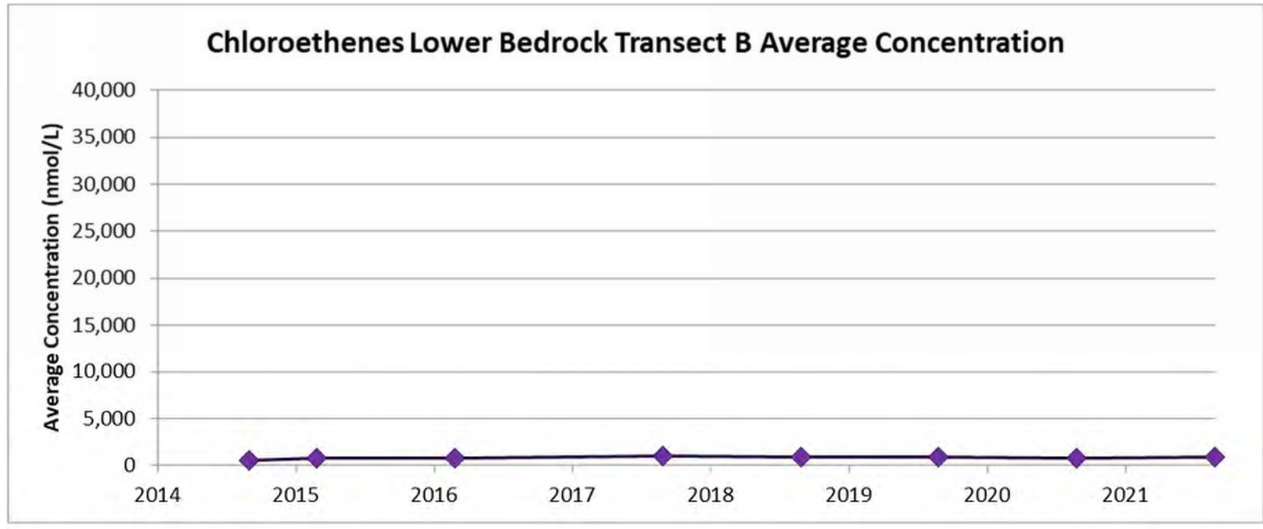
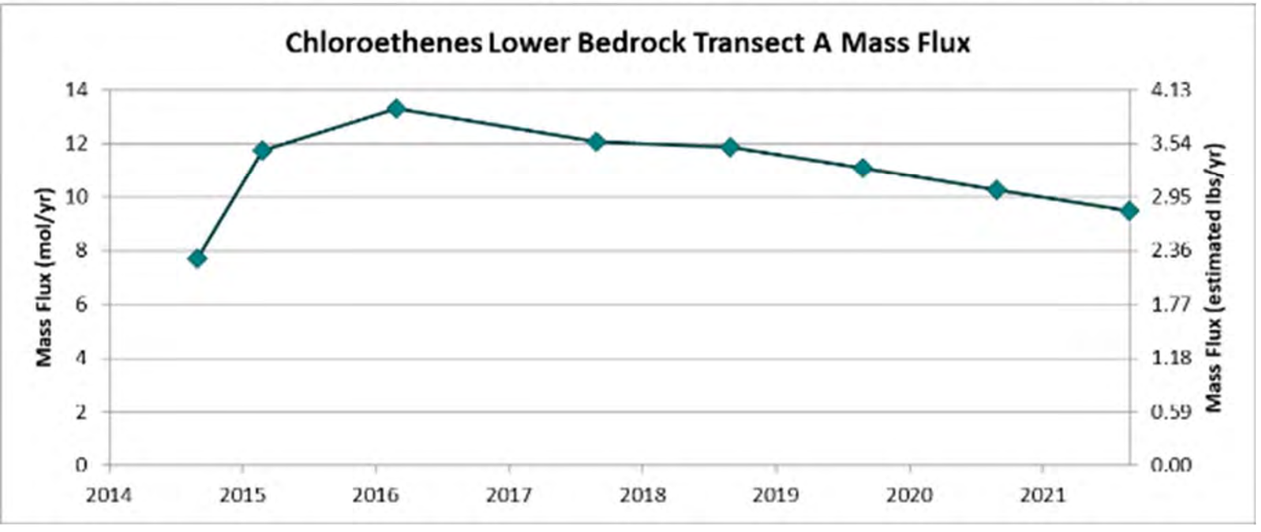
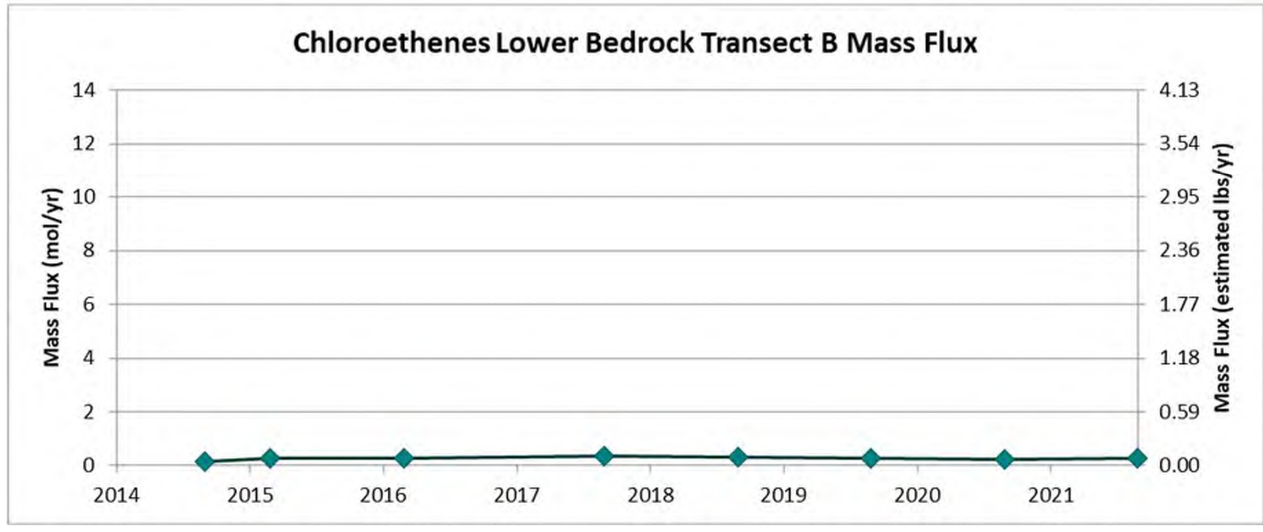

Chloroethenes Lower Bedrock Transect A Average Concentration
Average Concentration (nmol/L)
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Lower Bedrock Transect B Average Concentration
Average Concentration (nmol/L)
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Lower Bedrock Transect A Mass Flux
Mass Flux (mol/yr)
14
12
10
8
6
4
2
0
Mass Flux (estimated lbs/yr)
4.13
3.54
2.95
2.36
1.77
1.18
0.59
0.00
2014
2015
2016
2017
2018
2019
2020
2021


Chloroethenes Lower Bedrock Transect B Mass Flux
Mass Flux (mol/yr)
14
12
10
8
6
4
2
0
Mass Flux (estimated lbs/yr)
4.13
3.54
2.95
2.36
1.77
1.18
0.59
0.00
2014
2015
2016
2017
2018
2019
2020
2021

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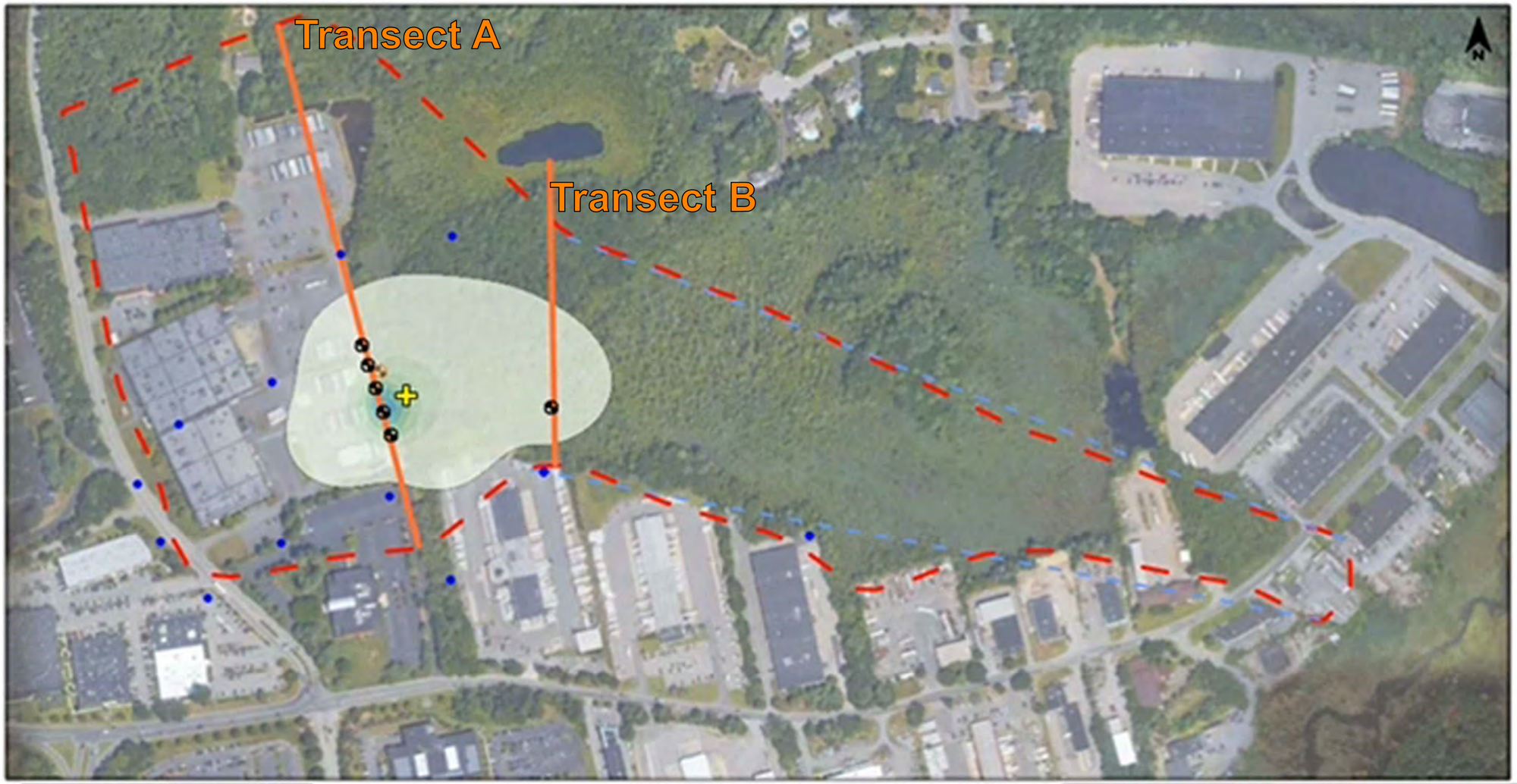

1,4-Dioxane
Lower Bedrock
Mar-2015

Concentration (µg/L)

45
40
35
30
25
20
15
10
5
0.3

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary
Control Fence

Transect A

Average Concentration: **8.5 µg/L**
Mass Flux: **0.0024 lbs/yr**

Transect B

Average Concentration: **0.6 µg/L**
Mass Flux: **0.0001 lbs/yr**

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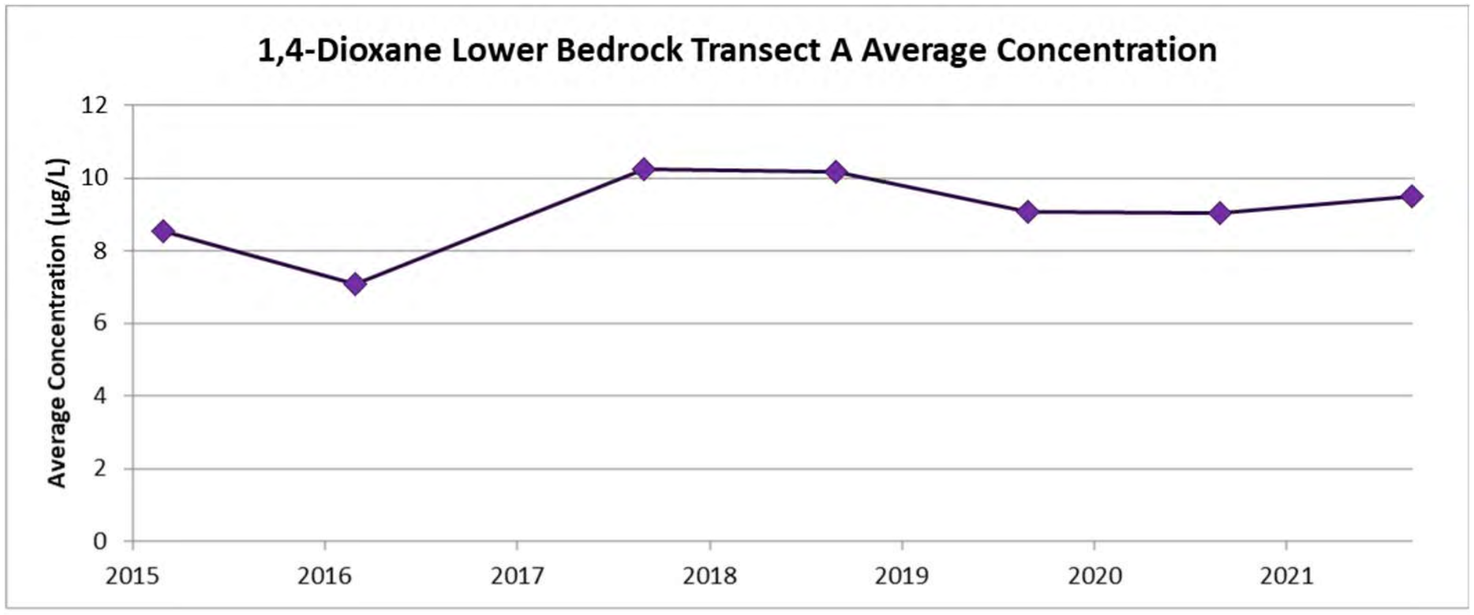
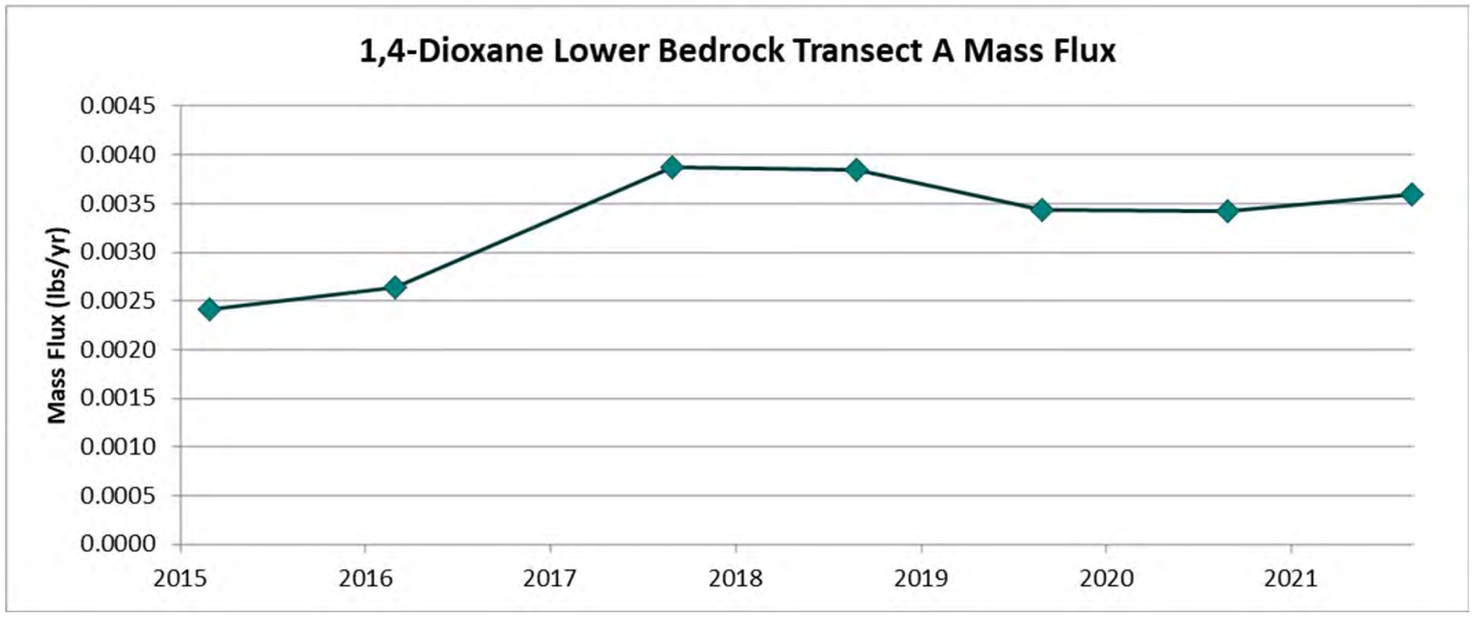

1,4-Dioxane Lower Bedrock Transect A Average Concentration
Average Concentration (µg/L)
0
2
4
6
8
10
12
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Lower Bedrock Transect A Mass Flux
Mass Flux (lbs/yr)
0.0000
0.0005
0.0010
0.0015
0.0020
0.0025
0.0030
0.0035
0.0040
0.0045
2015
2016
2017
2018
2019
2020
2021

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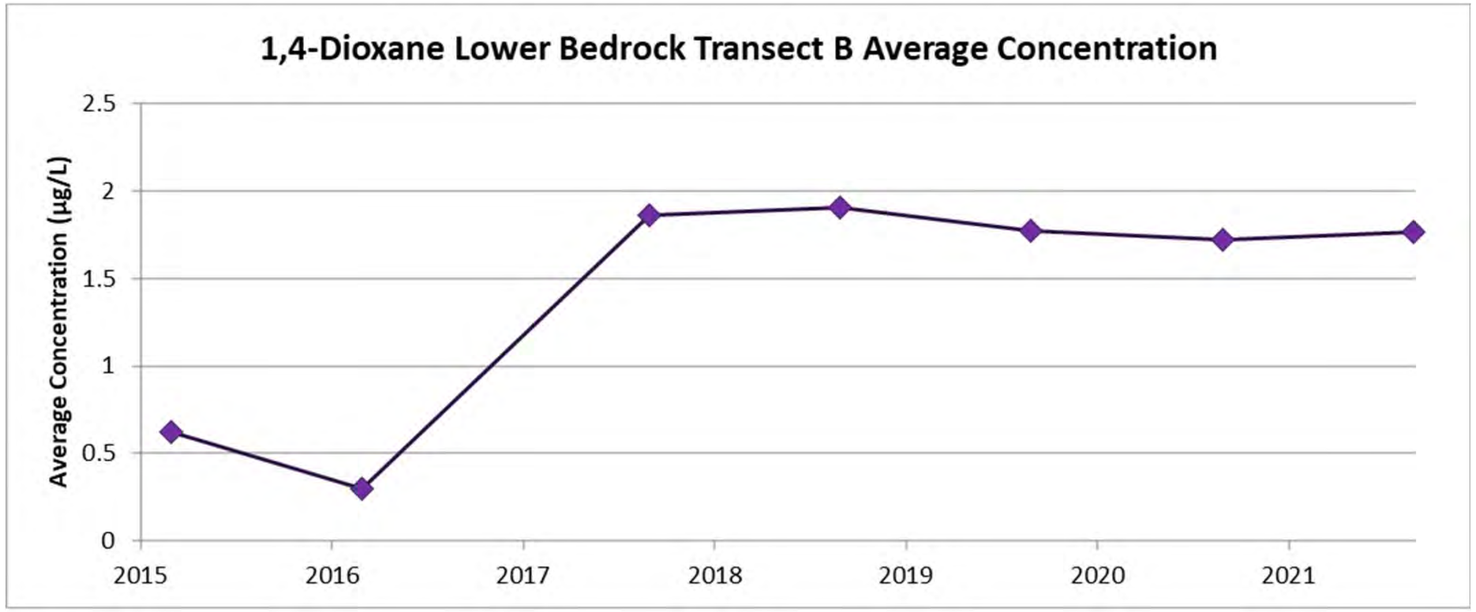
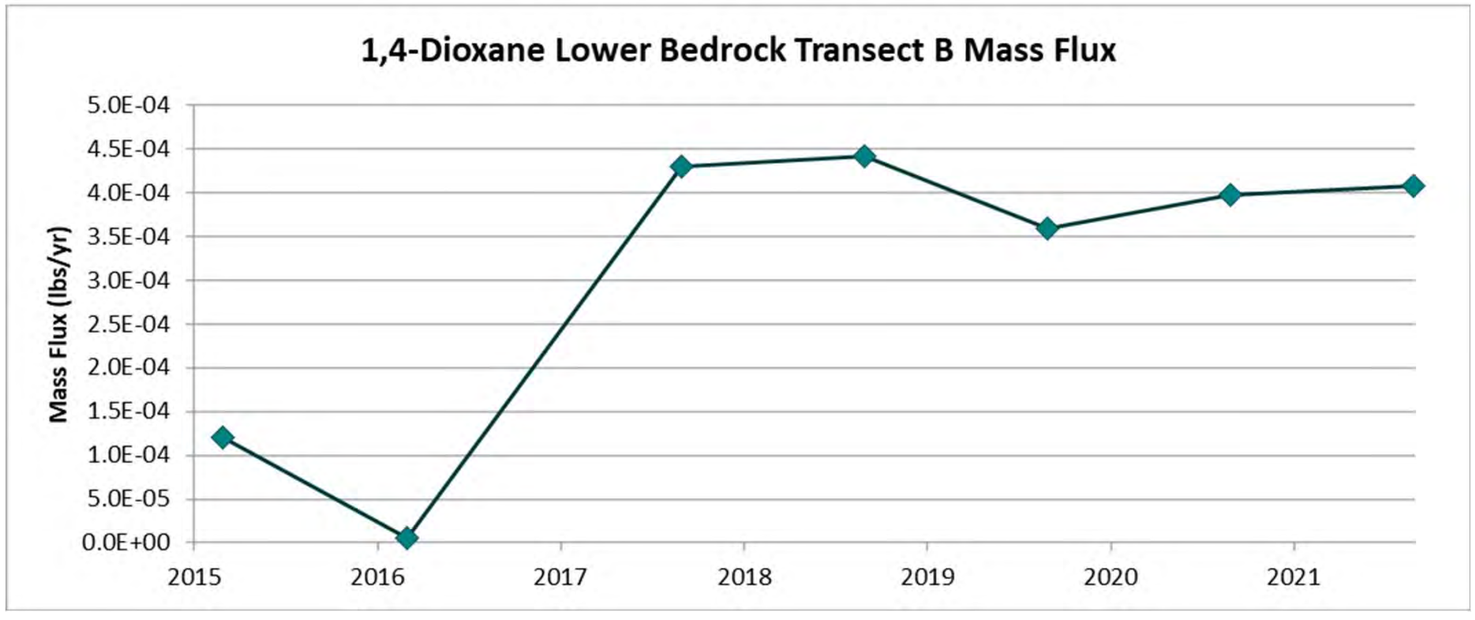

1,4-Dioxane Lower Bedrock Transect B Average Concentration
Average Concentration (µg/L)
2.5
2
1.5
1
0.5
0
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Lower Bedrock Transect B Mass Flux
Mass Flux (lbs/yr)
5.0E-04
4.5E-04
4.0E-04
3.5E-04
3.0E-04
2.5E-04
2.0E-04
1.5E-04
1.0E-04
5.0E-05
0.0E+00
2015
2016
2017
2018
2019
2020
2021

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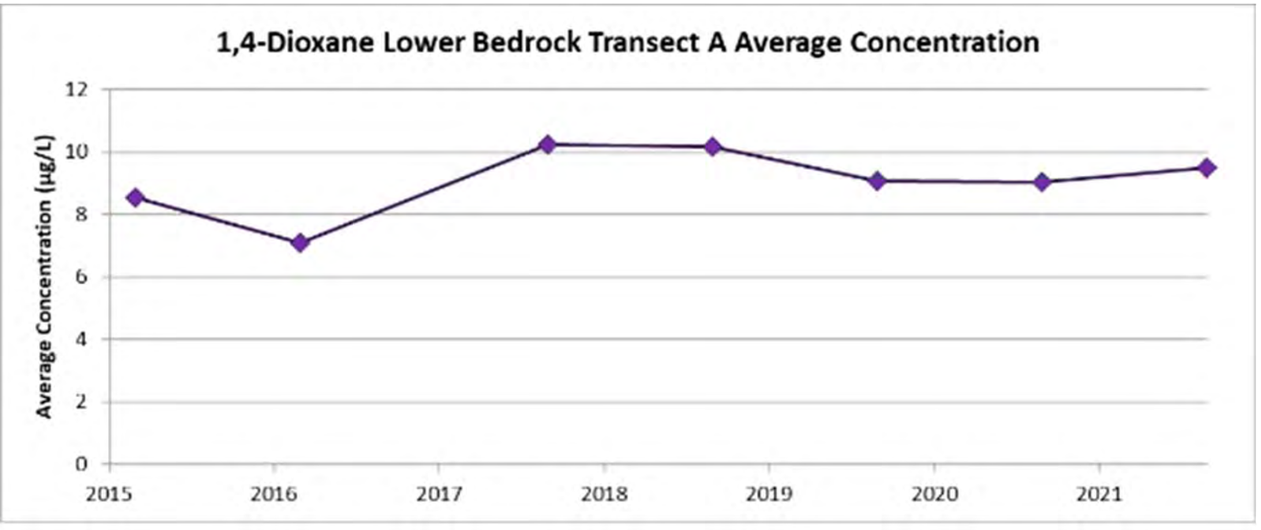
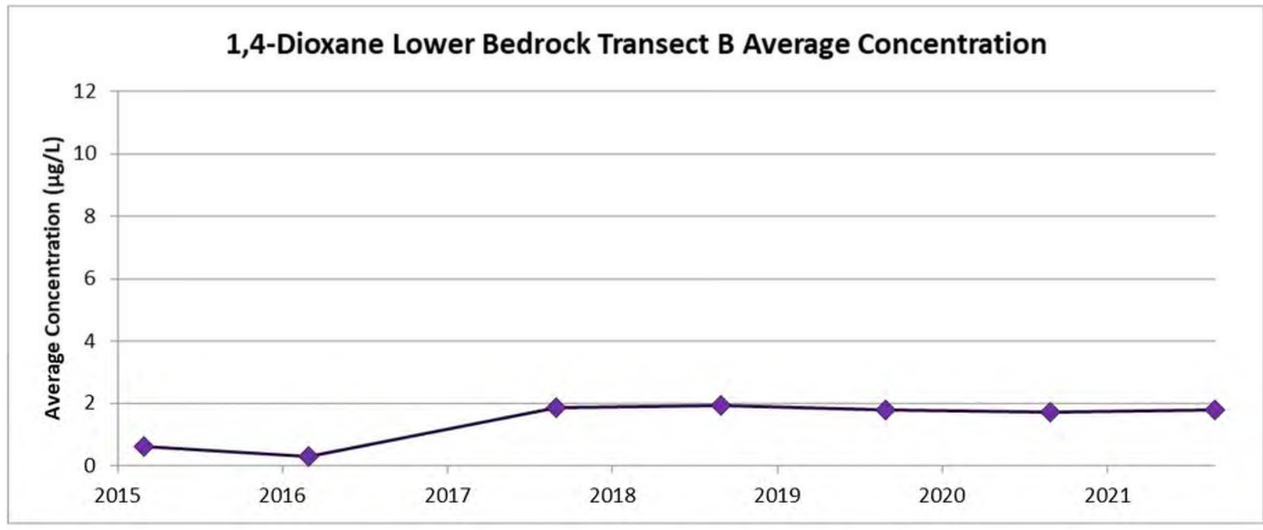
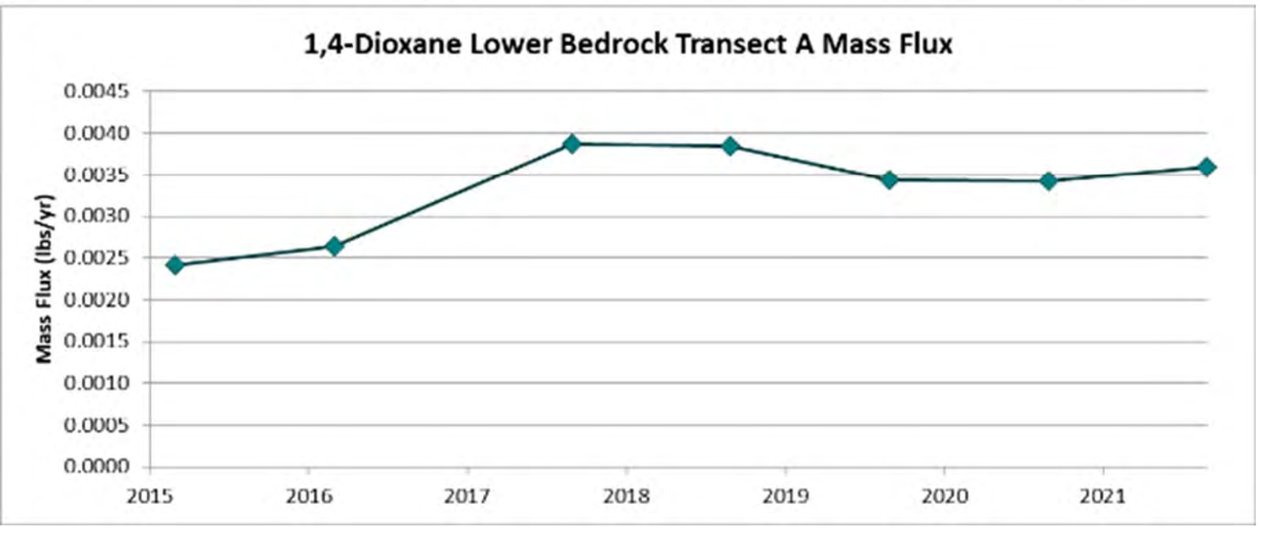
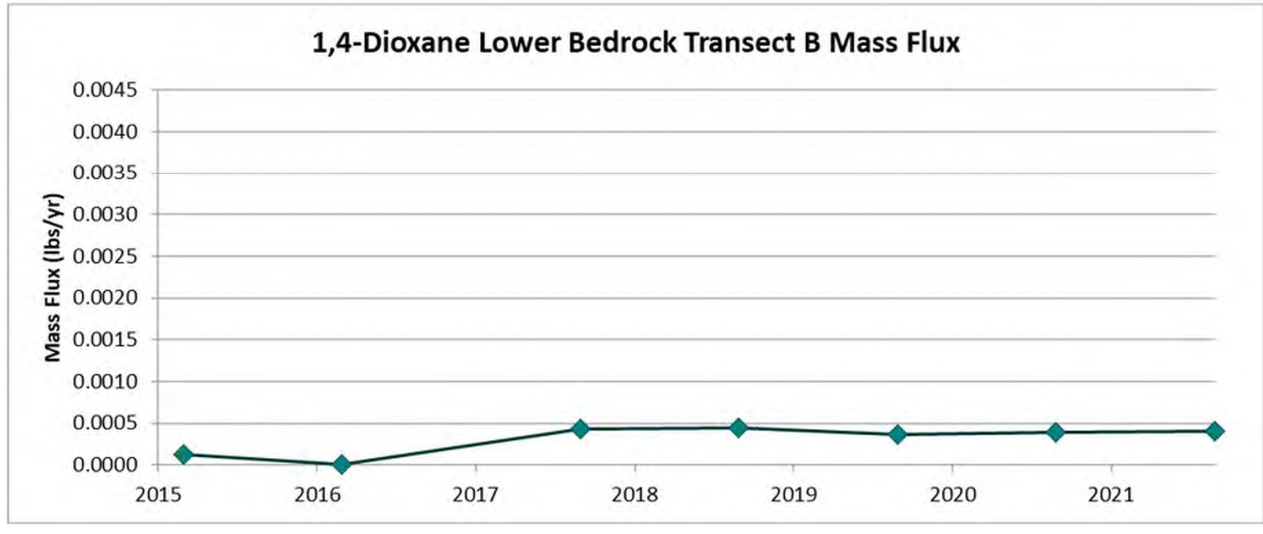

1,4-Dioxane Lower Bedrock Transect A Average Concentration
Average Concentration (µg/L)
0
2
4
6
8
10
12
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Lower Bedrock Transect B Average Concentration
Average Concentration (µg/L)
0
2
4
6
8
10
12
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Lower Bedrock Transect A Mass Flux
Mass Flux (lbs/yr)
0.0000
0.0005
0.0010
0.0015
0.0020
0.0025
0.0030
0.0035
0.0040
0.0045
2015
2016
2017
2018
2019
2020
2021


1,4-Dioxane Lower Bedrock Transect B Mass Flux
Mass Flux (lbs/yr)
0.0000
0.0005
0.0010
0.0015
0.0020
0.0025
0.0030
0.0035
0.0040
0.0045
2015
2016
2017
2018
2019
2020
2021

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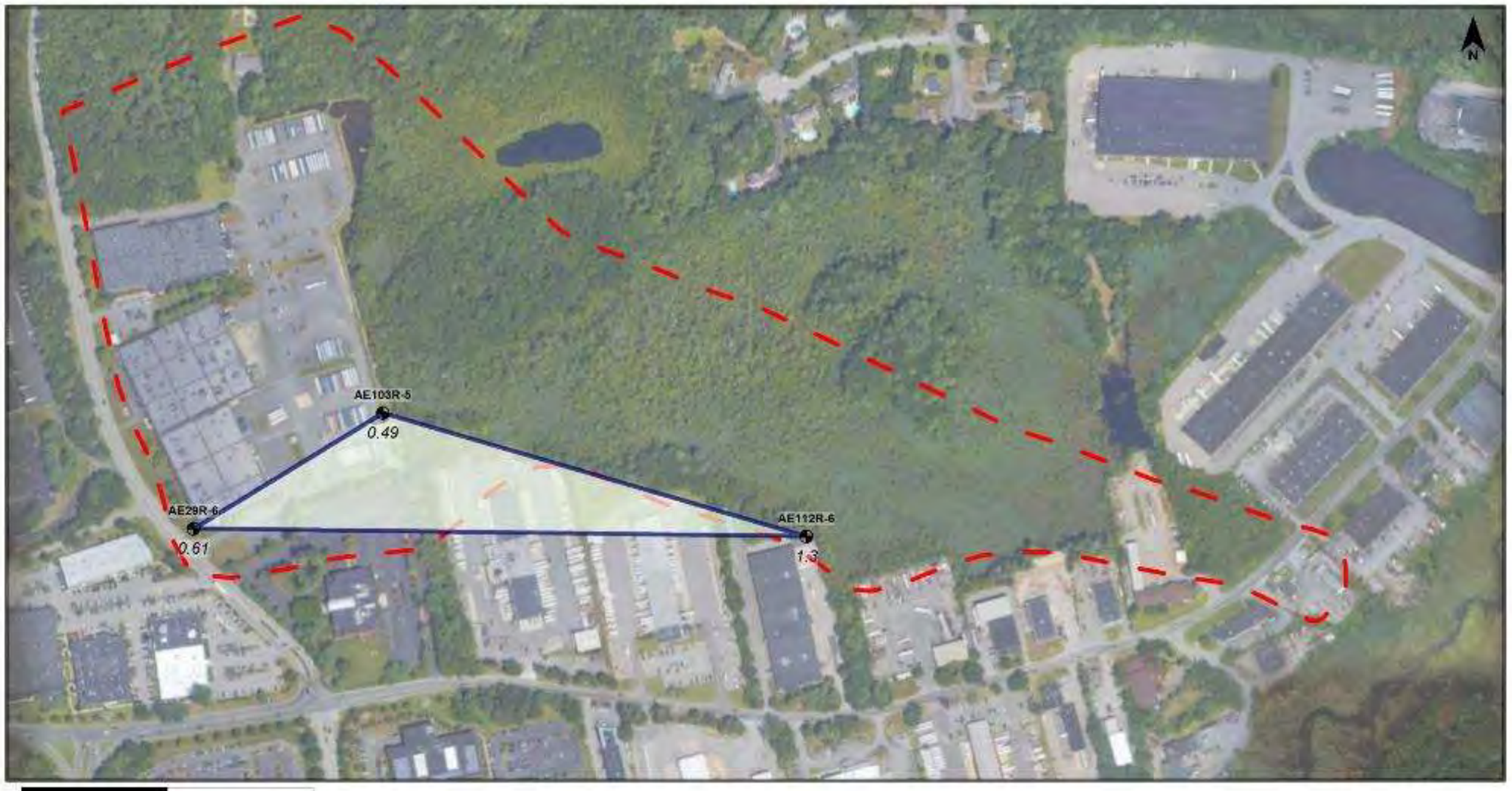

0 ft 450 ft 900 ft

Ethane
Lower Bedrock
Sep-2021

Concentration (µg/L)

5
4.5
4
3.5
3
2.5
2
1.5
1
0.5

LEGEND

AE103R-5 Monitoring Well

0.49 Concentration (µg/L)

MCP Site Boundary

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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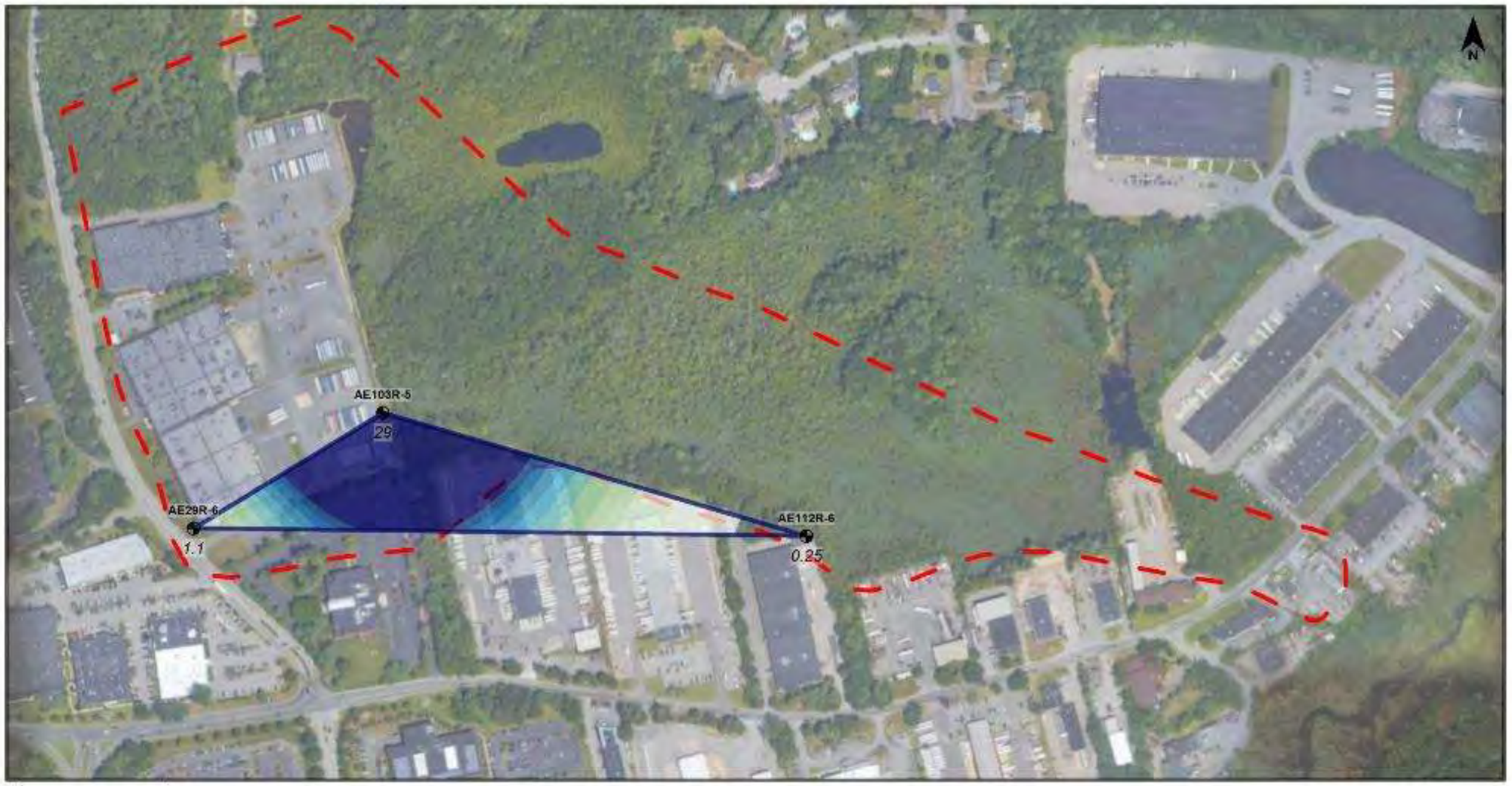

Ethene
Lower Bedrock
Sep-2021

Concentration (µg/L)

5
4.5
4
3.5
3
2.5
2
1.5
1
0.5

0 ft 450 ft 900 ft

LEGEND

AE103R-5 Monitoring Well

29 Concentration (µg/L)

MCP Site Boundary

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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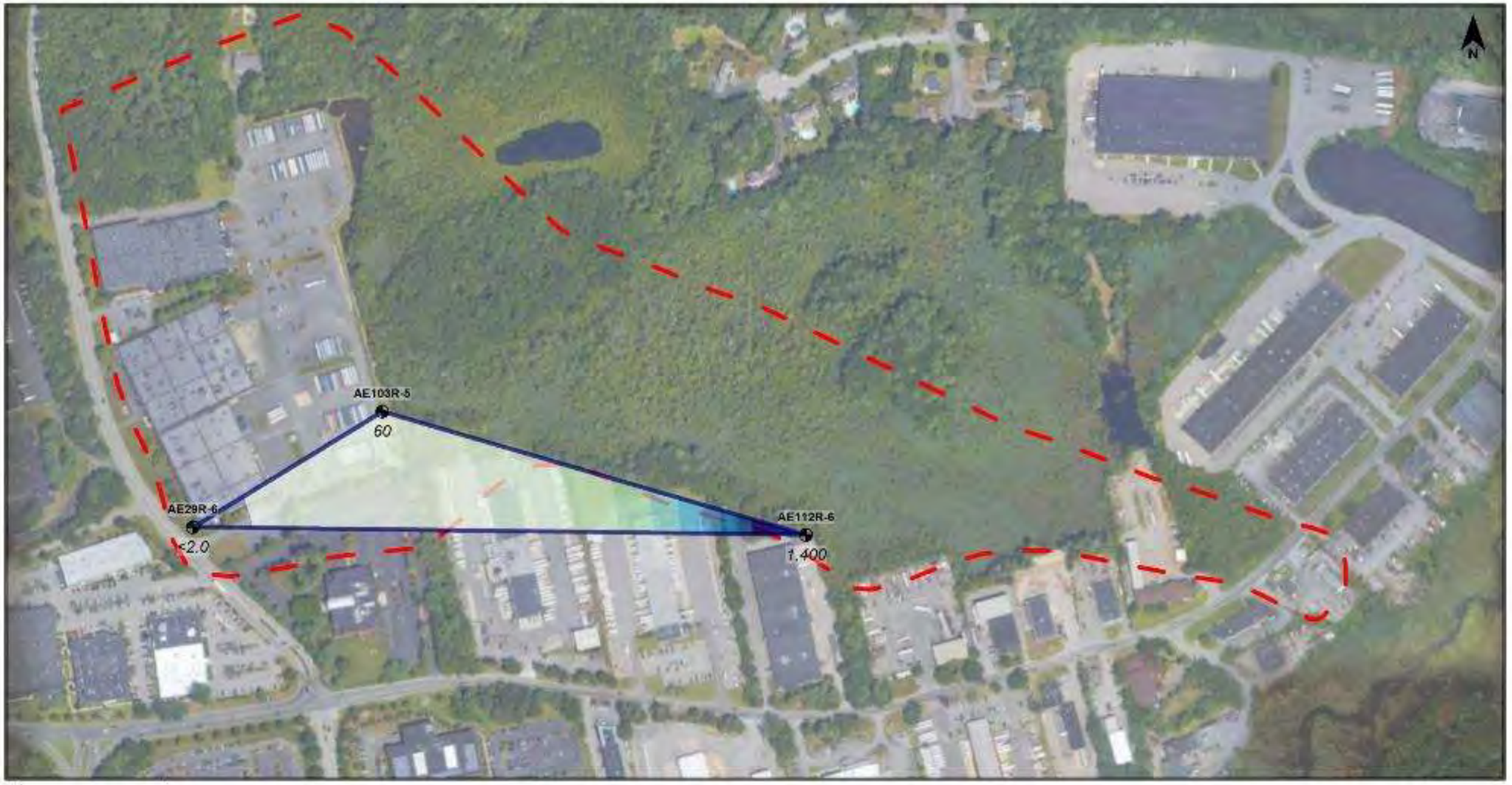

0 ft 450 ft 900 ft

Methane
Lower Bedrock
Sep-2021

Concentration (µg/L)

900
800
700
600
500
400
300
200
100
5

LEGEND

AE103R-5 Monitoring Well

60 Concentration (µg/L)

MCP Site Boundary

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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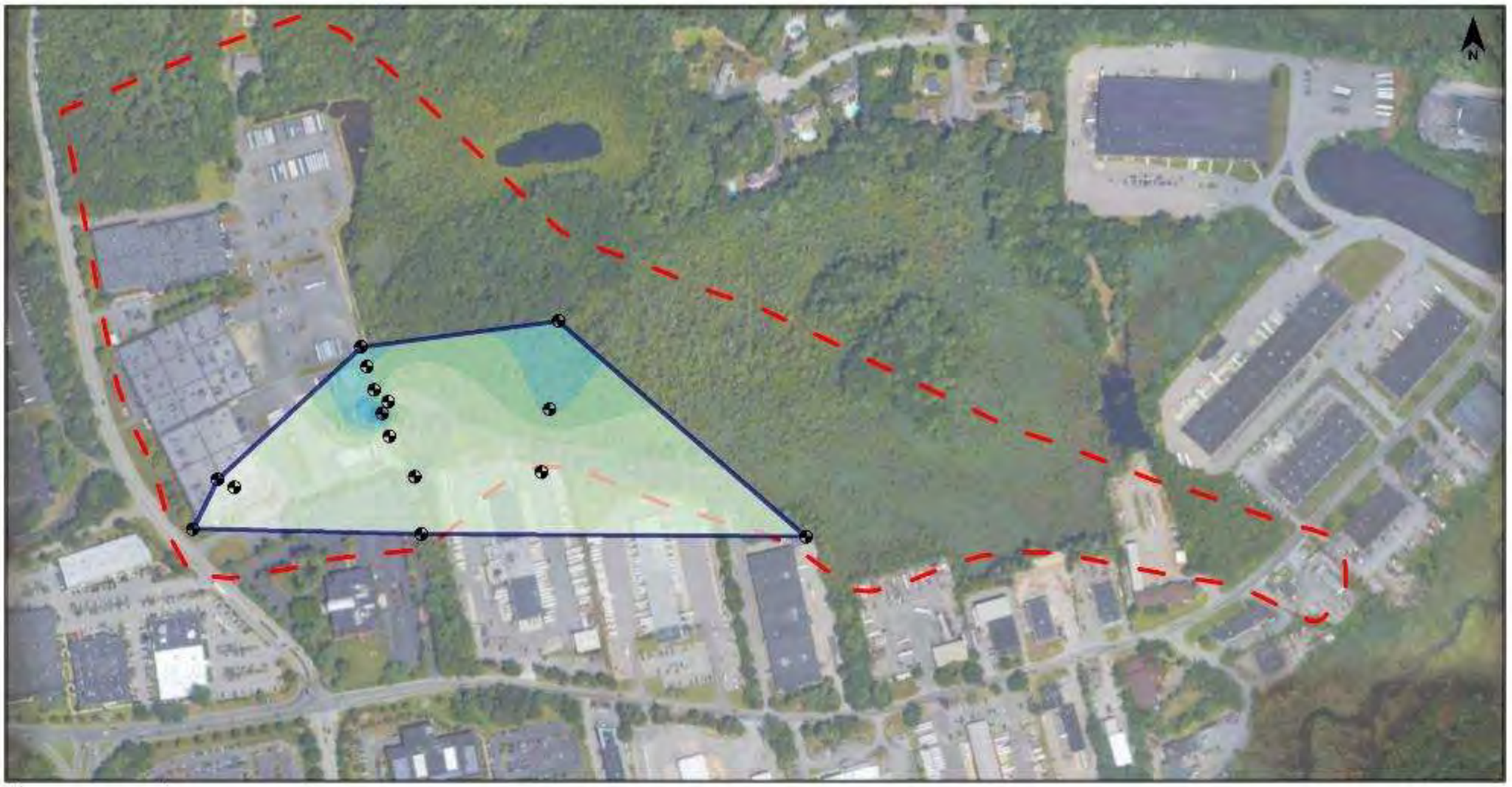

0 ft 450 ft 900 ft

ORP
Lower Bedrock
Sep-2021

ORP (mV)

100
50
25
0
-25
-50
-75
-100
-200
-300

LEGEND

MW-4 Monitoring Well — — MCP Site Boundary

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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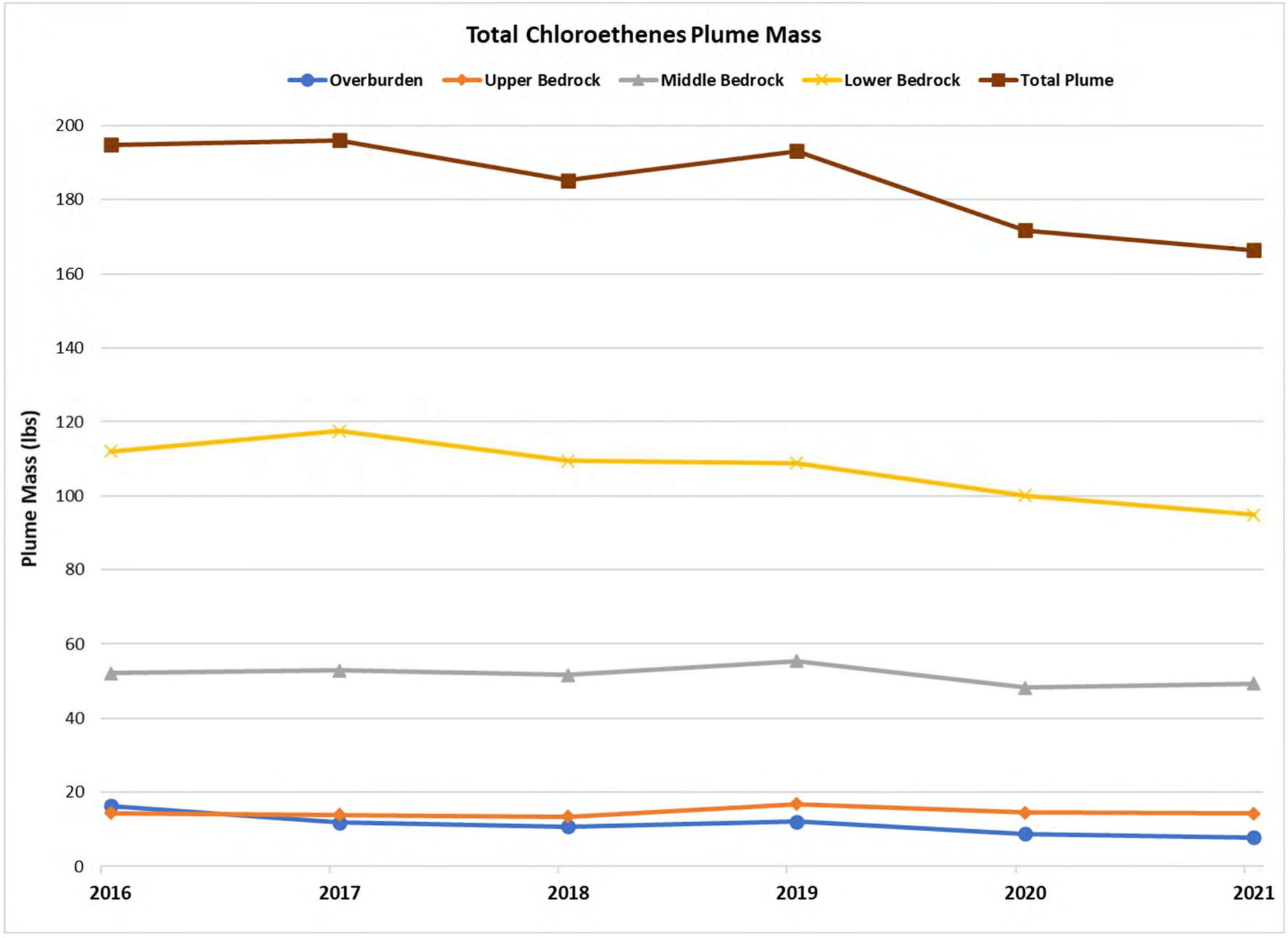

Mann-Kendall Trend Analyses		
Unit	**Trend**	**Confidence**
Overburden	Decreasing	97%
Upper Bedrock	No Trend	50%
Middle Bedrock	Decreasing	77%
Lower Bedrock	Decreasing	99%
Total Plume	**Decreasing**	**97%**

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PCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-04	NA	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS	NS
GZA-05	NA	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS	NS
GZA-06	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	<43 (1.0)	NA	NA	NA	NA	NA	NA	NA
GZA-10	NA	NA	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
GZA-102S	33	NS (23)	21	<25 (16)	<25 (10)	4.7	4.6	9	<5.0	7	6
GZA-103S	90	NS (55)	46	100	43	7	NS (17)	28	49	<25	29
GZA-104D	NA	NA	NA	2.7	NA	NA	NA	NA	NA	NA	NA
GZA-104S	<5.0	NS (21)	NS (25)	29	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NA	NA	NA	<540 (6.6)	6.6	6.6	6.6	<25	NS (73)	NS (122)	170
GZA-105S	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<25 (1.0)	<25 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	45	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	28	NA	NA	NA	NA	NA	NA	NA
GZA-106S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
GZA-107D	NA	NA	NA	15	<5.0	NS (4.9)	NS (4.8)	NS (4.8)	NS (4.7)	NS (4.6)	NS (4.5)
GZA-107M	NA	NA	NA	2	<5.0 (2.0)	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.9)
GZA-107S	NA	NA	NA	6.1	<5.0	NA	NA	NA	NA	NA	NA
GZA-108D	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	<5.0	NS (5.0)	NS (5.0)	5	<5.0 (4.9)	<5.0 (4.8)	NS (4.7)	NS (4.6)	NS (4.5)	NS (4.4)	NS (4.3)
GZA-13	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-14	6.6	NS (12)	NS (13)	14	NS (14)	NS (13)	NS (13)	NS (12)	NS (12)	NS (12)	NS (11)
GZA-14A	5.5	NS (5.5)	NS (5.5)	5.5	NS (5.6)	NS (5.8)	NS (5.9)	NS (6.1)	NS (6.2)	NS (6.4)	NS (6.5)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1S	NA	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2S	NA	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-4	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-5D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-5S	NA	NA	12	NS (17)	21	26	NS (23)	NS (20)	NS (17)	NS (14)	NS (10)
PS-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
PZ-1S	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
PZ-2S	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5,000 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-3	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	74	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
PZ-7S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<100 (1.0)	<2,500 (1.0)	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	2.7	<5.0 (2.7)	<5.0 (2.7)	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	1.2	<5.0 (1.2)	<5.0 (1.2)	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-9D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-9S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS	NS	NS	NS	NS
STM-10S	NA	NA	NA	6.6	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-3D	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-3S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8M	NA	NA	NA	<5.0	<5.0	<5.0	NS (5.1)	NS (5.2)	NS (5.3)	NS (5.4)	NS (5.5)
STM-8S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
WE-02	NA	<1,250 (1.0)	NS (1.0)	<600 (1.0)	<1,000 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	<12 (1.0)	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA
WE-03	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
WE-04D	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	<500 (1.0)	<500 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	150	NS (101)	NS (51)	<2.0	NS (4.6)	NS (7.1)	NS (9.7)	NS (12)
EMW-10S	NA	NA	NA	<1.0	NS (1.3)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)
EMW-11D	NA	NA	NA	8	NS (7.8)	NS (7.6)	NS (7.5)	NS (7.3)	NS (7.1)	NS (6.9)	NS (6.7)
EMW-11S	NA	NA	NA	<1.0	NS (1.3)	NS (1.7)	<2.0	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002
GZA-102S	19	NS (24)	26	18	5.2	NS (4.6)	4	NS (3.9)	NS (3.8)	NS (3.7)	NS (3.5)
GZA-103S	65	NS (39)	26	13	<5.0	NS (5.5)	6	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	2,000	NS (1,599)	1,400	650	NS (670)	NS (690)	NS (710)	NS (730)	NS (750)	NS (770)	NS (790)
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (4.5)	NS (4.3)	NS (4.2)	NS (4.2)	NS (4.1)	NS (4.0)	NS (3.9)	NS (3.9)	NS (3.8)	NS (3.7)	NS (3.6)
GZA-107M	NS (1.8)	NS (1.8)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.6)	NS (1.6)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (4.2)	NS (4.0)	NS (3.9)	NS (3.8)	NS (3.7)	NS (3.6)	NS (3.5)	NS (3.4)	NS (3.3)	NS (3.2)	NS (3.1)
GZA-13	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (11)	10	NS (8.5)	NS (7.0)	NS (5.5)	4	NS (3.8)	NS (3.7)	NS (3.5)	NS (3.3)	NS (3.2)
GZA-14A	NS (6.7)	7	NS (6.3)	NS (5.5)	NS (4.8)	4	NS (3.8)	NS (3.7)	NS (3.5)	NS (3.3)	NS (3.2)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NA	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NA	NA	NA	NA	NA	<2.0	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)
MW-4A	NA	NA	NA	NA	NA	<2.0	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NA	NA	NA	24	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)
PS-1M	NA	NA	NA	16	NS (16)	NS (15)	NS (15)	NS (14)	NS (14)	NS (13)	NS (13)
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.5)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.0)
PS-2D	NA	NA	NA	2	NS (2.0)	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	<5.0 (2.0)	NS (2.0)
PS-2M	NA	NA	NA	22	NS (12)	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	<5.0 (2.0)	NS (2.0)
PS-2S	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.5)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
PS-3	NA	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.0)
PS-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-5D	NA	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.2)
PS-5S	NS (7.2)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
PS-8D	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
STM-3S	NS (1.0)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NA	NA	NA	11	NS (11)	NS (11)	NS (11)	NS (10)	NS (10)	NS (10)	NS (10)
STM-8M	NS (5.6)	NS (5.8)	NS (5.9)	6	NS (4.0)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
STM-8S	NS (1.0)	<1.0	NS (7.4)	14	NS (8.0)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	<1.0	NS (1.5)	<2.0	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<2.0
W-02	NA	NA	NA	<1.0	NS (1.5)	<2.0	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<2.0
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NS (1.0)	NS (1.0)	<50 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	<1.0	NS (1.0)	<1.0	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	77
EMW-10D	NS (15)	20	22	14	7.1	6.3	23	18	9.4	17	15
EMW-10S	NS (1.8)	NS (1.8)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
EMW-11D	NS (6.6)	6.2	2.6	1.1	4.4	NS (4.2)	4	4.8	4.4	19	5.1
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

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<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
GZA-102S	NS (3.4)	NS (3.2)	NS (2.7)	NS (2.0)	NS (1.9)	NS (1.8)	NS (1.7)	NS (1.5)	NS (1.3)	NS (1.2)	NS (1.1)
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (810)	850	33	27	180	NS (110)	42	1,100	1,300	885	76
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (3.5)	NS (3.4)	NS (3.1)	NS (2.6)	NS (2.6)	NS (2.5)	NS (2.4)	NS (2.3)	NS (2.2)	NS (2.1)	NS (2.0)
GZA-107M	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (3.0)	NS (2.8)	NS (2.4)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.5)	NS (1.3)	NS (1.2)	NS (1.1)	<1.0
GZA-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (3.0)	NS (2.7)	<2.0	NS (0.77)	NS (0.57)	0.36	NS (0.52)	NS (0.84)	<1.0	NS (1.0)	NS (1.0)
GZA-14A	NS (3.0)	NS (2.7)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (1.7)	NS (1.5)	1.3	NS (0.70)	NS (0.60)	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)
MW-4A	NS (1.7)	NS (1.5)	NS (1.3)	NS (0.97)	NS (0.92)	0.86	NS (1.2)	NS (1.9)	2.2	NS (2.0)	NS (1.9)
MW-5	NA	NA	<2.0	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.1)
MW-7	NA	NA	<2.0	NS (0.87)	NS (0.69)	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)
PS-1D	NS (24)	NS (24)	24	9.1	11	NS (10)	10	6.2	8.2	8.1	6
PS-1M	NS (13)	NS (12)	NS (10)	NS (7.6)	NS (7.2)	NS (6.7)	NS (6.3)	NS (5.5)	NS (5.0)	NS (4.6)	NS (4.2)
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	NS (2.0)	NS (2.0)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
PS-2M	NS (2.0)	NS (2.0)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
PS-2S	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
PS-3	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-5D	NS (1.5)	<2.0	<2.0	NS (0.87)	NS (0.69)	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)
PS-5S	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
PS-8D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
STM-3S	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (10.0)	NS (9.7)	9.2	NS (3.3)	NS (2.3)	1.3	NS (1.3)	NS (1.4)	1.4	NS (1.4)	NS (1.5)
STM-8M	NS (1.8)	NS (1.7)	1.6	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)
STM-8S	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)
TRC-403	NA	NA	NA	NA	NA	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)
W-01	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NA	NA	NA	NA	NA	NA
W-02	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

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Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE03	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE04	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE101D	NA	NA	NA	1,410	1.8	1.4	<1.0	21	<1.0	2.3	2.5
AE101S	NA	NA	NA	<1.0	2.3	<1.0	1.9	1.1	<1.0	4.4	2.7
AE102D	NA	NA	NA	50	32	20	1.1	<1.0	<1.0	7	4.4
AE102M	NA	NA	NA	29	22	5.1	27	13	10	6.8	10
AE102S	NA	NA	NA	9.7	35	NS (29)	NS (22)	NS (16)	NS (11)	NS (6.2)	<1.0
AE103D	NA	NA	NA	61	52	5.7	78	49	28	42	47
AE103M	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE103S	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE104D	NA	NA	NA	38	16	18	13	3.3	<1.0	<1.0	1.7
AE104M	NA	NA	NA	16	17	NS (14)	NS (11)	NS (8.2)	NS (5.8)	NS (3.4)	<1.0
AE104S	NA	NA	NA	10	5.8	3.8	1.2	<1.0	<1.0	<1.0	<1.0
AE105D	NA	NA	NA	9.3	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE105M	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE105S	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE106D	NA	NA	NA	16	13	11	6	4.3	3.6	2.3	2.7
AE106M	NA	NA	NA	12	12	NS (14)	NS (17)	NS (19)	NS (22)	NS (24)	26
AE106S	NA	NA	NA	14	8.9	6.2	3.5	12	12	4.9	24
AE109D	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112D	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	1.5	1
AE1I	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE1S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE23S	NA	15	245	NS (128)	13	11	10	NS (73)	NS (135)	NS (198)	260
AE24	NA	263	956	NS (4,346)	7,680	7,660	164	733	5,500	680	350
AE25D	NA	NA	<1.0	NS (2.2)	3.4	NS (3.0)	NS (2.5)	NS (2.1)	NS (1.7)	NS (1.4)	1
AE25S	NA	NA	2.4	NS (6.2)	10	NS (8.9)	NS (7.2)	NS (6.1)	NS (5.0)	NS (3.9)	2.8
AE26D	NA	NA	<1.0	NS (3.6)	6.1	1.2	1.8	NS (2.0)	NS (2.2)	NS (2.4)	2.6
AE26S	NA	NA	28	NS (40)	52	57	42	31	29	24	22
AE2I	NS (80)	NS (84)	87	NS (81)	NS (76)	NS (65)	NS (48)	NS (37)	NS (27)	NS (15)	4.5
EMW-10D	NS (13)	NS (11)	NS (9.4)	NS (7.6)	5.9	9.5	71	76	99	110	130
EMW-10S	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
EMW-11D	NS (5.4)	NS (5.7)	NS (5.9)	NS (6.2)	6.5	7.5	1.3	1.9	<1.0	<1.0	1.8
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

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<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
GZA-102S	<1.0	NS (1.1)	NS (1.2)	NS (1.3)	NS (1.5)	NS (1.7)	NS (2.0)	2.3	2	1.3	<1.0
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (89)	NS (102)	NS (116)	NS (129)	142	134	382	116	24	5.9	19
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0 (1.0)	<1.0 (1.0)	<1.0 (1.0)	<1.0 (1.0)	<1.0 (1.0)	<1.0 (1.0)	<1.0 (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.5)	1.3	NA	NA	NA	NA
GZA-107M	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.1)	<1.0	NA	NA	NA	NA
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<1.0	<1.0	<1.0	<7.0 (1.0)	<1.0	<1.0	<1.0
GZA-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	1.1	NS (1.1)	NS (1.0)	NS (1.0)	<1.0
GZA-14A	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
HOW-2	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
HOW-3	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-4A	NS (1.7)	NS (1.5)	NS (1.3)	NS (1.2)	1	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.1)	1.1
MW-5	NS (1.1)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	10
PS-1D	NS (5.3)	NS (4.5)	NS (3.8)	NS (3.0)	2.3	3.3	1.6	3.5	3.1	3	<1.0
PS-1M	NS (3.8)	NS (3.4)	NS (2.9)	NS (2.5)	2.1	3.4	1.9	NS (2.3)	NS (2.7)	NS (3.2)	3.6
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-2D	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-2M	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-2S	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-3	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-5D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-5S	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-8D	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-8S	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

PCE Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
PZ-2S	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-3S	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (1.5)	NS (1.6)	NS (1.6)	1.7	1.2	1.7	1.7	1.5	1.3	<1.0	<1.0
STM-8M	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8S	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
TRC-101	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0
TRC-102	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRC-103	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0
TRC-402	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
TRC-403	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-04	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NA	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	<43 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NA	NA	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	33	NS (23)	21	<25 (16)	<25 (10)	4.7	4.6	9	<5.0	7	6	19	NS (24)	26
GZA-103S	90	NS (55)	46	100	43	7	NS (17)	28	49	<25	29	65	NS (39)	26
GZA-104D	NA	NA	NA	2.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	<5.0	NS (21)	NS (25)	29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998
GZA-105D	NA	NA	NA	<540 (6.6)	NS (6.6)	NS (6.6)	6.6	<25	NS (73)	NS (122)	170	2,000	NS (1,599)	1,400
GZA-105S	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<25 (1.0)	<25 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	45	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NA	NA	NA	15	<5.0	NS (4.9)	NS (4.8)	NS (4.8)	NS (4.7)	NS (4.6)	NS (4.5)	NS (4.5)	NS (4.3)	NS (4.2)
GZA-107M	NA	NA	NA	2	<5.0 (2.0)	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.8)
GZA-107S	NA	NA	NA	6.1	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	<5.0	NS (5.0)	NS (5.0)	5	<5.0 (4.9)	<5.0 (4.8)	NS (4.7)	NS (4.6)	NS (4.5)	NS (4.4)	NS (4.3)	NS (4.2)	NS (4.0)	NS (3.9)
GZA-13	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-14	6.6	NS (12)	NS (13)	14	NS (14)	NS (13)	NS (13)	NS (12)	NS (12)	NS (12)	NS (11)	NS (11)	10	NS (8.5)
GZA-14A	5.5	NS (5.5)	NS (5.5)	5.5	NS (5.6)	NS (5.8)	NS (5.9)	NS (6.1)	NS (6.2)	NS (6.4)	NS (6.5)	NS (6.7)	7	NS (6.3)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS
MW-2	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4A	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1S	NA	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2S	NA	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)
PS-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS (1.2)
PS-4	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-5D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS (1.2)
PS-5S	NA	NA	12	NS (17)	21	26	NS (23)	NS (20)	NS (17)	NS (14)	NS (10)	NS (7.2)	<1.0	NS (1.2)
PS-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5,000 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998
PZ-3	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<100 (1.0)	<2,500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	2.7	<5.0 (2.7)	<5.0 (2.7)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	1.2	<5.0 (1.2)	<5.0 (1.2)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-9S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NA	NA	NA	6.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.2)
STM-3S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.2)
STM-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8M	NA	NA	NA	<5.0	<5.0	<5.0	NS (5.1)	NS (5.2)	NS (5.3)	NS (5.4)	NS (5.5)	NS (5.6)	NS (5.8)	NS (5.9)
STM-8S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (7.4)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	<1,250 (1.0)	NS (1.0)	<600 (1.0)	<1,000 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	<12 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	<500 (1.0)	<500 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<50 (1.0)
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS (1.0)	<1.0

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	150	NS (101)	NS (51)	<2.0	NS (4.6)	NS (7.1)	NS (9.7)	NS (12)	NS (15)	20	22	14	7.1	6.3	23	18
EMW-10S	<1.0	NS (1.3)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
EMW-11D	8	NS (7.8)	NS (7.6)	NS (7.5)	NS (7.3)	NS (7.1)	NS (6.9)	NS (6.7)	NS (6.6)	6.2	2.6	1.1	4.4	NS (4.2)	4	4.8
EMW-11S	<1.0	NS (1.3)	NS (1.7)	<2.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	18	5.2	NS (4.6)	4	NS (3.9)	NS (3.8)	NS (3.7)	NS (3.5)	NS (3.4)	NS (3.2)	NS (2.7)	NS (2.0)	NS (1.9)	NS (1.8)	NS (1.7)	NS (1.5)
GZA-103S	13	<5.0	NS (5.5)	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011
GZA-105D	650	NS (670)	NS (690)	NS (710)	NS (730)	NS (750)	NS (770)	NS (790)	NS (810)	850	33	27	180	NS (110)	42	1,100
GZA-105S	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (4.2)	NS (4.1)	NS (4.0)	NS (3.9)	NS (3.9)	NS (3.8)	NS (3.7)	NS (3.6)	NS (3.5)	NS (3.4)	NS (3.1)	NS (2.6)	NS (2.6)	NS (2.5)	NS (2.4)	NS (2.3)
GZA-107M	NS (1.8)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.3)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (3.8)	NS (3.7)	NS (3.6)	NS (3.5)	NS (3.4)	NS (3.3)	NS (3.2)	NS (3.1)	NS (3.0)	NS (2.8)	NS (2.4)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.5)	NS (1.3)
GZA-13	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (7.0)	NS (5.5)	4	NS (3.8)	NS (3.7)	NS (3.5)	NS (3.3)	NS (3.2)	NS (3.0)	NS (2.7)	<2.0	NS (0.77)	NS (0.57)	0.36	NS (0.52)	NS (0.84)
GZA-14A	NS (5.5)	NS (4.8)	4	NS (3.8)	NS (3.7)	NS (3.5)	NS (3.3)	NS (3.2)	NS (3.0)	NS (2.7)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NA	NA	<2.0	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.7)	NS (1.5)	1.3	NS (0.70)	NS (0.60)	<0.50	NS (0.62)	NS (0.87)
MW-4A	NS (2.0)	NS (2.0)	<2.0	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.7)	NS (1.5)	NS (1.3)	NS (0.97)	NS (0.92)	0.86	NS (1.2)	NS (1.9)
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.3)
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	NS (0.87)	NS (0.69)	<0.50	NS (0.62)	NS (0.87)
PS-1D	24	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	NS (24)	24	9.1	11	NS (10)	10	6.2
PS-1M	16	NS (16)	NS (15)	NS (15)	NS (14)	NS (14)	NS (13)	NS (13)	NS (13)	NS (12)	NS (10)	NS (7.6)	NS (7.2)	NS (6.7)	NS (6.3)	NS (5.5)
PS-1S	<1.0	NS (1.5)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	2	NS (2.0)	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	<5.0 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)
PS-2M	22	NS (12)	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	<5.0 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	<2.0	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.5)	NS (1.4)
PS-2S	<1.0	NS (1.5)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
PS-3	NS (1.5)	NS (1.7)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-5D	NS (1.5)	NS (1.7)	<2.0	NS (1.8)	NS (1.5)	NS (1.3)	<1.0	NS (1.2)	NS (1.5)	<2.0	<2.0	NS (0.87)	NS (0.69)	<0.50	NS (0.62)	NS (0.87)
PS-5S	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
PS-8D	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
STM-3S	NS (1.5)	NS (1.7)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	11	NS (11)	NS (11)	NS (11)	NS (10)	NS (10)	NS (10)	NS (10)	NS (10.0)	NS (9.7)	9.2	NS (3.3)	NS (2.3)	1.3	NS (1.3)	NS (1.4)
STM-8M	6	NS (4.0)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	1.6	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)
STM-8S	14	NS (8.0)	<2.0	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.50	NS (0.62)	NS (0.87)
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.50	NS (0.62)	NS (0.87)
W-01	<1.0	NS (1.5)	<2.0	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<2.0	<2.0	NA	NA	NA	NA	NA	NA	NA
W-02	<1.0	NS (1.5)	<2.0	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	<2.0	<2.0	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Non-Sampled Well

TCE Overburden Input Data

	Sep. 2011	Mar. 2012	Sep. 2012	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE03	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE04	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE101D	NA	NA	NA	NA	NA	NA	1,410	1.8	1.4	<1.0	21	<1.0	2.3	2.5
AE101S	NA	NA	NA	NA	NA	NA	<1.0	2.3	<1.0	1.9	1.1	<1.0	4.4	2.7
AE102D	NA	NA	NA	NA	NA	NA	50	32	20	1.1	<1.0	<1.0	7	4.4
AE102M	NA	NA	NA	NA	NA	NA	29	22	5.1	27	13	10	6.8	10
AE102S	NA	NA	NA	NA	NA	NA	9.7	35	NS (29)	NS (22)	NS (16)	NS (11)	NS (6.2)	<1.0
AE103D	NA	NA	NA	NA	NA	NA	61	52	5.7	78	49	28	42	47
AE103M	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE103S	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE104D	NA	NA	NA	NA	NA	NA	38	16	18	13	3.3	<1.0	<1.0	1.7
AE104M	NA	NA	NA	NA	NA	NA	16	17	NS (14)	NS (11)	NS (8.2)	NS (5.8)	NS (3.4)	<1.0
AE104S	NA	NA	NA	NA	NA	NA	10	5.8	3.8	1.2	<1.0	<1.0	<1.0	<1.0
AE105D	NA	NA	NA	NA	NA	NA	9.3	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE105M	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE105S	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE106D	NA	NA	NA	NA	NA	NA	16	13	11	6	4.3	3.6	2.3	2.7
AE106M	NA	NA	NA	NA	NA	NA	12	12	NS (14)	NS (17)	NS (19)	NS (22)	NS (24)	26
AE106S	NA	NA	NA	NA	NA	NA	14	8.9	6.2	3.5	12	12	4.9	24
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	1.5	1
AE1I	NA	NA	14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE1S	NA	NA	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE23S	NA	NA	NA	NA	15	245	NS (128)	13	11	10	NS (73)	NS (135)	NS (198)	260
AE24	NA	NA	NA	NA	263	956	NS (4,346)	7,680	7,660	164	733	5,500	680	350
AE25D	NA	NA	NA	NA	NA	<1.0	NS (2.2)	3.4	NS (3.0)	NS (2.5)	NS (2.1)	NS (1.7)	NS (1.4)	1
AE25S	NA	NA	NA	NA	NA	2.4	NS (6.2)	10	NS (8.9)	NS (7.2)	NS (6.1)	NS (5.0)	NS (3.9)	2.8
AE26D	NA	NA	NA	NA	NA	<1.0	NS (3.6)	6.1	1.2	1.8	NS (2.0)	NS (2.2)	NS (2.4)	2.6
AE26S	NA	NA	NA	NA	NA	28	NS (40)	52	57	42	31	29	24	22
AE2I	NA	NA	77	NS (80)	NS (84)	87	NS (81)	NS (76)	NS (65)	NS (48)	NS (37)	NS (27)	NS (15)	4.5
EMW-10D	9.4	17	15	NS (13)	NS (11)	NS (9.4)	NS (7.6)	5.9	9.5	71	76	99	110	130
EMW-10S	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
EMW-11D	4.4	19	5.1	NS (5.4)	NS (5.7)	NS (5.9)	NS (6.2)	6.5	7.5	1.3	1.9	<1.0	<1.0	1.8
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
GZA-102S	NS (1.3)	NS (1.2)	NS (1.1)	<1.0	NS (1.1)	NS (1.2)	NS (1.3)	NS (1.5)	NS (1.7)	NS (2.0)	2.3	2	1.3	<1.0
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Non-Sampled Well

TCE Overburden Input Data

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GZA-105D	1,300	885	76	NS (89)	NS (102)	NS (116)	NS (129)	142	134	382	116	24	5.9	19
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (2.2)	NS (2.1)	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.5)	1.3	NA	NA	NA	NA
GZA-107M	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.1)	<1.0	NA	NA	NA	NA
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.2)	NS (1.1)	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<1.0	<1.0	<1.0	<7.0 (1.0)	<1.0	<1.0	<1.0
GZA-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	1.1	NS (1.1)	NS (1.0)	NS (1.0)	<1.0
GZA-14A	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-4A	2.2	NS (2.0)	NS (1.9)	NS (1.7)	NS (1.5)	NS (1.3)	NS (1.2)	1	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.1)	1.1
MW-5	NS (1.3)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	10
PS-1D	8.2	8.1	6	NS (5.3)	NS (4.5)	NS (3.8)	NS (3.0)	2.3	3.3	1.6	3.5	3.1	3	<1.0
PS-1M	NS (5.0)	NS (4.6)	NS (4.2)	NS (3.8)	NS (3.4)	NS (2.9)	NS (2.5)	2.1	3.4	1.9	NS (2.3)	NS (2.7)	NS (3.2)	3.6
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-2D	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-2M	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-2S	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-3	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-5D	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-5S	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-8D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-8S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Overburden Input Data

	Sep. 2011	Mar. 2012	Sep. 2012	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-3S	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	1.4	NS (1.4)	NS (1.5)	NS (1.5)	NS (1.6)	NS (1.6)	1.7	1.2	1.7	1.7	1.5	1.3	<1.0	<1.0
STM-8M	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8S	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
TRC-101	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0
TRC-102	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0
TRC-402	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
TRC-403	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10S	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11D	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-04	NA	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS
GZA-05	NA	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS
GZA-06	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS
GZA-09	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
GZA-10	NA	NA	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	<5.0	NS (5.0)	<5.0	<25 (8.4)	<25 (12)	15	NS (13)	NS (12)	NS (10)
GZA-103S	<5.0	NS (11)	<12	<100	230	<120	NS (97)	NS (74)	NS (51)
GZA-104D	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
GZA-104S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
GZA-105D	<5.0	NS (5.0)	NS (5.0)	<5.0	NS (58)	NS (112)	NS (165)	NS (219)	NS (273)

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995
GZA-105S	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<25 (1.0)	<25 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
GZA-106M	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
GZA-106S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
GZA-107D	<5.0 (2.1)	NS (2.1)	NS (2.1)	<5.0 (2.1)	<5.0 (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)
GZA-107M	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
GZA-108D	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-13	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-14	<5.0 (3.0)	NS (3.0)	NS (3.0)	<5.0 (3.0)	NS (3.0)	NS (3.0)	NS (3.0)	NS (3.0)	NS (3.0)
GZA-14A	<5.0 (3.0)	NS (3.0)	NS (3.0)	<5.0 (3.0)	NS (3.0)	NS (3.0)	NS (3.0)	NS (3.0)	NS (3.0)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4A	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1M	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-1S	NA	NA	NA	NA	12	7.8	NS (8.5)	NS (9.2)	NS (10.0)
PS-2D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-2S	NA	NA	NA	NA	<5.0	5.3	NS (5.0)	NS (4.7)	NS (4.4)
PS-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-4	NA	NA	NA	NA	23	120	NS (118)	NS (115)	NS (113)
PS-5D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-5S	NA	NA	NA	NA	42	34	NS (30)	NS (26)	NS (22)
PS-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
PZ-1M	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-1S	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-2S	NA	NA	<5.0 (1.0)	NS (1.0)	NS (1.0)	<5,000 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995
PZ-3	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
PZ-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
PZ-7D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
PZ-7S	<5.0 (1.0)	NS (1.0)	NS (1.0)	<100 (1.0)	<2,500 (1.0)	NA	NA	NA	NA
PZ-8D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
PZ-8M	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
PZ-8S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
PZ-9D	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-9S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS	NS	NS
STM-10S	NA	NA	NA	<5.0 (1.0)	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-3D	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-3S	NA	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-4S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
STM-5S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA
STM-8D	NA	NA	NA	<5.0 (2.0)	<5.0 (2.0)	<5.0 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
STM-8M	NA	NA	NA	<5.0	NS (5.0)	<5.0	NS (6.0)	NS (7.0)	NS (8.0)
STM-8S	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA
WE-02	NA	<500 (1.0)	NS (1.0)	<1,250 (1.0)	<1,000 (1.0)	<500 (1.0)	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	<12 (1.0)	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA
WE-03	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
WE-04D	NA	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA
WE-04S	NA	NA	NA	<500 (1.0)	<500 (1.0)	<500 (1.0)	NA	NA	NA
WE-06	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	NA	NA	40	NS (27)	NS (15)	<2.0
EMW-10S	NA	NA	NA	NA	NA	<1.0	NS (1.3)	NS (1.7)	<2.0
EMW-11D	NA	NA	NA	NA	NA	63	NS (61)	NS (59)	NS (58)
EMW-11S	NA	NA	NA	NA	NA	<1.0	NS (1.3)	NS (1.7)	<2.0
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	NS (8.6)	7	17	NS (8.3)	4	8	7.5	NS (5.7)	4
GZA-103S	NS (28)	<5.0	40	NS (14)	<1.0	3	10	NS (5.5)	1
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (327)	380	79	NS (962)	1,400	2,000	NS (2,040)	NS (2,080)	NS (2,120)

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-13	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS
GZA-14	NS (3.0)	NS (3.0)	NS (3.0)	3	NS (2.8)	NS (2.5)	NS (2.3)	<2.0	NS (2.1)
GZA-14A	NS (3.0)	NS (3.0)	NS (3.0)	3	NS (2.8)	NS (2.5)	NS (2.3)	2	NS (2.0)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	<1.0	NA	NA	NA	NA	NA
MW-4	NA	NA	NA	NA	NA	NA	NA	<2.0	NS (4.5)
MW-4A	NA	NA	NA	NA	NA	NA	NA	<2.0	NS (1.8)
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NA	NA	NA	NA	NA	20	NS (19)	NS (18)	NS (17)
PS-1M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.5)	<2.0	NS (2.0)
PS-1S	NS (11)	NS (11)	NS (12)	NS (14)	NS (14)	15	NS (8.6)	<2.0	NS (3.1)
PS-2D	NA	NA	NA	NA	NA	6	NS (4.0)	<2.0	NS (1.8)
PS-2M	NA	NA	NA	NA	NA	<1.0	NS (1.5)	<2.0	NS (2.0)
PS-2S	NS (4.2)	NS (3.9)	NS (3.6)	3	NS (2.0)	<1.0	NS (1.5)	<2.0	NS (2.0)
PS-3	NA	NA	NA	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (1.8)
PS-4	NS (110)	NS (108)	NS (105)	NS (100)	NS (98)	NS (95)	NS (93)	NS (90)	NS (88)
PS-5D	NA	NA	NA	NA	NA	NA	NA	<2.0	NS (2.0)
PS-5S	NS (18)	NS (13)	NS (9.2)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.4)
PS-8D	NA	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NA	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	NA	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 1995	Mar. 1996	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.0)
STM-3S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NS (2.0)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	2	NS (2.0)	<2.0	NS (2.6)
STM-8M	NS (9.0)	NS (10.0)	NS (11)	NS (13)	NS (14)	15	NS (8.6)	<2.0	NS (2.1)
STM-8S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.5)	2	NS (2.0)	<2.0	NS (2.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	NA	NA	10	NS (6.0)	<2.0	NS (5.2)
W-02	NA	NA	NA	NA	NA	8	NS (5.0)	<2.0	NS (5.6)
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<50 (1.0)	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	<1.0	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NS (4.6)	NS (7.1)	NS (9.7)	NS (12)	NS (15)	20	13	22	23
EMW-10S	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.6)	NS (1.4)	NS (1.4)
EMW-11D	NS (56)	NS (54)	NS (52)	NS (50)	NS (49)	45	10	2.3	13
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	NS (4.2)	NS (4.4)	NS (4.6)	NS (4.8)	NS (5.1)	NS (5.5)	NS (6.3)	NS (7.6)	NS (7.8)
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (2,160)	NS (2,200)	NS (2,240)	NS (2,280)	NS (2,320)	2,400	170	590	790

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-13	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-14	NS (2.1)	NS (2.2)	NS (2.3)	NS (2.3)	NS (2.4)	NS (2.5)	NS (2.8)	NS (3.2)	NS (3.2)
GZA-14A	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (7.0)	NS (9.5)	NS (12)	NS (14)	NS (17)	NS (22)	32	NS (56)	NS (60)
MW-4A	NS (1.5)	NS (1.3)	<1.0	NS (5.1)	NS (9.2)	NS (17)	NS (34)	NS (59)	NS (63)
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-1D	NS (16)	NS (16)	NS (15)	NS (14)	NS (13)	NS (11)	7.6	8.9	11
PS-1M	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.1)	NS (2.1)
PS-1S	NS (4.3)	NS (5.4)	6.6	NS (6.7)	NS (6.8)	NS (7.0)	NS (7.4)	NS (7.9)	NS (8.0)
PS-2D	NS (1.5)	NS (1.3)	<1.0	NS (1.1)	NS (1.2)	NS (1.5)	<2.0	NS (1.7)	NS (1.6)
PS-2M	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	<2.0	NS (1.7)	NS (1.6)
PS-2S	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)
PS-3	NS (1.5)	NS (1.3)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-4	NS (85)	NS (83)	NS (80)	NS (78)	NS (75)	NS (70)	NS (60)	NS (46)	NS (43)
PS-5D	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	<2.0	17	NS (5.0)	NS (3.0)
PS-5S	NS (2.7)	NS (3.1)	NS (3.4)	NS (3.8)	NS (4.2)	NS (4.9)	NS (6.3)	NS (8.5)	NS (8.9)
PS-8D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)
STM-3S	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (3.3)	NS (3.9)	NS (4.6)	NS (5.2)	NS (5.9)	NS (7.1)	9.7	NS (3.7)	NS (2.7)
STM-8M	NS (2.3)	NS (2.4)	NS (2.5)	NS (2.7)	NS (2.8)	NS (3.1)	3.6	NS (5.5)	NS (5.8)
STM-8S	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NS (8.4)	NS (12)	NS (15)	18	18	NA	NA	NA	NA
W-02	NS (9.2)	NS (13)	NS (16)	20	20	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012	Mar. 2013	Sep. 2013	Mar. 2014
AE03	NA	NA	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)
AE04	NA	NA	NA	NA	NA	4.4	1.2	NS (1.2)	NS (1.1)
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	<1.0	NS	NS	NS
AE1S	NA	NA	NA	NA	NA	<1.0	NS	NS	NS
AE23S	NA	NA	NA	NA	NA	NA	NA	58	7.6
AE24	NA	NA	NA	NA	NA	NA	NA	<10	<20 (17)
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	43
AE2I	NA	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	<5.0 (1.0)
EMW-10D	25	19	17	11	8.1	5.9	NS (6.1)	NS (6.4)	NS (6.7)
EMW-10S	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)
EMW-11D	NS (14)	14	16	10	36	12	NS (18)	NS (24)	NS (30)
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	NS (8.0)	NS (8.2)	NS (8.6)	NS (8.8)	NS (9.0)	NS (9.3)	9.5	NS (10.0)	NS (10)
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (543)	300	1,200	1,300	846	285	NS (297)	NS (308)	NS (320)

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012	Mar. 2013	Sep. 2013	Mar. 2014
GZA-105S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0
GZA-13	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-14	3.3	NS (3.2)	NS (3.0)	2.9	NS (2.8)	NS (2.7)	NS (2.6)	NS (2.5)	NS (2.4)
GZA-14A	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	64	NS (61)	NS (54)	51	NS (55)	NS (60)	NS (64)	NS (69)	NS (73)
MW-4A	67	NS (62)	NS (52)	47	NS (48)	NS (49)	NS (50)	NS (50)	NS (51)
MW-5	NA	NA	NA	NA	NA	NA	NA	2.3	NS (3.8)
MW-7	33	NS (28)	NS (17)	12	NS (12)	NS (11)	NS (11)	NS (11)	NS (10)
PS-1D	NS (11)	11	12	12	12	9.6	NS (9.9)	NS (10)	NS (11)
PS-1M	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)	NS (2.1)
PS-1S	NS (8.1)	NS (8.2)	NS (8.4)	NS (8.5)	NS (8.6)	NS (8.7)	NS (8.8)	NS (8.9)	NS (9.0)
PS-2D	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.1)
PS-2M	NS (1.6)	NS (1.5)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.1)
PS-2S	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)
PS-3	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)
PS-4	NS (41)	NS (38)	NS (33)	NS (31)	NS (28)	NS (26)	NS (23)	NS (21)	NS (18)
PS-5D	1	NS (0.93)	NS (0.80)	0.73	NS (3.2)	NS (5.6)	NS (8.0)	NS (11)	NS (13)
PS-5S	NS (9.2)	NS (9.6)	NS (10)	NS (11)	NS (11)	NS (11)	NS (12)	NS (12)	NS (12)
PS-8D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012	Mar. 2013	Sep. 2013	Mar. 2014
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)
STM-3S	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	1.7	NS (1.7)	NS (1.8)	1.8	NS (3.0)	NS (4.2)	NS (5.4)	NS (6.6)	NS (7.8)
STM-8M	NS (6.1)	NS (6.4)	NS (7.0)	NS (7.3)	NS (7.6)	NS (8.0)	NS (8.3)	NS (8.6)	NS (8.9)
STM-8S	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	1	NS (0.98)	NS (0.94)	0.92	NS (0.93)	NS (0.94)	NS (0.95)	NS (0.97)	NS (0.98)
TRC-403	<0.50	NS (0.62)	NS (0.87)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE03	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE04	NS (1.1)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE101D	98	15	20	52	24	32	64	32
AE101S	9.1	12	19	41	18	19	39	19
AE102D	27	40	37	12	60	4.6	30	77
AE102M	37	30	51	50	23	45	39	49
AE102S	11	20	NS (17)	NS (14)	NS (12)	NS (9.3)	NS (7.1)	4.8
AE103D	14	14	3.9	5	5.7	3.2	3.2	3.5
AE103M	7.9	12	NS (10)	NS (7.6)	NS (5.9)	NS (4.3)	NS (2.6)	<1.0
AE103S	4.4	8.6	3	8.1	<1.0	<1.0	<1.0	<1.0
AE104D	3.4	1.1	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
AE104M	5.5	14	NS (12)	NS (9.1)	NS (7.0)	NS (5.0)	NS (3.0)	<1.0
AE104S	8.3	12	6.4	1.9	<1.0	<1.0	<1.0	<1.0
AE105D	19	47	50	32	41	29	18	16
AE105M	19	19	NS (17)	NS (14)	NS (11)	NS (9.4)	NS (7.3)	5.2
AE105S	17	21	18	11	10	13	8.7	7.8
AE106D	4.4	3.6	3.1	1.8	1.6	<1.0	<1.0	<1.0
AE106M	5.2	7.4	NS (7.7)	NS (8.1)	NS (8.4)	NS (8.6)	NS (8.9)	9.2
AE106S	7.8	8.5	14	13	6.2	8.5	25	11
AE109D	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112D	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE1I	NS	NS	NS	NS	NS	NS	NS	NS
AE1S	NS	NS	NS	NS	NS	NS	NS	NS
AE23S	NS (19)	31	30	22	NS (17)	NS (12)	NS (7.0)	2.1
AE24	NS (25)	32	<200 (28)	<5.0	<10 (4.3)	<50 (3.5)	<5.0 (2.7)	<2.0
AE25D	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE25S	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26D	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26S	NS (107)	169	117	111	63	57	34	17
AE2I	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
EMW-10D	NS (6.9)	7.2	9.8	19	15	16	21	19
EMW-10S	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
EMW-11D	NS (36)	42	75	22	13	4.6	5.3	5.2
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
GZA-102S	NS (11)	NS (11)	NS (12)	NS (14)	15	2.7	2.5	<1.0
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (331)	343	419	823	244	130	54	35

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
GZA-105S	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (2.1)	NS (2.1)	NS (2.1)	2.1	NA	NA	NA	NA
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	<1.0	<1.0	<1.0	<7.0 (1.0)	<1.0	<1.0	<1.0
GZA-13	NS	NS	NS	NS	NS	NS	NS	NS
GZA-14	NS (2.3)	2.2	2.2	<1.0	NS (1.1)	NS (1.1)	NS (1.2)	1.3
GZA-14A	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
HOW-2	NA	NA	<1.0	NS	NS	NS	NS	NS
HOW-3	NA	NA	<1.0	NS	NS	NS	NS	NS
MW-1	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (77)	82	34	45	40	20	27	20
MW-4A	NS (52)	53	40	25	NS (21)	NS (17)	NS (12)	8.3
MW-5	NS (5.4)	7	6.4	14	13	11	10	12
MW-7	NS (10)	9.7	10	24	16	29	35	27
PS-1D	NS (11)	11	12	14	9	9	7.4	8.3
PS-1M	NS (2.1)	2.1	1.5	<1.0	NS (1.2)	NS (1.5)	NS (1.8)	<2.0
PS-1S	NS (9.1)	9.2	5.7	9.9	10	7.3	6.6	9.7
PS-2D	NS (1.1)	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	<1.0
PS-2M	NS (1.1)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-2S	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-3	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-4	NS (16)	13	4.8	4.5	NS (5.3)	NS (6.1)	NS (6.9)	7.7
PS-5D	NS (15)	18	12	21	17	13	13	14
PS-5S	NS (13)	13	7.4	6.9	NS (7.3)	NS (7.7)	NS (8.1)	8.5
PS-8D	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-8M	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-8S	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PZ-1D	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1M	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1S	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	1	<1.0	<1.0	1.2

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Overburden Input Data

	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
PZ-3	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4D	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4S	NA	NA	NA	NA	NA	NA	NA	NA
PZ-6S	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7D	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7S	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-3S	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	9	15	18	16	15	10	4.9	3.9
STM-8M	9.2	5.7	7.9	17	NS (14)	NS (10.0)	NS (6.2)	2.5
STM-8S	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
TRC-101	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0
TRC-102	NA	1	6.7	1.7	1.2	<1.0	<1.0	<1.0
TRC-103	NA	NA	NA	NA	3.2	1.2	2.1	1.7
TRC-402	NS (0.99)	<1.0	<1.0	<1.0	NS	NS	NS	NS
TRC-403	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
W-01	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-04	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	NS	NS	NS	NS	NS	NS
GZA-05	NA	NA	NA	NA	<10 (1.0)	NS	NS	NS	NS	NS	NS
GZA-06	NA	NA	NA	<10 (1.0)	NS	NS	NS	NS	NS	NS	NS
GZA-09	<10 (2.0)	NS (2.0)	NS (2.0)	2	<10 (2.0)	<10 (2.0)	NA	NA	NA	NA	NA
GZA-10	NA	NA	NA	NA	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	<10 (4.5)	NS (4.5)	<10 (4.5)	<50 (4.5)	<50 (4.5)	4.5	4.4	7	<5.0	<5.0	<2.0
GZA-103S	17	NS (23)	<25	<200 (55)	84	26	NS (18)	9	<5.0	<25 (5.3)	<2.0
GZA-104D	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
GZA-104S	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-105D	NA	NA	NA	180	NS (163)	NS (147)	130	230	NS (194)	NS (157)	120
GZA-105S	<10 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	<50 (2.0)	<50 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
GZA-106D	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-106M	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-106S	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-107D	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107M	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-108D	<10 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	<10 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	<12 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-13	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-14	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-14A	<10 (1.0)	NS (1.0)	NS (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-2	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-4A	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-5	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-7	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-1D	NA	NA	<10 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-1M	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-1S	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2M	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2S	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-4	NA	NA	NA	NA	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.1)
PS-5D	NA	NA	<5.0 (1.0)	NS (1.2)	<10 (1.3)	<10 (1.5)	NS (1.5)	NS (1.6)	NS (1.6)	NS (1.7)	NS (1.7)
PS-5S	NA	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PS-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1989	Sep. 1991	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
PZ-8D	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
PZ-9D	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PZ-9S	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS	NS	NS	NS	NS
STM-10S	NA	NA	NA	<10 (1.0)	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-3D	NA	NA	NA	NA	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-3S	NA	NA	NA	NA	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-4S	NA	NA	NA	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-8D	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-8M	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-8S	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
WE-02	NA	<500 (1.0)	NS (1.0)	<1,250 (1.0)	<2,000 (1.0)	<1,000 (1.0)	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	<25 (1.0)	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA
WE-03	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
WE-04D	NA	<5.0 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	<1,000 (1.0)	<1,000 (1.0)	<1,000 (1.0)	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10D	NA	NA	NA	1	NS (0.98)	NS (0.97)	<2.0 (0.95)	NS (0.94)	NS (0.92)	NS (0.91)	NS (0.89)	NS (0.88)
EMW-10S	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
EMW-11D	NA	NA	NA	12	NS (14)	NS (16)	NS (18)	NS (20)	NS (22)	NS (25)	NS (27)	NS (29)
EMW-11S	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
GZA-102S	5	NS (2.3)	<1.0	2	<20 (1.7)	NS (1.3)	1	NS (1.1)	NS (1.2)	NS (1.4)	NS (1.5)	NS (1.6)
GZA-103S	6	NS (2.7)	<1.0	<1.0	<2.0 (1.0)	NS (1.0)	<2.0 (1.0)	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

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<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	<1.0	NS (308)	460	340	NS (333)	NS (326)	NS (319)	NS (312)	NS (305)	NS (298)	NS (291)	NS (284)
GZA-105S	NS (2.0)	NS (2.0)	NS (2.0)	2	NS (2.0)	NS (1.9)	NS (1.9)	NS (1.9)	NS (1.8)	NS (1.8)	NS (1.8)	NS (1.8)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-13	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
GZA-14A	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NS (1.0)	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
MW-4A	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
MW-5	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
MW-7	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.1)	NS (1.1)
PS-1D	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (0.98)	NS (0.96)
PS-1M	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.1)	NS (1.1)	1.1	NS (1.1)	NS (1.1)
PS-2D	NS (1.0)	<2.0 (1.0)	NS (1.0)	1	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
PS-2M	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
PS-2S	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-3	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
PS-4	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.4)	NS (1.5)
PS-5D	NS (1.7)	NS (1.8)	NS (1.9)	NS (1.9)	NS (2.0)	<2.0	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
PS-5S	NS (1.0)	<1.0	NS (1.1)	NS (1.1)	NS (1.2)	<2.0 (1.2)	NS (1.3)	NS (1.3)	NS (1.4)	NS (1.5)	NS (1.5)	NS (1.6)
PS-8D	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 1996	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-3S	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
STM-8M	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
STM-8S	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-01	NA	NA	NA	<1.0	NS (1.2)	NS (1.4)	NS (1.6)	NS (1.8)	<2.0	<2.0	8	8
W-02	NA	NA	NA	<1.0	NS (1.2)	NS (1.4)	NS (1.6)	NS (1.8)	<2.0	<2.0	4	4
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NS (1.0)	NS (1.0)	<100 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	<1.0	NS (1.0)	<2.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
AE03	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE04	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.9
AE101D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE1I	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
AE23S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2I	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
EMW-10D	<2.0 (0.85)	<2.0 (0.78)	0.69	0.63	0.55	0.67	0.25	0.4	<1.0	<1.0
EMW-10S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
EMW-11D	33	6.7	1.4	10	NS (11)	12	8.6	6.2	28	7.3
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-102S	NS (1.9)	NS (2.4)	NS (3.1)	NS (3.2)	NS (3.3)	NS (3.5)	NS (3.7)	NS (3.8)	NS (4.0)	NS (4.1)
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	270	65	110	240	NS (225)	210	140	150	128	110
GZA-105S	NS (1.7)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.3)	NS (1.3)	NS (1.2)	NS (1.2)	NS (1.2)	NS (1.2)
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
GZA-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
GZA-14A	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
HOW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (1.0)	1	NS (1.5)	NS (1.5)	1.6	NS (1.6)	NS (1.6)	1.6	NS (1.7)	NS (1.7)
MW-4A	NS (1.1)	NS (1.2)	NS (1.3)	NS (1.3)	1.3	NS (1.1)	NS (0.81)	0.64	NS (0.69)	NS (0.74)
MW-5	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
MW-7	NS (1.3)	<2.0 (1.6)	NS (2.1)	NS (2.1)	2.2	NS (1.8)	NS (1.1)	0.71	NS (0.75)	NS (0.79)
PS-1D	NS (0.92)	<2.0 (0.85)	0.73	0.79	NS (1.0)	1.3	0.91	0.48	1.1	<1.0
PS-1M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-1S	NS (1.1)	NS (1.1)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2D	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2M	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-3	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-4	NS (1.5)	NS (1.6)	NS (1.8)	NS (1.8)	NS (1.8)	NS (1.8)	NS (1.9)	NS (1.9)	NS (1.9)	NS (2.0)
PS-5D	<2.0	5.3	NS (2.1)	NS (1.5)	<1.0	NS (0.83)	NS (0.49)	0.32	NS (0.70)	NS (1.1)
PS-5S	NS (1.7)	NS (1.9)	NS (2.3)	NS (2.3)	NS (2.4)	NS (2.4)	NS (2.5)	NS (2.6)	NS (2.7)	NS (2.7)
PS-8D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Sep. 2003	Sep. 2005	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Mar. 2011	Sep. 2011	Mar. 2012	Sep. 2012
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-3S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
STM-8M	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-8S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
TRC-101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-402	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
TRC-403	NA	NA	NA	NA	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE03	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE04	1	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	1.6	<1.0	<1.0	<1.0	<1.0	<1.0
AE101D	NA	NA	NA	<25 (1.0)	<1.0	<1.0	<1.0	1.7	1.6	2.3	1.8
AE101S	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	1.4
AE102D	NA	NA	NA	10	16	19	4.7	<1.0	2.7	11	33
AE102M	NA	NA	NA	14	<1.0	9.6	22	11	15	13	13
AE102S	NA	NA	NA	<1.0	3.4	NS (3.2)	NS (3.0)	NS (2.8)	NS (2.6)	NS (2.5)	2.3
AE103D	NA	NA	NA	<5.0 (2.4)	2.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE103M	NA	NA	NA	9.4	13	NS (11)	NS (8.1)	NS (6.4)	NS (4.6)	NS (2.8)	<1.0
AE103S	NA	NA	NA	4.8	8.5	2.9	7.4	<1.0	<1.0	<1.0	<1.0
AE104D	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE104M	NA	NA	NA	<1.0	2.3	NS (2.1)	NS (1.8)	NS (1.6)	NS (1.4)	NS (1.2)	<1.0
AE104S	NA	NA	NA	1.2	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE105D	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	4.6
AE105M	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE105S	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE106D	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE106M	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE106S	NA	NA	NA	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	3.6	<1.0
AE109D	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112D	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE1I	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE1S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE23S	NA	<1.0	<1.0	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE24	NA	<10 (1.0)	<20 (1.0)	NS (1.0)	<1.0	<200 (1.0)	<5.0 (1.0)	<10 (1.0)	<50 (1.0)	<2.5 (1.0)	<2.0 (1.0)
AE25D	NA	NA	<1.0	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE25S	NA	NA	<1.0	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26D	NA	NA	<1.0	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26S	NA	NA	<1.0	NS (1.0)	<1.0	<1.0	<5.0 (1.0)	<1.0	<1.0	<1.0	<1.0
AE2I	NS (1.0)	NS (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
EMW-10D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	1.8	1.8	2.1	5.7	2.9
EMW-10S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
EMW-11D	NS (11)	NS (14)	NS (18)	NS (21)	25	39	11	3.9	1.2	2.3	1.7
EMW-11S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-10	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
GZA-102S	4.2	NS (4.7)	NS (5.2)	NS (5.7)	NS (6.2)	NS (7.1)	NS (8.6)	9.6	1.3	1.2	<1.0
GZA-103S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Interpolated between two sampling events.

Non-Sampled Well

vinyl chloride Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
GZA-104S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105D	NS (97)	NS (85)	NS (72)	NS (59)	47	80	84	47	23	16	9.4
GZA-105S	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GZA-106D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-106S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-107D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA
GZA-107M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA
GZA-107S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-12	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<1.0	<1.0	<1.0	<7.0 (1.0)	<1.0	<1.0	<1.0
GZA-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-14	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
GZA-14A	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
HOW-2	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
HOW-3	NA	NA	NA	NA	NA	<1.0	NS	NS	NS	NS	NS
MW-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	NS (1.8)	NS (1.8)	NS (1.9)	NS (1.9)	2	1.7	1.5	1.6	3.8	1.6	<1.0
MW-4A	NS (0.79)	NS (0.85)	NS (0.90)	NS (0.95)	<1.0	2	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
MW-5	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	NS (0.83)	NS (0.88)	NS (0.92)	NS (0.96)	<1.0	1.5	1.5	1.4	2	2.8	2.5
PS-1D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0
PS-1M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)
PS-1S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	1	1.5	2.1	1.3	1.7	1.3
PS-2D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-2M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-2S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
PS-3	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-4	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.1)	2.1	<1.0	1.3	NS (1.4)	NS (1.5)	NS (1.7)	1.8
PS-5D	NS (1.5)	NS (1.9)	NS (2.2)	NS (2.6)	3	3.8	3.2	4.3	4.6	2.3	2.5
PS-5S	NS (2.8)	NS (2.8)	NS (2.9)	NS (2.9)	3	<1.0	1.3	NS (1.7)	NS (2.1)	NS (2.5)	2.9
PS-8D	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PS-8M	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0

Notes:

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Non-Sampled Well

vinyl chloride Overburden Input Data

	Mar. 2013	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
PZ-8D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-9D	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10S	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2D2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3D	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-3S	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-4S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8D	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-8M	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8S	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
TRC-101	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	<1.0
TRC-102	NA	NA	NA	NA	<1.0	5.2	1.1	<1.0	<1.0	<1.0	<1.0
TRC-103	NA	NA	NA	NA	NA	NA	NA	2.4	<1.0	1	1.6
TRC-402	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
TRC-403	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS	NS	NS	NS
W-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-02R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-04S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

1,4-Dioxane Overburden Input Data

	Mar. 2012	Sep. 2012	Sep. 2013	Mar. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE03	NA	<0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE04	NA	<0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE101D	NA	NA	NA	NA	<0.20	<0.20	<0.20	0.32	<0.20	0.31	<0.30
AE101S	NA	NA	NA	NA	NA	<0.20	<0.20	<0.20	<0.20	0.23	0.38
AE102D	NA	NA	NA	NA	6.9	4.7	6.2	6.7	5.4	4.7	5.3
AE102M	NA	NA	NA	NA	NA	<0.20	0.73	0.76	0.78	0.62	0.73
AE103D	NA	NA	NA	NA	1	<0.20	0.84	0.82	0.82	0.78	0.68
AE103S	NA	NA	NA	NA	NA	0.36	0.7	NS	NS	NS	NS
AE104D	NA	NA	NA	NA	0.3	<0.20	0.31	0.37	0.42	0.34	0.34
AE104S	NA	NA	NA	NA	NA	<0.20	0.35	NS	NS	NS	NS
AE105D	NA	NA	NA	NA	NA	1.4	1.3	2	1.4	0.82	0.67
AE105S	NA	NA	NA	NA	NA	1.1	0.44	NS	NS	NS	NS
AE106D	NA	NA	NA	NA	0.4	NS	NS	NS	NS	NS	NS
AE106M	NA	NA	NA	NA	0.5	NS	NS	NS	NS	NS	NS
AE106S	NA	NA	NA	NA	0.5	NS	NS	NS	NS	NS	NS
AE109D	NA	NA	NA	NA	NA	<0.20	0.31	0.22	0.37	0.42	0.55
AE112D	NA	NA	NA	NA	NA	<0.20	NS	NS	NS	NS	NS
AE1I	NA	<0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE1S	NA	<0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
AE23S	NA	NA	0.57	NS	NS	NS	NS	NS	NS	NS	NS
AE24	NA	NA	0.39	NS (0.37)	NS (0.32)	NS (0.27)	<0.20	0.29	1.4	<0.20	<0.20
AE25D	NA	NA	NA	<0.20	NS	NS	NS	NS	NS	NS	NS
AE25S	NA	NA	NA	<0.20	<0.20	NS	NS	NS	NS	NS	NS
AE26D	NA	NA	NA	<0.20	NS	NS	NS	NS	NS	NS	NS
AE26S	NA	NA	NA	<0.20	NS	NS	NS	NS	NS	NS	NS
AE2I	NA	<0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-10D	<0.20	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11D	<0.20	0.51	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-105D	2.2	1.6	NS (1.5)	NS (1.5)	NS (1.4)	1.3	6.1	2.3	1	0.68	0.7
GZA-12	NA	<0.20	NS (0.20)	NS (0.20)	<0.20	NS (0.20)	NS (0.20)	<0.20	<0.20	<0.20	<0.20
HOW-2	NA	NA	NA	NA	NA	<0.20	NS	NS	NS	NS	NS
HOW-3	NA	NA	NA	NA	NA	<0.20	NS	NS	NS	NS	NS
MW-4	NA	NA	NA	NA	1.3	0.68	1.2	1.4	0.86	0.84	0.8
MW-4A	NA	NA	NA	NA	1.1	0.69	0.89	NS	NS	NS	NS
PS-1D	<0.20	0.67	NS (0.72)	NS (0.75)	0.8	NS	NS	NS	NS	NS	NS
STM-8D	NA	NA	NA	NA	NA	0.35	0.78	0.76	0.44	0.45	0.41
STM-8M	NA	NA	NA	NA	NA	<0.20	0.65	NS	NS	NS	NS
STM-8S	NA	NA	NA	NA	NA	<0.20	<0.20	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Geochemical Overburden Input Data

	Jan. 1990	Jan. 1990	Jan. 1990	Jan. 1990
AE03	2.3	<0.24	3,100	-87
AE04	NS	NS	NS	11
AE101D	NS	NS	NS	-11
AE101S	NS	NS	NS	-10
AE102D	NS	NS	NS	99
AE102M	<0.17	<0.24	<2.0	213
AE102S	NS	NS	NS	176
AE103D	NS	NS	NS	132
AE103M	NS	NS	NS	-110
AE103S	NS	NS	NS	-121
AE104D	NS	NS	NS	158
AE104M	NS	NS	NS	89
AE104S	NS	NS	NS	26
AE105D	NS	NS	NS	-115
AE105M	NS	NS	NS	39
AE105S	NS	NS	NS	-11
AE106D	<0.17	<0.24	39	173
AE106M	NS	NS	NS	151
AE106S	NS	NS	NS	167
AE109D	NS	NS	NS	83
AE112D	NS	NS	NS	199
AE23S	NS	NS	NS	241
AE24	NS	NS	NS	189
AE25D	NS	NS	NS	161
AE25S	NS	NS	NS	159
AE26D	NS	NS	NS	133
AE26S	NS	NS	NS	149
AE2I	NS	NS	NS	222
EMW-10D	NS	NS	NS	229
EMW-11D	NS	NS	NS	-60
GZA-06	NS	NS	NS	19
GZA-10	NS	NS	NS	142
GZA-102S	NS	NS	NS	38
GZA-105D	1	<0.24	370	70
GZA-105S	NS	NS	NS	-109
GZA-12	NS	NS	NS	212
GZA-14	NS	NS	NS	27
GZA-14A	NS	NS	NS	45
MW-4	NS	NS	NS	-73
MW-4A	NS	NS	NS	-71
MW-5	NS	NS	NS	-72

Notes:

All concentrations in µg/l

<5.00: Analyte not detected. Detection limit used.

Geochemical Overburden Input Data

	Jan. 1990	Jan. 1990	Jan. 1990	Jan. 1990
MW-7	NS	NS	NS	20
PS-1D	NS	NS	NS	-118
PS-1M	NS	NS	NS	-60
PS-1S	NS	NS	NS	-121
PS-2D	NS	NS	NS	-50
PS-2M	NS	NS	NS	-51
PS-2S	NS	NS	NS	-78
PS-3	NS	NS	NS	-35
PS-4	NS	NS	NS	-18
PS-5D	NS	NS	NS	-64
PS-5S	NS	NS	NS	-44
PS-8D	NS	NS	NS	-48
PS-8M	NS	NS	NS	-29
PS-8S	NS	NS	NS	58
PZ-2S	NS	NS	NS	-32
STM-3D	NS	NS	NS	-102
STM-3S	NS	NS	NS	97
STM-8D	<0.17	<0.24	6.6	32
STM-8M	NS	NS	NS	-24
STM-8S	NS	NS	NS	39
TRC-101	<0.17	<0.24	<2.0	-82
TRC-102	NS	NS	NS	-73
TRC-103	NS	NS	NS	-91

Notes:

All concentrations in µg/l

<5.00: Analyte not detected. Detection limit used.

PCE Upper Bedrock Input Data

	Sep. 1989	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Mar. 1997
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-07	NA	NA	<150 (1.0)	<25 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	1,600	21	150	120	360	280	790	630	880	970	900	820
GZA-102R1	380	150	170	190	230	44	45	52	88	570	31	NS (507)
GZA-102R2	NA	NA	580	NS (689)	NS (801)	910	1,100	NS (1,199)	NS (1,300)	1,400	990	NS (1,126)
GZA-103R1	<5.0	140	58,000	110	350	150	250	380	320	130	170	44
GZA-103R2	<5.0	NS (46)	<140 (54)	NS (63)	NS (71)	79	230	NS (339)	NS (450)	560	360	NS (268)
GZA-104R1	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	480	1,900	7,200	1,000	4,200	640	980	2,900	4,400	3,800	2,700	2,800
GZA-106R	NA	NA	52	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	<5.0	NS (5.0)	NS (5.0)	<25 (5.0)	<5.0	5	<5.0	NS (5.0)	<5.0	14	17	NS (16)
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1R	NA	<5.0 (1.0)	<6.4 (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	<5.0 (3.8)	3.8	<5.0 (3.8)	<5,000 (3.8)	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	260	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	<100 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NA	NA	7.9	5.8	5.2	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-10R1	NA	NA	920	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-5R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-8R	NA	NA	<5.0	NS (5.0)	<5.0	NS (6.6)	NS (8.2)	NS (9.9)	NS (11)	NS (13)	NS (15)	NS (16)
STM-9R	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	<680 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	<44 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NA	NA	270	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

PCE Upper Bedrock Input Data

	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	390	150	160
EMW-10R	NA	NA	2	NS (38)	NS (74)	110	NS (78)	NS (47)	15	NS (8.5)	<2.0	NS (2.0)	<2.0
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	NS (523)	230	NS (291)	NS (352)	NS (413)	NS (474)	NS (535)	NS (595)	NS (657)	NS (778)	900	NS (855)	840
GZA-102R1	990	110	33	36	NS (33)	31	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS (1,264)	1,400	700	NS (692)	NS (684)	NS (676)	NS (668)	NS (660)	NS (652)	NS (636)	620	NS	NS
GZA-103R1	110	69	56	<50	50	48	290	NS (219)	NS (148)	<5.0	<2.0	NS (2.0)	<2.0
GZA-103R2	NS (175)	83	280	<50	NS (45)	NS (39)	NS (34)	NS (29)	NS (23)	NS (13)	<2.0	NS (2.0)	<2.0
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	1,700	1,200	1,600	81	4	NS (2,687)	5,400	6,100	NS (6,113)	NS (6,138)	NS (6,163)	6,200	NS (6,144)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NS (15)	14	NS (9.5)	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	510	340
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	190	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	18	NS (10)	2	NS (5.0)	8	NS (7.5)	NS (6.9)	NS (6.4)	5.9	NS (5.8)	NS (5.7)	NS (5.6)	5.5
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	13	NS (13)	NS (12)	NS (11)	NS (9.6)	NS (9.1)
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

PCE Upper Bedrock Input Data

	Sep. 2008	Sep. 2009	Sep. 2011	Sep. 2012	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-1	NA	NA	NA	NA	NA	NA	32	7.2	<1.0	<1.0	635	3.6	<1.0	5.5
AE100R-2	NA	NA	NA	NA	NA	NA	84	162	72	114	NS (410)	NS (707)	NS (1,004)	1,300
AE100R-3	NA	NA	NA	NA	NA	NA	2,080	1,680	2,270	3,440	1,390	5,700	4,000	6,100
AE101R-1	NA	NA	NA	NA	NA	NA	60	22	18	126	166	170	160	130
AE101R-2	NA	NA	NA	NA	NA	NA	482	53	6.4	5.1	4.7	19	8.2	33
AE102RR-1	NA	NA	NA	NA	NA	NA	31	127	NS (108)	NS (80)	NS (61)	NS (42)	NS (23)	4.4
AE103R-1	NA	NA	NA	NA	NA	NA	1,020	343	1,620	1,480	1,130	870	980	1,200
AE104R-1	NA	NA	NA	NA	NA	NA	186	367	469	477	315	130	220	410
AE106R-1	NA	NA	NA	NA	NA	NA	3.5	3.3	12	9.4	10	2.9	2.3	1.8
AE108R-1	NA	NA	NA	NA	NA	NA	2.8	1.8	1.4	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	3.2	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
AE23R	NA	NA	NA	NA	40,800	9,200	NS (9,019)	8,840	76,300	67,300	48,400	100,000	54,000	56,000
AE25R	NA	NA	NA	NA	NA	85	NS (49)	13	NS (11)	NS (8.7)	NS (7.0)	NS (5.2)	NS (3.4)	1.6
AE26R	NA	NA	NA	NA	NA	3,880	NS (2,721)	1,580	NS	NS	NS	NS	NS	NS
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	480	179	316	270	870	340
AE27R	NA	NA	NA	NA	NA	236	NS (130)	26	1,130	71	NS (54)	NS (37)	NS (19)	<2.0
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	6,170	3,600	5,500	3,500	4,300	3,400
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	3.6	<1.0
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE2R	NA	NA	NA	NA	NA	7.7	NS (7.2)	6.6	6.5	9.8	NS (8.4)	NS (7.1)	NS (5.7)	4.4
BRW-1R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-10R	NS (0.87)	<0.50	<1.0	NS (1.1)	NS (1.1)	NS (1.1)	NS (1.2)	1.2	2	25	12	8	34	3.2
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	NS (870)	880	490	461	NS (340)	280	NS (289)	298	441	356	277	300	240	220
GZA-102R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-103R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	NS (5,811)	NS (5,701)	NS (5,479)	NS (5,368)	NS (5,257)	NS (5,202)	NS (5,146)	NS (5,091)	4,980	5,630	5,350	5,100	5,300	5,600
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	NS (5.9)	6	3.7	NS (3.1)	NS (2.6)	NS (2.3)	2	2.9	3.1	3.3	<1.0	<1.0	<1.0	2
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NS (6.6)	NS (5.7)	NS (4.0)	NS (3.1)	NS (2.3)	NS (1.9)	NS (1.4)	<1.0	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	<1.0	<1.0	<1.0
TRC-401R	180	NS (820)	2,100	3,880	NS (3,007)	NS (2,573)	NS (2,133)	1,700	2,240	216	1,070	2,600	1,800	1,300
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

TCE Upper Bedrock Input Data

	Sep. 1989	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Mar. 1997
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-07	NA	20	<40 (20)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	3,300	56	400	210	540	570	910	670	720	600	710	500
GZA-102R1	510	220	220	170	260	72	100	70	140	1,600	50	NS (918)
GZA-102R2	NA	NA	1,800	NS (1,966)	NS (2,134)	2,300	2,700	NS (2,468)	NS (2,233)	2,000	1,600	NS (1,965)
GZA-103R1	<5.0	780	5,000	280	590	<250	630	760	420	260	370	140
GZA-103R2	<5.0	NS (272)	<540 (326)	NS (301)	NS (275)	<250	540	NS (629)	NS (720)	810	560	NS (411)
GZA-104R1	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	6,200	3,100	9,600	1,500	5,800	1,400	2,000	4,800	7,400	5,200	6,700	5,000
GZA-106R	NA	NA	90	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	<5.0	12	<5.0	<25 (5.7)	<5.0	<5.0	<5.0	NS (5.0)	<5.0	10	14	NS (15)
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1R	NA	NA	<120 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	<5.0 (4.8)	4.8	<5.0 (4.8)	<5,000 (4.8)	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	330	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	<100 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NA	NA	12	8	8.7	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-10R1	NA	NA	<50 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-5R	NA	NA	11	11	<5.0	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-8R	NA	NA	17	NS (15)	13	NS (20)	NS (27)	NS (34)	NS (40)	NS (47)	NS (54)	NS (61)
STM-9R	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	<960 (1.0)	<1,700 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	<36 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NA	NA	290	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

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Interpolated between two sampling events.

Non-Sampled Well

TCE Upper Bedrock Input Data

	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005	Sep. 2008
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,100	370	460	NS
EMW-10R	NA	NA	4	NS (39)	NS (75)	110	NS (87)	NS (65)	42	NS (28)	14	NS (6.4)	3.9	NS (1.6)
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	NS (364)	230	NS (233)	NS (235)	NS (238)	NS (241)	NS (244)	NS (246)	NS (249)	NS (255)	260	NS (170)	140	NS (170)
GZA-102R1	1,800	100	42	33	NS (33)	33	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS (2,335)	2,700	1,100	NS (1,089)	NS (1,078)	NS (1,067)	NS (1,056)	NS (1,045)	NS (1,034)	NS (1,012)	990	NS	NS	NS
GZA-103R1	150	93	75	62	83	53	140	NS (107)	NS (73)	<5.0	<2.0	NS (2.0)	<2.0	NA
GZA-103R2	NS (259)	110	220	NS (198)	NS (176)	NS (155)	NS (133)	NS (111)	NS (89)	NS (46)	<2.0	NS (1.3)	1	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	4,600	3,200	2,200	580	18	NS (3,142)	6,300	8,500	NS (8,815)	NS (9,439)	NS (10,064)	11,000	NS (10,822)	NS (9,764)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NS (16)	17	NS (11)	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,400	1,000	NS
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,300	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	<1.0	NS (1.2)	NS (1.5)	NS (1.7)	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	68	NS (43)	18	NS (32)	46	NS (43)	NS (40)	NS (37)	34	NS (33)	NS (31)	NS (29)	28	NS (26)
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	130	NS (132)	NS (135)	NS (138)	NS (143)	NS (145)	NS (155)
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,100
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

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<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Upper Bedrock Input Data

	Sep. 2009	Sep. 2011	Sep. 2012	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-1	NA	NA	NA	NA	NA	63	15	<1.0	<1.0	971	13	2.5	44
AE100R-2	NA	NA	NA	NA	NA	117	356	81	182	NS (511)	NS (841)	NS (1,171)	1,500
AE100R-3	NA	NA	NA	NA	NA	3,350	2,890	3,410	4,780	2,200	7,300	4,900	7,300
AE101R-1	NA	NA	NA	NA	NA	78	43	18	65	55	50	44	41
AE101R-2	NA	NA	NA	NA	NA	758	230	28	26	35	44	46	91
AE102RR-1	NA	NA	NA	NA	NA	78	385	NS (357)	NS (314)	NS (285)	NS (257)	NS (228)	200
AE103R-1	NA	NA	NA	NA	NA	3,240	8,380	3,880	2,080	1,590	1,400	1,200	1,800
AE104R-1	NA	NA	NA	NA	NA	421	1,080	1,320	1,500	1,280	540	700	1,200
AE106R-1	NA	NA	NA	NA	NA	13	7.2	12	9	14	4.6	4.9	5.3
AE108R-1	NA	NA	NA	NA	NA	6.2	5.4	7.6	5.1	6.6	4.9	4.4	<1.0
AE109R-1	NA	NA	NA	NA	NA	NA	NA	6.1	3.7	1.8	1.5	1.2	1.1
AE110R-1	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-1	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-1	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE23R	NA	NA	NA	131,000	39,300	NS (68,438)	97,100	156,000	179,000	163,000	240,000	130,000	150,000
AE25R	NA	NA	NA	NA	265	NS (140)	17	NS (16)	NS (15)	NS (15)	NS (14)	NS (14)	13
AE26R	NA	NA	NA	NA	4,670	NS (4,242)	3,820	NS	NS	NS	NS	NS	NS
AE26R-1	NA	NA	NA	NA	NA	NA	NA	602	478	719	500	1,400	600
AE27R	NA	NA	NA	NA	93	NS (66)	40	1,500	101	NS (76)	NS (52)	NS (27)	2.8
AE28R-1	NA	NA	NA	NA	NA	NA	NA	7,390	9,930	13,900	10,000	11,000	6,600
AE29R-1	NA	NA	NA	NA	NA	NA	NA	4.6	2.8	<1.0	2.4	4	1.4
AE29R-2	NA	NA	NA	NA	NA	NA	NA	5.7	3.6	NS (3.1)	NS (2.6)	NS (2.0)	1.5
AE2R	NA	NA	NA	NA	<1.0	NS (1.1)	1.1	<1.0	1.3	NS (1.2)	NS (1.1)	NS (1.1)	<1.0
BRW-1R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-10R	0.83	1.4	NS (2.3)	NS (3.2)	NS (3.7)	NS (4.1)	4.6	5.9	63	35	23	81	11
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	180	160	108	NS (132)	144	NS (118)	93	186	176	134	120	110	110
GZA-102R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-103R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	NS (9,411)	NS (8,707)	NS (8,353)	NS (8,001)	NS (7,826)	NS (7,648)	NS (7,473)	7,120	8,270	7,570	6,700	8,200	7,500
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	26	14	NS (12)	NS (9.1)	NS (7.8)	6.6	20	14	14	6.7	<1.0	<1.0	8.9
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NS (159)	NS (165)	NS (169)	NS (172)	NS (174)	NS (175)	177	63	60	48	50	40	44
TRC-401R	NS (3,900)	9,500	7,700	NS (6,153)	NS (5,387)	NS (4,607)	3,840	4,150	355	1,960	5,200	3,600	2,100
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Upper Bedrock Input Data

	Sep. 1989	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996	Sep. 1996	Mar. 1997	Sep. 1997	Mar. 1998
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-07	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	<5.0	<5.0	<12 (5.7)	<5.0	<25 (5.9)	NS (5.7)	NS (5.5)	NS (5.3)	NS (5.2)	<5.0	11	4	NS (3.0)	2
GZA-102R1	<5.0	<5.0	<5.0	200	60	NS (51)	NS (42)	NS (32)	NS (23)	14	63	NS (156)	250	15
GZA-102R2	<5.0	<25	<5.0	NS (30)	NS (55)	NS (80)	NS (105)	NS (130)	NS (155)	180	320	NS (277)	NS (233)	190
GZA-103R1	<5.0	<25	<5,000 (617)	1,200	2,500	NS (2,242)	NS (1,980)	NS (1,722)	NS (1,459)	1,200	1,500	480	1,600	1,200
GZA-103R2	<5.0	<25	<30	NS (182)	NS (336)	NS (487)	NS (642)	NS (793)	NS (948)	1,100	1,100	NS (1,100)	NS (1,100)	1,100
GZA-104R1	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	<5.0	<100 (80)	<120 (95)	110	<250 (110)	NS (109)	NS (109)	NS (109)	NS (108)	108	320	220	530	1,400
GZA-106R	<5.0 (1.0)	NS (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	<5.0	<5.0	<5.0	NS (26)	NS (46)	NS (67)	NS (88)	NS (108)	NS (129)	150	16	NS (42)	NS (68)	94
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1R	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	<5,000 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	<5.0 (1.0)	NS (1.0)	<25 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	<100 (1.0)	<500 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-10R1	NA	NA	<50 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS (1.2)
STM-5R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	NA	NA	<5.0	NS (5.0)	<5.0	NS (5.1)	NS (5.2)	NS (5.4)	NS (5.5)	NS (5.6)	NS (5.8)	NS (5.9)	6	NS (5.5)
STM-9R	NA	NA	NA	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	<25 (1.0)	<1,700 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
WE-105R2	NA	NA	<5.0 (1.0)	<500 (1.0)	<250 (1.0)	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

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<5.00: Analyte not detected. Detection limit used.

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Upper Bedrock Input Data

	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	83	43	40	NS	NS
EMW-10R	2	NS (15)	NS (29)	42	NS (34)	NS (27)	19	NS (15)	10	NS (17)	20	NS (26)	28
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	NS (2.0)	<13 (2.0)	NS (2.0)	<20 (2.0)	NS (2.0)	NS (2.0)	<2.0	<20 (2.0)	<20 (1.9)	NS (1.9)	<10 (1.9)	NS (1.7)	1.7
GZA-102R1	20	8.4	NS (8.7)	9	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	210	NS (197)	NS (185)	NS (172)	NS (159)	NS (147)	NS (134)	NS (108)	83	NS	NS	NS	NS
GZA-103R1	690	1,300	470	340	240	NS (201)	NS (161)	NS (82)	3.7	NS (4.1)	4.2	NA	NA
GZA-103R2	1,700	NS (1,154)	NS (599)	<50	NS (44)	NS (39)	NS (33)	NS (22)	11	NS (13)	14	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	130	1,700	13	NS (76)	140	180	NS (269)	NS (447)	NS (624)	890	NS (859)	NS (675)	NS (614)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	29	21	NS	NS
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	180	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NS (1.5)	NS (1.7)	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	5	NS (3.5)	<2.0	NS (2.2)	NS (2.5)	NS (2.7)	2.9	NS (3.9)	NS (4.9)	NS (6.5)	7	NS (7.2)	7.2
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	47	NS (53)	NS (65)	NS (78)	NS (96)	NS (102)	NS (139)	NS (151)
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100 (98)	98	NS (115)
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

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<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Upper Bedrock Input Data

	Sep. 2011	Sep. 2012	Sep. 2013	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-1	NA	NA	NA	NA	8	25	7.5	5.3	36	16	6.5	33
AE100R-2	NA	NA	NA	NA	45	60	54	49	NS (55)	NS (61)	NS (67)	73
AE100R-3	NA	NA	NA	NA	<50 (29)	29	<50 (36)	<50 (47)	<100 (54)	61	52	61
AE101R-1	NA	NA	NA	NA	10	14	13	39	33	30	29	33
AE101R-2	NA	NA	NA	NA	38	420	116	63	80	34	71	74
AE102RR-1	NA	NA	NA	NA	17	97	NS (105)	NS (118)	NS (126)	NS (134)	NS (142)	150
AE103R-1	NA	NA	NA	NA	146	1,970	1,830	630	336	360	340	320
AE104R-1	NA	NA	NA	NA	16	46	79	122	166	240	220	170
AE106R-1	NA	NA	NA	NA	7.1	3.8	5.5	5	18	28	14	18
AE108R-1	NA	NA	NA	NA	2.6	3.5	15	22	38	24	23	<1.0
AE109R-1	NA	NA	NA	NA	NA	NA	2.9	3.7	2.8	3.1	2.6	2.4
AE110R-1	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-1	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-1	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE23R	NA	NA	<2,000 (1.0)	<500 (1.0)	NS (1.0)	<1,000 (1.0)	<2,000 (1.0)	<500 (1.0)	<5,000 (1.0)	<500 (1.0)	<500 (1.0)	<500 (1.0)
AE25R	NA	NA	NA	20	NS (16)	13	NS (14)	NS (15)	NS (15)	NS (16)	NS (16)	17
AE26R	NA	NA	NA	<100 (85)	NS (85)	85	NS	NS	NS	NS	NS	NS
AE26R-1	NA	NA	NA	NA	NA	NA	29	152	248	260	230	78
AE27R	NA	NA	NA	<5.0 (3.0)	NS (3.0)	3	<10	393	NS (420)	NS (446)	NS (473)	500
AE28R-1	NA	NA	NA	NA	NA	NA	<50	738	1,280	1,900	2,200	2,100
AE29R-1	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE29R-2	NA	NA	NA	NA	NA	NA	1.5	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE2R	NA	NA	NA	<1.0	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
BRW-1R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-10R	32	NS (32)	NS (32)	NS (32)	NS (32)	32	37	56	42	29	56	6.7
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	1.2	<10 (1.6)	NS (1.9)	<10 (2.1)	NS (2.3)	2.5	4.5	<10 (4.8)	<5.0	<5.0	5.4	4.8
GZA-102R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-103R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	NS (492)	NS (430)	NS (369)	NS (339)	NS (308)	NS (277)	216	222	264	210	190	150
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	3.7	NS (3.9)	NS (4.0)	NS (4.1)	4.2	7.2	7.5	6.6	5.1	<1.0	<1.0	6.6
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NS (175)	NS (188)	NS (200)	NS (206)	NS (212)	218	165	178	160	170	140	180
TRC-401R	150	138	NS (120)	NS (112)	NS (103)	94	107	29	127	100	90	64
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Upper Bedrock Input Data

	Sep. 1989	Mar. 1992	Sep. 1992	Mar. 1993	Sep. 1993	Mar. 1994	Sep. 1994	Mar. 1995	Sep. 1995	Mar. 1996
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-07	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA	NA
GZA-101R	<10 (1.0)	<10 (1.0)	<25 (1.0)	<10 (1.0)	<10 (1.0)	<100 (1.0)	<50 (1.0)	<25 (1.0)	<25 (1.0)	<2.0 (1.0)
GZA-102R1	<10	<10	12	<10	12	8.3	<5.0	<5.0 (4.3)	<5.0 (3.7)	3
GZA-102R2	<10	NS (42)	49	<100 (48)	<500 (46)	<200 (45)	<100 (44)	<50 (43)	<50 (41)	40
GZA-103R1	3,900	2,100	<10,000 (1,646)	1,200	3,600	970	710	1,500	510	1,200
GZA-103R2	NA	NA	1,300	NS (995)	NS (685)	380	1,500	NS (1,315)	NS (1,126)	940
GZA-104R1	<10 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-104R2	<10 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-105R	19	<200 (13)	<250 (12)	11	3	<500 (3.2)	<100 (3.4)	<120 (3.6)	<100 (3.8)	4
GZA-106R	<10 (1.0)	NS (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA	NA
GZA-108R1	<10 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	<10 (1.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	38	<10	NS (22)	NS (33)	45	14	NS (9.5)	<5.0	46
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1R	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
PZ-2R	NA	NA	24	<10	<10,000 (10)	NS	NS	NS	NS	NS
PZ-4R	NA	NA	<10 (1.0)	<10 (1.0)	<50 (1.0)	NA	NA	NA	NA	NA
PZ-7R	NA	NA	<250 (1.0)	<1,000 (1.0)	NA	NA	NA	NA	NA	NA
PZ-8R	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS	NS	NS	NS	NS
PZ-9R	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-10R1	NA	NA	<100 (1.0)	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-5R	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	<10 (1.0)	<10 (1.0)	NA	NA	NA	NA	NA
STM-8R	NA	NA	<10 (1.0)	NS (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-9R	NA	NA	NA	NA	<10 (1.0)	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	1,800	<2,500 (1,403)	<1,000	NA	NA	NA	NA	NA
WE-06R	NA	NA	<10 (1.0)	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
WE-105R2	NA	NA	<10 (1.0)	<1,000 (1.0)	<500 (1.0)	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Upper Bedrock Input Data

	Sep. 1996	Mar. 1997	Sep. 1997	Mar. 1998	Sep. 1998	Mar. 1999	Sep. 1999	Mar. 2000	Sep. 2000	Mar. 2001
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-10R	NA	<1.0	NS (1.0)	NS (1.0)	<1.0	NS (2.2)	NS (3.4)	4.6	NS (3.4)	NS (2.2)
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	<1.0	<1.0	NS (1.0)	<1.0	NS (1.0)	<5.0 (1.0)	NS (1.0)	<40 (1.0)	NS (1.0)	NS (1.0)
GZA-102R1	5	NS (8.0)	11	3	<1.0	<2.0 (1.0)	NS (1.0)	<4.0 (1.0)	NS	NS
GZA-102R2	130	NS (96)	NS (60)	26	21	<20	<100 (20)	<100 (20)	<100 (20)	NS (20)
GZA-103R1	1,200	210	920	1,200	590	720	330	<200	<200 (172)	NS (144)
GZA-103R2	970	NS (867)	NS (763)	660	1,100	NS (993)	NS (885)	NS (778)	NS (670)	NS (563)
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	46	7	12	20	5	27	6	NS (6.0)	<400 (6.0)	<50 (6.0)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	5	NS (25)	NS (45)	65	NA	NA	NA	NA	NA	NA
IP-02R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	NS (1.0)	NS (1.0)	<1.0	NS (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
TRC-401R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

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<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Upper Bedrock Input Data

	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009	Sep. 2011	Sep. 2012	Sep. 2013
AE100R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE23R	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2,000 (1.0)
AE25R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE27R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE2R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R2	NA	NA	6.7	<10 (6.7)	<10 (6.7)	NS	NS	NS	NS	NS
EMW-10R	<1.0	NS (1.5)	<2.0	NS (4.1)	4.8	NS (4.1)	3.9	4.8	NS (4.2)	NS (3.7)
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	<2.0 (1.0)	<20 (1.0)	<20 (1.0)	NS (1.0)	<10 (1.0)	NS (1.0)	<1.0	<1.0	<10 (1.0)	NS (1.0)
GZA-102R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS (20)	NS (20)	<20	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	NS (115)	NS (59)	2.7	NS (2.8)	2.9	NA	NA	NA	NA	NA
GZA-103R2	NS (455)	NS (240)	25	NS (15)	11	NA	NA	NA	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	<50 (6.0)	<100 (6.0)	NS (6.0)	<100 (6.0)	NS (6.0)	NS (6.0)	NS (6.0)	NS (6.0)	NS (6.0)	NS (6.0)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NA	NA	NA	<20 (1.0)	<20 (1.0)	NS	NS	NS	NS	NS
IP-04R1	NA	NA	NA	35	NS	NS	NS	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)	NS (1.0)	<1.0	<1.0	NS (1.0)	NS (1.0)
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NS (1.1)	NS (1.3)	NS (1.4)	NS (1.7)	NS (1.8)	NS (2.3)	NS (2.5)	NS (2.8)	NS (3.0)	NS (3.1)
TRC-401R	NA	NA	NA	NA	<100 (5.5)	5.5	NS (4.8)	<50 (3.4)	<100 (2.7)	NS (2.0)
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Upper Bedrock Input Data

	Mar. 2014	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-1	NA	1.5	<1.0	3.8	1.4	<20 (3.1)	4.8	4.1	13
AE100R-2	NA	9.5	8	14	9.9	NS (9.9)	NS (9.9)	NS (9.9)	<10 (9.9)
AE100R-3	NA	<50 (1.5)	1.5	<50 (1.5)	<50 (1.5)	<100 (1.5)	<50 (1.5)	<25 (1.5)	<25 (1.5)
AE101R-1	NA	<1.0	<1.0	<1.0	7.4	6.4	6.4	7.6	8.5
AE101R-2	NA	<10 (1.0)	<1.0	12	11	14	5.8	18	13
AE102RR-1	NA	<1.0	<1.0	NS (3.3)	NS (6.8)	NS (9.1)	NS (11)	NS (14)	16
AE103R-1	NA	<50	<50	112	75	49	23	23	18
AE104R-1	NA	<5.0 (1.0)	<1.0	<20 (8.2)	<20 (19)	26	29	34	18
AE106R-1	NA	1.1	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0
AE108R-1	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-1	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-1	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-1	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-1	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE23R	<500 (1.0)	NS (1.0)	<1,000 (1.0)	<2,000 (1.0)	<500 (1.0)	<5,000 (1.0)	<500 (1.0)	<500 (1.0)	<500 (1.0)
AE25R	<10 (1.0)	NS (1.0)	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26R	<100 (1.0)	NS (1.0)	<1.0	NS	NS	NS	NS	NS	NS
AE26R-1	NA	NA	NA	<5.0 (2.5)	<10 (2.5)	<5.0 (2.5)	<2.5	2.5	130
AE27R	<5.0 (1.0)	NS (1.0)	<1.0	<10 (1.0)	<5.0 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<2.0 (1.0)
AE28R-1	NA	NA	NA	<50	<200 (192)	<500 (286)	380	540	710
AE29R-1	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE29R-2	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE2R	<1.0	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
BRW-1R2	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-10R	NS (3.4)	NS (3.1)	2.8	4.5	6.2	15	17	11	<1.0
GZA-07	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-101R	<10 (1.0)	NS (1.0)	<1.0	<1.0	<10 (1.0)	<5.0 (1.0)	<2.5 (1.0)	<1.0	<1.0
GZA-102R1	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-102R2	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-103R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-104R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-105R	NS (6.0)	NS (6.0)	NS (6.0)	<200 (6.0)	<200 (6.0)	<200 (6.0)	<50 (6.0)	<50 (6.0)	<20 (6.0)
GZA-106R	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-108R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-15	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R1	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R1	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-2R	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-7R	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-8R	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-9R	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-10R1	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-1R	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-4R	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-6R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-8R	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
STM-9R	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-201R	NS (3.2)	NS (3.3)	3.4	<5.0 (3.1)	<5.0 (2.7)	<5.0 (2.4)	2.1	2.3	2.4
TRC-401R	NS (1.7)	NS (1.3)	<1.0	<100 (1.0)	<5.0 (1.0)	<20 (1.0)	<10 (1.0)	<10 (1.0)	<10 (1.0)
WE-05R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-06R	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE-105R2	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

1,4-Dioxane Upper Bedrock Input Data

	Sep. 2009	Sep. 2012	Sep. 2013	Mar. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-1	NA	NA	NA	NA	0.4	0.42	0.5	NS	NS	NS	NS
AE100R-2	NA	NA	NA	NA	NA	1.3	1.8	NS	NS	NS	NS
AE100R-3	NA	NA	NA	NA	6.2	4	9.8	9.4	13	9.2	12
AE101R-1	NA	NA	NA	NA	0.6	<0.20	0.92	NS	NS	NS	NS
AE101R-2	NA	NA	NA	NA	5.9	3.3	6.7	6.8	5.2	5.8	6.5
AE102RR-1	NA	NA	NA	NA	6.2	NS	NS	NS	NS	NS	NS
AE103R-1	NA	NA	NA	NA	18	16	9	8.7	8	4.2	9.4
AE104R-1	NA	NA	NA	NA	4.8	7.2	13	12	9	10	14
AE106R-1	NA	NA	NA	NA	1	NS	NS	NS	NS	NS	NS
AE108R-1	NA	NA	NA	NA	2.2	NS	NS	NS	NS	NS	NS
AE111R-1	NA	NA	NA	NA	NA	0.81	NS	NS	NS	NS	NS
AE112R-1	NA	NA	NA	NA	NA	<0.20	NS	NS	NS	NS	NS
AE23R	NA	NA	4.5	38	17	16	19	19	15	<0.20	12
AE25R	NA	NA	NA	3.8	NS	NS	NS	NS	NS	NS	NS
AE26R	NA	NA	NA	17	19	NS	NS	NS	NS	NS	NS
AE26R-1	NA	NA	NA	NA	NA	18	32	22	25	21	20
AE27R	NA	NA	NA	<0.20	NS (0.75)	1.3	NS	NS	NS	NS	NS
AE28R-1	NA	NA	NA	NA	NA	10	NS	NS	NS	NS	NS
AE29R-1	NA	NA	NA	NA	NA	0.62	NS	NS	NS	NS	NS
AE29R-2	NA	NA	NA	NA	NA	1.2	NS	NS	NS	NS	NS
AE2R	NA	NA	NA	<0.20	NS	NS	NS	NS	NS	NS	NS
EMW-10R	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-101R	1.4	1.2	NS (0.53)	<0.20	1.3	NS	NS	NS	NS	NS	NS
GZA-102R2	2.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZA-103R1	<0.51	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GZA-103R2	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R2	27	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-8R	NA	NA	NA	NA	NA	0.4	0.82	0.81	<0.20	<0.20	0.53
TRC-401R	NA	29	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Geochemical Upper Bedrock Input Data

	Jan. 1990	Jan. 1990	Jan. 1990	Jan. 1990
AE100R-1	2	3.5	<2.0	-51
AE100R-2	NS	NS	NS	24
AE100R-3	NS	NS	NS	44
AE101R-1	NS	NS	NS	67
AE101R-2	NS	NS	NS	-108
AE102RR-1	NS	NS	NS	-113
AE103R-1	0.35	2.9	66	115
AE104R-1	NS	NS	NS	-184
AE106R-1	NS	NS	NS	-24
AE108R-1	<0.17	<0.24	<2.0	-43
AE109R-1	NS	NS	NS	-29
AE110R-1	NS	NS	NS	-206
AE111R-1	NS	NS	NS	-10
AE112R-1	NS	NS	NS	-162
AE23R	NS	NS	NS	-82
AE25R	NS	NS	NS	-51
AE26R-1	NS	NS	NS	-256
AE27R	NS	NS	NS	-172
AE28R-1	NS	NS	NS	-128
AE29R-1	NS	NS	NS	116
AE29R-2	NS	NS	NS	132
AE2R	NS	NS	NS	-76
EMW-10R	<0.17	<0.24	<2.0	107
GZA-101R	<0.17	<0.24	2.2	-114
GZA-105R	2.3	1.6	88	-47
STM-8R	NS	NS	NS	-118
TRC-201R	NS	NS	NS	-126
TRC-401R	NS	NS	NS	-139

Notes:

All concentrations in µg/l

<5.00: Analyte not detected. Detection limit used.

PCE Middle Bedrock Input Data

	Sep. 1992	Mar. 1993	Sep. 1993	Sep. 1997	Sep. 1998	Sep. 1999	Mar. 2000	Sep. 2001	Sep. 2002
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11R1	NA	NA	NA	NA	160	NS (307)	380	330	740
EMW-11R2	NA	NA	NA	NA	47	NS (17)	<2.0	8,200	8,200
GZA-107R	6.2	<5.0	NS (4.9)	NS (4.3)	NS (4.1)	NS (3.9)	NS (3.9)	NS (3.6)	NS (3.4)
IP-01R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-03R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R1	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-3R	NA	<5.0 (1.0)	<5.0 (1.0)	<1.0	NS (1.5)	<2.0	NS (2.0)	NS (1.9)	NS (1.8)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

PCE Middle Bedrock Input Data

	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009	Sep. 2011	Sep. 2012
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	29	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	1,600	830	370	280	250	32	16	1,400	860
EMW-11R2	120	250	140	170	140	190	NS (407)	840	1,770
GZA-107R	NS (3.3)	NS (3.2)	NS (3.1)	NS (3.0)	NS (3.0)	NS (2.5)	NS (2.3)	NS (2.0)	NS (1.8)
IP-01R2	NA	NA	NA	3,100	590	440	NS (380)	260	3,910
IP-02R3	NA	NA	NA	180	170	NS	NS	NS	NS
IP-03R2	NA	NA	NA	450	NS	NS	NS	NS	NS
IP-04R3	NA	NA	NA	1,000	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.2)	NS (1.2)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

PCE Middle Bedrock Input Data

	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-4	862	1,000	1,490	1,900	1,500	4,000	3,400	2,600
AE100R-5	362	1,870	302	493	884	1,400	1,100	1,100
AE100R-6	507	716	754	849	744	1,200	900	600
AE101R-3	287	82	16	8.7	2.2	6.9	2.1	4.3
AE102RR-2	99	181	256	109	128	130	93	120
AE102RR-3	120	130	NS (127)	NS (122)	NS (119)	NS (116)	NS (113)	110
AE103R-2	3,560	2,300	4,550	2,790	NS (2,743)	NS (2,695)	NS (2,647)	2,600
AE103R-3	2,770	1,400	3,290	2,950	1,730	1,700	950	3,400
AE103R-4	4,160	5,520	7,170	6,190	4,700	4,100	3,200	4,900
AE104R-2	314	460	NS (434)	NS (395)	NS (368)	NS (342)	NS (316)	290
AE104R-3	4,420	3,220	3,850	3,300	2,410	1,800	1,300	1,600
AE105R-1	29	11	41	51	29	34	31	26
AE105R-2	34	34	46	71	28	52	41	45
AE105R-3	34	38	NS (41)	NS (44)	NS (46)	NS (49)	NS (51)	53
AE106R-2	6.9	9.9	NS (8.6)	NS (6.7)	NS (5.5)	NS (4.2)	NS (3.0)	1.7
AE106R-3	10	14	25	25	7.8	2.3	2.5	2.2
AE108R-2	12	7.8	10	18	NS (22)	NS (27)	NS (31)	36
AE108R-3	12	11	15	22	37	35	49	41
AE109R-2	NA	NA	3.2	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-2	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-2	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-3	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-2	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-3	NA	NA	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-4	NA	NA	2.8	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26R-2	NA	NA	179	<5.0	2.6	9.3	7	<1.0
AE26R-3	NA	NA	174	<5.0	NS (4.6)	NS (4.2)	NS (3.8)	3.4
AE26R-4	NA	NA	724	188	NS (251)	NS (314)	NS (377)	440
AE28R-2	NA	NA	19,700	20,200	18,300	17,000	15,000	20,000
AE28R-3	NA	NA	9,940	5,400	4,200	3,600	6,900	4,100
AE29R-3	NA	NA	<1.0	<1.0	5.4	<1.0	<1.0	<1.0
AE29R-4	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE29R-5	NA	NA	<1.0	<5.0 (2.3)	3.2	<1.0	<1.0	<1.0
BRW-1R3	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	NS (543)	464	1,240	1,450	1,250	2,400	2,100	2,700
EMW-11R2	NS (3,485)	3,910	4,390	3,200	4,500	4,200	3,600	3,600
GZA-107R	NS (1.5)	NS (1.4)	NS (1.2)	<1.0	NA	NA	NA	NA
IP-01R2	NS (2,051)	1,590	3,560	4,700	3,090	3,400	2,900	2,600
IP-02R3	NS	NS	NS	NS	NS	NS	NS	NS
IP-03R2	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R3	NS	NS	NS	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8R1	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRC-301R-1	16	32	33	29	NS (26)	NS (22)	NS (19)	16
TRC-301R-2	22	9.6	51	56	41	43	37	41
TRC-301R-3	22	17	60	58	NS (53)	NS (49)	NS (44)	40
TRC-301R-4	2.1	9.1	16	13	14	13	10	8.7

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Middle Bedrock Input Data

	Sep. 1992	Mar. 1993	Sep. 1993	Sep. 1997	Sep. 1998	Sep. 1999	Mar. 2000	Sep. 2001
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11R1	NA	NA	NA	NA	220	NS (727)	980	950
EMW-11R2	NA	NA	NA	NA	100	NS (967)	1,400	17,000
GZA-107R	10	<5.0	NS (4.9)	NS (4.4)	NS (4.2)	NS (4.1)	NS (4.0)	NS (3.8)
IP-01R2	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R3	NA	NA	NA	NA	NA	NA	NA	NA
IP-03R2	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R3	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R1	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-2R2	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA
STM-3R	NA	<5.0 (1.0)	<5.0 (1.0)	<1.0	NS (1.5)	<2.0	NS (2.0)	NS (1.9)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

TCE Middle Bedrock Input Data

	Sep. 2002	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009	Sep. 2011
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	260	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	3,100	6,500	1,100	460	270	270	130	260	2,800
EMW-11R2	14,000	3,900	2,700	980	1,200	1,500	580	NS (2,387)	6,000
GZA-107R	NS (3.7)	NS (3.6)	NS (3.5)	NS (3.4)	NS (3.3)	NS (3.3)	NS (2.9)	NS (2.7)	NS (2.5)
IP-01R2	NA	NA	NA	NA	16,000	5,600	5,000	NS (4,533)	3,600
IP-02R3	NA	NA	NA	NA	1,300	1,200	NS	NS	NS
IP-03R2	NA	NA	NA	NA	2,600	NS	NS	NS	NS
IP-04R3	NA	NA	NA	NA	3,100	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.8)	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.2)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

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Interpolated between two sampling events.

Non-Sampled Well

TCE Middle Bedrock Input Data

	Sep. 2012	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-4	NA	1,410	1,600	2,350	2,990	2,740	5,400	4,700	3,400
AE100R-5	NA	901	3,500	718	1,020	1,810	2,300	2,200	1,600
AE100R-6	NA	658	1,160	1,170	1,320	1,350	1,600	1,300	760
AE101R-3	NA	693	264	43	28	13	18	7.3	12
AE102RR-2	NA	228	465	468	256	413	400	370	420
AE102RR-3	NA	209	274	NS (289)	NS (311)	NS (326)	NS (340)	NS (355)	370
AE103R-2	NA	6,200	11,500	7,840	3,970	NS (4,052)	NS (4,135)	NS (4,218)	4,300
AE103R-3	NA	5,330	13,400	6,430	4,450	3,190	3,200	1,300	6,000
AE103R-4	NA	6,560	14,100	13,500	9,660	8,890	7,400	6,000	8,000
AE104R-2	NA	1,250	2,220	NS (2,124)	NS (1,981)	NS (1,886)	NS (1,791)	NS (1,695)	1,600
AE104R-3	NA	7,160	7,760	5,860	4,790	4,340	3,500	2,200	2,800
AE105R-1	NA	102	74	132	192	143	140	110	110
AE105R-2	NA	130	187	130	246	120	170	130	140
AE105R-3	NA	170	220	NS (209)	NS (193)	NS (182)	NS (172)	NS (161)	150
AE106R-2	NA	20	26	NS (23)	NS (18)	NS (15)	NS (12)	NS (9.0)	6
AE106R-3	NA	24	34	27	34	19	4.8	5.5	8.6
AE108R-2	NA	19	17	11	17	NS (20)	NS (22)	NS (25)	28
AE108R-3	NA	14	15	9.4	13	29	23	30	24
AE109R-2	NA	NA	NA	6	2.9	1.5	1.4	1.2	1.3
AE110R-2	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-2	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-3	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-2	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-3	NA	NA	NA	<1.0	<1.0	1.3	1.5	<1.0	1.2
AE112R-4	NA	NA	NA	<1.0	2.1	NS (1.8)	NS (1.6)	NS (1.3)	1
AE26R-2	NA	NA	NA	193	110	88	79	60	53
AE26R-3	NA	NA	NA	173	134	NS (116)	NS (99)	NS (81)	63
AE26R-4	NA	NA	NA	395	580	NS (568)	NS (555)	NS (542)	530
AE28R-2	NA	NA	NA	15,700	18,000	19,600	19,000	16,000	19,000
AE28R-3	NA	NA	NA	6,180	5,190	6,220	5,100	9,000	3,800
AE29R-3	NA	NA	NA	95	48	17	21	8.8	3.4
AE29R-4	NA	NA	NA	48	5.7	NS (5.1)	NS (4.5)	NS (3.9)	3.3
AE29R-5	NA	NA	NA	130	22	13	41	33	52
BRW-1R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	1,840	NS (1,944)	1,970	2,780	3,400	3,470	5,300	4,000	5,100
EMW-11R2	4,230	NS (7,884)	8,790	8,820	11,500	12,400	11,000	7,100	6,300
GZA-107R	NS (2.3)	NS (2.0)	NS (2.0)	NS (1.8)	1.6	NA	NA	NA	NA
IP-01R2	7,490	NS (5,294)	4,750	7,290	8,590	7,570	7,300	6,600	5,800
IP-02R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-03R2	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.2)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8R1	NA	6.1	3.6	1.8	2.3	2	1.9	1.7	1.9
TRC-301R-1	NA	88	107	64	69	NS (67)	NS (65)	NS (63)	61
TRC-301R-2	NA	77	44	102	144	101	110	87	97
TRC-301R-3	NA	84	75	118	139	NS (129)	NS (120)	NS (110)	100
TRC-301R-4	NA	36	45	35	36	36	27	27	27

Notes:

All concentrations in µg/l

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Middle Bedrock Input Data

	Sep. 1992	Mar. 1993	Sep. 1993	Sep. 1997	Sep. 1998	Sep. 1999	Mar. 2000	Sep. 2001	Sep. 2002
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11R1	NA	NA	NA	NA	15	NS (60)	82	220	<20
EMW-11R2	NA	NA	NA	NA	7	NS (69)	100	750	630
GZA-107R	<5.0 (2.0)	<5.0 (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
IP-01R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-03R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R3	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R1	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	<5.0 (1.0)	NA	NA	NA	NA	NA	NA	NA
STM-3R	NA	<5.0 (1.0)	<5.0 (1.0)	<1.0	NS (1.5)	<2.0	NS (2.0)	NS (1.9)	NS (1.8)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

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NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Middle Bedrock Input Data

	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009	Sep. 2011	Sep. 2012
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	43	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	1,200	25	22	17	7.8	12	47	120	120
EMW-11R2	6,400	250	500	490	150	330	NS (1,320)	3,300	897
GZA-107R	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)	NS (2.0)
IP-01R2	NA	NA	NA	<200 (100)	100	130	NS (116)	89	131
IP-02R3	NA	NA	NA	34	30	NS	NS	NS	NS
IP-03R2	NA	NA	NA	46	NS	NS	NS	NS	NS
IP-04R3	NA	NA	NA	<40 (1.0)	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.7)	NS (1.7)	NS (1.7)	NS (1.6)	NS (1.6)	NS (1.4)	NS (1.4)	NS (1.2)	NS (1.2)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Middle Bedrock Input Data

	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-4	<25	27	59	<50	<100 (70)	89	92	140
AE100R-5	15	33	118	65	69	160	400	740
AE100R-6	29	80	188	160	101	110	140	71
AE101R-3	38	462	32	21	39	19	9.6	26
AE102RR-2	37	98	89	211	188	130	170	150
AE102RR-3	30	44	NS (63)	NS (93)	NS (112)	NS (131)	NS (151)	170
AE103R-2	171	1,020	2,320	373	NS (332)	NS (292)	NS (251)	210
AE103R-3	144	770	3,130	511	436	330	140	480
AE103R-4	259	427	1,080	1,290	888	700	690	510
AE104R-2	58	87	NS (115)	NS (158)	NS (186)	NS (214)	NS (242)	270
AE104R-3	<200 (141)	141	149	136	139	230	140	150
AE105R-1	19	9	17	25	23	26	26	31
AE105R-2	18	20	15	25	21	30	28	35
AE105R-3	17	24	NS (26)	NS (29)	NS (32)	NS (34)	NS (36)	38
AE106R-2	10	16	NS (17)	NS (18)	NS (19)	NS (20)	NS (21)	22
AE106R-3	11	16	14	14	42	33	19	23
AE108R-2	5.7	8.7	6.6	7.5	NS (8.1)	NS (8.7)	NS (9.4)	10
AE108R-3	2	2.6	2.3	2.9	8.4	7.6	9.4	7.5
AE109R-2	NA	NA	2	2	2.1	2.3	2.7	3.8
AE110R-2	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-2	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-3	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-2	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-3	NA	NA	<1.0	<1.0	<1.0	1.9	2.3	3.8
AE112R-4	NA	NA	<1.0	3.2	NS (4.3)	NS (5.4)	NS (6.5)	7.6
AE26R-2	NA	NA	34	131	153	130	130	70
AE26R-3	NA	NA	43	158	NS (137)	NS (116)	NS (94)	73
AE26R-4	NA	NA	69	440	NS (438)	NS (435)	NS (432)	430
AE28R-2	NA	NA	<200	298	<500	840	1,100	1,600
AE28R-3	NA	NA	<200	294	462	730	1,500	830
AE29R-3	NA	NA	36	48	21	36	31	16
AE29R-4	NA	NA	35	47	NS (59)	NS (72)	NS (85)	98
AE29R-5	NA	NA	75	212	224	190	220	140
BRW-1R3	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	NS (201)	221	234	330	609	420	300	280
EMW-11R2	NS (576)	496	844	1,320	1,430	1,500	750	420
GZA-107R	NS (2.0)	NS (2.0)	NS (2.0)	2	NA	NA	NA	NA
IP-01R2	NS (104)	97	110	121	<200 (121)	120	87	89
IP-02R3	NS	NS	NS	NS	NS	NS	NS	NS
IP-03R2	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R3	NS	NS	NS	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8R1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRC-301R-1	20	23	17	19	NS (19)	NS (18)	NS (17)	17
TRC-301R-2	25	15	22	26	19	17	18	20
TRC-301R-3	26	23	26	26	NS (24)	NS (22)	NS (20)	18
TRC-301R-4	18	22	17	22	19	14	17	20

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Middle Bedrock Input Data

	Sep. 1992	Mar. 1993	Sep. 1993	Sep. 1997	Sep. 1998	Sep. 1999	Mar. 2000	Sep. 2001
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	NA	NA	NA	NA	NA	NA	NA
EMW-11R1	NA	NA	NA	NA	<1.0	NS (1.7)	<2.0	26
EMW-11R2	NA	NA	NA	NA	<1.0	NS (1.7)	<2.0	250
GZA-107R	<10 (1.0)	<10 (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
IP-01R2	NA	NA	NA	NA	NA	NA	NA	NA
IP-02R3	NA	NA	NA	NA	NA	NA	NA	NA
IP-03R2	NA	NA	NA	NA	NA	NA	NA	NA
IP-04R3	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R1	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-2R2	NA	<10 (1.0)	NA	NA	NA	NA	NA	NA
STM-3R	NA	<10 (1.0)	<10 (1.0)	<1.0	NS (1.0)	<2.0 (1.0)	NS (1.0)	NS (1.0)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Middle Bedrock Input Data

	Sep. 2002	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Sep. 2008	Sep. 2009	Sep. 2011
AE100R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE100R-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R3	NA	<4.0 (1.0)	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	190	590	<10	<10 (9.0)	<4.0	<4.0 (3.6)	1.2	3.3	<25 (4.0)
EMW-11R2	430	1,500	58	300	180	63	120	NS (193)	340
GZA-107R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
IP-01R2	NA	NA	NA	NA	<200 (3.4)	<100 (3.4)	3.4	NS (3.4)	<50 (3.5)
IP-02R3	NA	NA	NA	NA	<4.0 (1.0)	<20 (1.0)	NS	NS	NS
IP-03R2	NA	NA	NA	NA	<40 (1.0)	<40 (1.0)	NS	NS	NS
IP-04R3	NA	NA	NA	NA	<40 (1.0)	<40 (1.0)	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)
STM-8R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRC-301R-4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

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Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Middle Bedrock Input Data

	Sep. 2012	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-4	NA	<25 (1.6)	1.6	<50 (1.6)	<50 (1.6)	<100 (1.6)	<50 (1.6)	<25 (1.6)	<10 (1.6)
AE100R-5	NA	<10 (1.5)	1.5	33	<10	<50 (19)	<25	38	33
AE100R-6	NA	<10 (1.0)	<1.0	<25 (2.1)	<20 (3.7)	<50 (4.8)	<10 (5.9)	7	<2.5
AE101R-3	NA	<10 (1.0)	<1.0	5.8	2.9	11	4.9	3.6	9.3
AE102RR-2	NA	<5.0 (1.0)	<1.0	<1.0	5.3	9.1	5.8	12	9
AE102RR-3	NA	<5.0 (1.0)	<1.0	NS (1.7)	NS (2.7)	NS (3.4)	NS (4.1)	NS (4.8)	5.5
AE103R-2	NA	<100 (33)	<50 (33)	<200 (33)	<100 (33)	NS (33)	NS (33)	NS (33)	33
AE103R-3	NA	<100 (50)	<50	268	139	147	100	36	110
AE103R-4	NA	<100 (50)	<50	<200 (61)	<200 (78)	<200 (89)	100	150	59
AE104R-2	NA	<10 (2.0)	2	NS (5.7)	NS (11)	NS (15)	NS (19)	NS (22)	26
AE104R-3	NA	<200 (2.7)	2.7	<100 (5.7)	<100 (10)	<100 (13)	16	11	6.3
AE105R-1	NA	<1.0	<1.0	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	<1.0	1.1	1.3
AE105R-2	NA	<1.0	<1.0	<5.0 (1.0)	<5.0 (1.0)	<5.0 (1.0)	<1.0	1.4	2
AE105R-3	NA	<1.0	<1.0	NS (1.1)	NS (1.3)	NS (1.5)	NS (1.6)	NS (1.8)	1.9
AE106R-2	NA	1.3	1.3	NS (1.3)	NS (1.3)	NS (1.4)	NS (1.4)	NS (1.4)	1.4
AE106R-3	NA	1.5	1.3	1.7	1.5	1.3	1.6	1.6	1.1
AE108R-2	NA	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE108R-3	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-2	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-2	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-2	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-3	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-2	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-3	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26R-2	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<1.0	<2.0	<2.0	33
AE26R-3	NA	NA	NA	<5.0	<5.0	NS (28)	NS (51)	NS (75)	98
AE26R-4	NA	NA	NA	<10	<10	NS (42)	NS (75)	NS (108)	140
AE28R-2	NA	NA	NA	<200 (99)	<200 (99)	<500 (99)	99	370	180
AE28R-3	NA	NA	NA	<200 (50)	<200 (130)	<100	<50	290	340
AE29R-3	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE29R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE29R-5	NA	NA	NA	<1.0	<5.0 (1.0)	<1.0	<1.0	<1.0	<1.0
BRW-1R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R1	<20 (4.4)	NS (5.1)	5.3	<25 (4.1)	<50 (2.2)	<1.0	71	50	31
EMW-11R2	97	NS (36)	21	<200 (82)	<200 (173)	234	140	120	36
GZA-107R	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0	NA	NA	NA	NA
IP-01R2	<100 (3.6)	NS (3.7)	3.7	<100 (3.7)	<100 (3.7)	<200 (3.7)	<20 (3.7)	<10 (3.7)	<10 (3.7)
IP-02R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-03R2	NS	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R3	NS	NS	NS	NS	NS	NS	NS	NS	NS
STM-2R1	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-2R2	NA	NA	NA	NA	NA	NA	NA	NA	NA
STM-3R	NS (1.0)	NS (1.0)	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
STM-8R1	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRC-301R-1	NA	1.8	2.5	1.4	1.3	NS (1.4)	NS (1.5)	NS (1.6)	1.7
TRC-301R-2	NA	3.9	6.2	<5.0	<5.0 (3.7)	<5.0 (2.8)	1.9	2.3	1.9
TRC-301R-3	NA	4.8	7.7	<5.0	<5.0 (4.1)	NS (3.5)	NS (3.0)	NS (2.4)	1.8
TRC-301R-4	NA	12	9.5	5.9	9.1	6.8	7.9	8.8	10

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

1,4-Dioxane Middle Bedrock Input Data

	Mar. 2008	Sep. 2008	Sep. 2009	Sep. 2012	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE100R-4	NA	NA	NA	NA	NA	3.6	8.6	11	13	10	9.5
AE100R-5	NA	NA	NA	NA	NA	5	9.9	NS	NS	NS	NS
AE100R-6	NA	NA	NA	NA	10	5.7	12	14	12	10	8.1
AE101R-3	NA	NA	NA	NA	NA	2.6	5.4	4.6	3.5	2.7	2.7
AE102RR-2	NA	NA	NA	NA	5.3	2.8	6.1	6.4	6	6.2	5.9
AE102RR-3	NA	NA	NA	NA	3.7	NS	NS	NS	NS	NS	NS
AE103R-2	NA	NA	NA	NA	23	23	18	NS	NS	NS	NS
AE103R-3	NA	NA	NA	NA	25	21	24	NS	NS	NS	NS
AE103R-4	NA	NA	NA	NA	33	34	46	45	43	38	41
AE104R-2	NA	NA	NA	NA	16	NS	NS	NS	NS	NS	NS
AE104R-3	NA	NA	NA	NA	13	17	17	16	14	11	14
AE105R-2	NA	NA	NA	NA	NA	3.6	6.1	5.8	5.9	5.1	5.3
AE105R-3	NA	NA	NA	NA	4.9	NS	NS	NS	NS	NS	NS
AE106R-2	NA	NA	NA	NA	1.6	NS	NS	NS	NS	NS	NS
AE106R-3	NA	NA	NA	NA	2	NS	NS	NS	NS	NS	NS
AE108R-2	NA	NA	NA	NA	1.6	NS	NS	NS	NS	NS	NS
AE108R-3	NA	NA	NA	NA	0.3	NS	NS	NS	NS	NS	NS
AE109R-2	NA	NA	NA	NA	NA	NA	NA	4	3.6	5.6	6.8
AE111R-2	NA	NA	NA	NA	NA	<0.20	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)
AE111R-3	NA	NA	NA	NA	NA	0.2	NS	NS	NS	NS	NS
AE112R-2	NA	NA	NA	NA	NA	<0.20	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)
AE112R-3	NA	NA	NA	NA	NA	<0.20	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)
AE112R-4	NA	NA	NA	NA	NA	<0.20	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)	NS (0.20)
AE26R-2	NA	NA	NA	NA	NA	14	NS	NS	NS	NS	NS
AE26R-3	NA	NA	NA	NA	NA	19	NS	NS	NS	NS	NS
AE26R-4	NA	NA	NA	NA	NA	17	NS	NS	NS	NS	NS
AE28R-2	NA	NA	NA	NA	NA	34	66	50	60	48	48
AE28R-3	NA	NA	NA	NA	NA	31	NS (36)	39	46	39	40
AE29R-3	NA	NA	NA	NA	NA	11	NS	NS	NS	NS	NS
AE29R-4	NA	NA	NA	NA	NA	8.6	NS	NS	NS	NS	NS
AE29R-5	NA	NA	NA	NA	NA	14	NS	NS	NS	NS	NS
EMW-11R1	NA	NA	7.5	8.4	11	NS	NS	NS	NS	NS	NS
EMW-11R2	NA	22	40	20	28	NS	NS	NS	NS	NS	NS
IP-01R2	32	32	32	22	NS	NS	NS	NS	NS	NS	NS
IP-02R3	NA	NA	32	NS	NS	NS	NS	NS	NS	NS	NS
IP-03R2	NA	NA	27	NS	NS	NS	NS	NS	NS	NS	NS
IP-04R3	33	33	31	NS	NS	NS	NS	NS	NS	NS	NS
STM-8R1	NA	NA	NA	NA	NA	<0.20	0.29	0.4	0.28	0.32	0.38
TRC-301R-1	NA	NA	NA	NA	3.2	NS	NS	NS	NS	NS	NS
TRC-301R-2	NA	NA	NA	NA	2	NS	NS	NS	NS	NS	NS
TRC-301R-3	NA	NA	NA	NA	4.2	NS	NS	NS	NS	NS	NS
TRC-301R-4	NA	NA	NA	NA	2.5	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Well not installed. Extrapolated from a sampling event.

Non-Sampled Well

Geochemical Middle Bedrock Input Data

	Jan. 1990	Jan. 1990	Jan. 1990	Jan. 1990
AE100R-4	NS	NS	NS	68
AE100R-5	2	2.4	42	68
AE100R-6	NS	NS	NS	-7.9
AE101R-3	NS	NS	NS	-106
AE102RR-2	NS	NS	NS	-68
AE102RR-3	NS	NS	NS	-73
AE103R-2	NS	NS	NS	110
AE103R-3	NS	NS	NS	93
AE103R-4	NS	NS	NS	54
AE104R-2	NS	NS	NS	-170
AE104R-3	NS	NS	NS	-133
AE105R-1	0.37	1.4	150	43
AE105R-2	NS	NS	NS	8.6
AE105R-3	NS	NS	NS	-17
AE106R-2	NS	NS	NS	-13
AE106R-3	<0.17	1.5	300	-20
AE108R-2	NS	NS	NS	-25
AE108R-3	NS	NS	NS	66
AE109R-2	NS	NS	NS	-75
AE110R-2	NS	NS	NS	-172
AE111R-2	NS	NS	NS	-39
AE111R-3	NS	NS	NS	-63
AE112R-2	NS	NS	NS	-153
AE112R-3	NS	NS	NS	-140
AE112R-4	NS	NS	NS	-131
AE26R-2	<0.17	2.9	38	-175
AE26R-3	NS	NS	NS	-199
AE26R-4	NS	NS	NS	-180
AE28R-2	6.2	10	120	-257
AE28R-3	NS	NS	NS	-265
AE29R-3	NS	NS	NS	56
AE29R-4	NS	NS	NS	-188
AE29R-5	NS	NS	NS	-188
EMW-11R1	NS	NS	NS	-108
EMW-11R2	0.91	9.1	100	-91
IP-01R2	NS	NS	NS	-142
STM-3R	NS	NS	NS	-110
STM-8R1	<0.17	0.31	<2.0	93
TRC-301R-1	NS	NS	NS	-102
TRC-301R-2	NS	NS	NS	-129
TRC-301R-3	1	1.9	56	-141
TRC-301R-4	NS	NS	NS	-174

Notes:

All concentrations in µg/l

<5.00: Analyte not detected. Detection limit used.

PCE Lower Bedrock Input Data

	Sep. 1998	Mar. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005
AE101R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-4	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-5	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-8	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-6	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R4	NA	NA	NA	NA	NA	450	230	260
EMW-11R3	3,800	3,300	2,000	4,000	1,800	260	NS (140)	<100

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

PCE Lower Bedrock Input Data

	Sep. 2011	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE101R-4	NA	262	96	NS (86)	NS (71)	NS (61)	NS (51)	NS (41)	31
AE101R-5	NA	1,500	1,320	245	623	451	730	480	670
AE101R-6	NA	654	422	145	378	28	17	27	170
AE102RR-4	NA	393	615	657	414	548	340	310	650
AE102RR-5	NA	869	1,200	1,750	1,200	1,320	1,200	1,400	1,800
AE102RR-6	NA	3,000	2,990	3,940	2,910	3,230	3,200	3,600	4,000
AE103R-5	NA	4,070	4,810	7,620	7,030	5,960	5,500	4,700	5,000
AE103R-6	NA	562	1,680	2,450	2,080	NS (2,335)	NS (2,590)	NS (2,845)	3,100
AE103R-7	NA	2,880	2,210	3,590	3,600	2,690	2,100	2,000	3,700
AE104R-4	NA	1,330	3,640	4,610	3,800	3,100	2,100	1,400	1,500
AE104R-5	NA	769	2,890	3,980	3,890	2,800	2,400	2,100	1,300
AE104R-6	NA	2,080	3,030	4,180	4,120	3,570	2,400	2,400	1,300
AE105R-4	NA	36	34	58	67	47	55	52	51
AE105R-5	NA	16	27	NS (39)	56	18	50	43	46
AE106R-4	NA	3	2.8	NS (2.6)	NS (2.2)	NS (1.9)	NS (1.7)	NS (1.4)	1.2
AE106R-5	NA	4.3	3	NS (4.1)	5.8	3	1.6	<1.0	1.8
AE108R-4	NA	13	6.8	15	14	NS (16)	NS (17)	NS (19)	20
AE108R-5	NA	9.8	7.3	8.9	9.3	15	24	19	21
AE109R-3	NA	NA	NA	<5.0 (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-4	NA	NA	NA	159	112	<10	<2.0	2.1	<1.0
AE109R-5	NA	NA	NA	318	293	127	77	71	44
AE109R-6	NA	NA	NA	98	58	20	18	12	6.1
AE109R-7	NA	NA	NA	42	<5.0	<2.0	<1.0	<1.0	<1.0
AE109R-8	NA	NA	NA	11	2.4	1	<1.0	<1.0	<1.0
AE110R-3	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-4	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-5	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-6	NA	NA	NA	<1.0	<1.0	2.6	<1.0	<1.0	<1.0
AE110R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-5	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-6	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-5	NA	NA	NA	17	6.5	<1.0	<1.0	<1.0	<1.0
AE112R-6	NA	NA	NA	9.2	5.6	1	<1.0	<1.0	<1.0
AE112R-7	NA	NA	NA	16	5.1	NS (4.1)	NS (3.1)	NS (2.0)	<1.0
AE26R-5	NA	NA	NA	1,750	965	952	1,000	1,300	1,300
AE28R-4	NA	NA	NA	6,960	6,910	5,110	7,000	5,900	6,200
AE29R-6	NA	NA	NA	<1.0	<1.0	<5.0 (1.0)	<5.0 (1.0)	<1.0	<2.0
BRW-1R4	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R3	280	NS (1,859)	2,120	3,450	3,180	2,560	3,300	2,300	2,900

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Lower Bedrock Input Data

	Sep. 1998	Mar. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005
AE101R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-4	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-5	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-8	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-6	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R4	NA	NA	NA	NA	NA	1,200	560	550
EMW-11R3	4,500	5,500	3,200	6,700	3,600	700	NS (4,292)	5,500

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

TCE Lower Bedrock Input Data

	Sep. 2011	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE101R-4	NA	565	286	NS (267)	NS (237)	NS (218)	NS (199)	NS (179)	160
AE101R-5	NA	2,010	2,770	2,490	2,560	2,280	2,800	2,300	2,400
AE101R-6	NA	1,420	1,930	695	1,270	993	1,300	920	1,800
AE102RR-4	NA	522	1,230	970	606	864	550	490	1,100
AE102RR-5	NA	1,110	2,650	2,360	1,650	2,060	2,100	1,800	2,700
AE102RR-6	NA	4,300	5,920	5,310	3,680	4,540	4,300	4,600	4,700
AE103R-5	NA	5,160	12,400	12,800	9,980	9,710	9,200	7,600	6,900
AE103R-6	NA	2,280	11,700	8,020	7,500	NS (7,325)	NS (7,150)	NS (6,975)	6,800
AE103R-7	NA	6,030	6,560	5,170	4,710	4,380	4,000	3,200	5,200
AE104R-4	NA	3,650	8,840	7,150	5,820	5,650	4,200	3,100	3,400
AE104R-5	NA	1,710	7,360	6,390	5,600	5,440	4,400	4,200	2,700
AE104R-6	NA	4,030	8,180	6,540	6,130	6,770	4,600	4,900	2,800
AE105R-4	NA	107	215	166	230	187	190	150	170
AE105R-5	NA	56	153	NS (169)	193	88	150	120	150
AE106R-4	NA	12	16	NS (16)	NS (15)	NS (15)	NS (15)	NS (14)	14
AE106R-5	NA	14	41	NS (49)	61	58	36	26	40
AE108R-4	NA	34	24	30	37	NS (40)	NS (44)	NS (47)	50
AE108R-5	NA	24	23	14	22	48	54	51	51
AE109R-3	NA	NA	NA	16	18	2.9	1.1	5.3	<1.0
AE109R-4	NA	NA	NA	366	453	76	20	21	10
AE109R-5	NA	NA	NA	832	1,190	739	360	390	240
AE109R-6	NA	NA	NA	342	377	237	200	180	110
AE109R-7	NA	NA	NA	150	57	29	12	10	3.6
AE109R-8	NA	NA	NA	30	11	6.9	5	2.9	1.9
AE110R-3	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-4	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-5	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-6	NA	NA	NA	<1.0	<1.0	10	<1.0	<1.0	<1.0
AE110R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-5	NA	NA	NA	<1.0	1.2	<1.0	<1.0	<1.0	<1.0
AE111R-6	NA	NA	NA	<1.0	1.1	<1.0	<1.0	<1.0	<1.0
AE111R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-5	NA	NA	NA	2.5	8.1	3.6	3.9	2.1	5.6
AE112R-6	NA	NA	NA	1.7	4.1	2.6	1.9	1.3	1.5
AE112R-7	NA	NA	NA	2.5	7	NS (5.5)	NS (4.0)	NS (2.5)	<1.0
AE26R-5	NA	NA	NA	1,260	2,030	1,970	1,900	2,100	1,600
AE28R-4	NA	NA	NA	4,240	6,060	5,550	7,300	6,500	6,700
AE29R-6	NA	NA	NA	183	146	91	85	120	70
BRW-1R4	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R3	5,000	NS (4,571)	4,500	4,720	4,410	4,040	5,100	3,700	4,400

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Lower Bedrock Input Data

	Sep. 1998	Mar. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005
AE101R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-4	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-5	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-8	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-6	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R4	NA	NA	NA	NA	NA	60	25	39
EMW-11R3	110	<20	62	570	280	82	NS (492)	630

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

cis-1,2-DCE Lower Bedrock Input Data

	Sep. 2011	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE101R-4	NA	35	114	NS (155)	NS (216)	NS (257)	NS (298)	NS (339)	380
AE101R-5	NA	89	114	786	924	809	1,200	1,300	1,600
AE101R-6	NA	53	120	853	1,140	1,620	1,500	1,700	1,500
AE102RR-4	NA	45	73	65	74	92	83	61	100
AE102RR-5	NA	56	150	122	125	127	180	130	160
AE102RR-6	NA	<100	219	229	215	202	240	120	120
AE103R-5	NA	192	354	882	936	1,190	1,100	1,000	510
AE103R-6	NA	136	478	2,140	3,490	NS (2,893)	NS (2,296)	NS (1,697)	1,100
AE103R-7	NA	306	271	286	341	381	390	400	280
AE104R-4	NA	104	165	<200 (189)	224	218	490	550	430
AE104R-5	NA	62	138	<200 (199)	291	280	520	590	500
AE104R-6	NA	114	162	<200	324	338	490	520	330
AE105R-4	NA	18	25	20	24	32	37	36	44
AE105R-5	NA	9.6	19	NS (19)	19	18	41	37	45
AE106R-4	NA	4.6	8.3	NS (9.8)	NS (12)	NS (14)	NS (15)	NS (17)	18
AE106R-5	NA	5.8	7.5	NS (8.8)	11	12	15	17	13
AE108R-4	NA	15	15	19	27	NS (29)	NS (31)	NS (32)	34
AE108R-5	NA	10	13	11	14	26	23	27	35
AE109R-3	NA	NA	NA	<5.0	32	27	14	17	7.9
AE109R-4	NA	NA	NA	36	439	299	200	170	140
AE109R-5	NA	NA	NA	53	230	351	240	220	170
AE109R-6	NA	NA	NA	27	121	159	180	170	170
AE109R-7	NA	NA	NA	16	96	138	130	92	66
AE109R-8	NA	NA	NA	2.8	2.2	3.8	4.7	4.6	4.9
AE110R-3	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-4	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-5	NA	NA	NA	<1.0	<1.0	NS (1.1)	NS (1.3)	NS (1.5)	1.6
AE110R-6	NA	NA	NA	<1.0	<1.0	4	1.5	1.5	1.8
AE110R-7	NA	NA	NA	<1.0	<1.0	NS (1.2)	NS (1.3)	NS (1.5)	1.7
AE111R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-5	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-6	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-5	NA	NA	NA	<1.0	3.6	12	14	13	12
AE112R-6	NA	NA	NA	<1.0	2	7	8.6	8.3	9.3
AE112R-7	NA	NA	NA	<1.0	1.7	NS (5.0)	NS (8.4)	NS (12)	15
AE26R-5	NA	NA	NA	111	310	466	510	390	340
AE28R-4	NA	NA	NA	170	311	484	540	640	690
AE29R-6	NA	NA	NA	185	325	349	320	320	300
BRW-1R4	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R3	2,400	NS (495)	180	242	429	432	840	600	370

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Lower Bedrock Input Data

	Sep. 1998	Mar. 2000	Mar. 2001	Sep. 2001	Sep. 2002	Sep. 2003	Mar. 2005	Sep. 2005
AE101R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE101R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-4	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-5	NA	NA	NA	NA	NA	NA	NA	NA
AE102RR-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE103R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE104R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE105R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE106R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE108R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE109R-8	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-3	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE110R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE111R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-6	NA	NA	NA	NA	NA	NA	NA	NA
AE112R-7	NA	NA	NA	NA	NA	NA	NA	NA
AE26R-5	NA	NA	NA	NA	NA	NA	NA	NA
AE28R-4	NA	NA	NA	NA	NA	NA	NA	NA
AE29R-6	NA	NA	NA	NA	NA	NA	NA	NA
BRW-1R4	NA	NA	NA	NA	NA	<20 (1.0)	<10 (1.0)	<10 (1.0)
EMW-11R3	1	<20	<50	710	120	40	NS (182)	230

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

Vinyl Chloride Lower Bedrock Input Data

	Sep. 2011	Sep. 2014	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE101R-4	NA	<10 (1.0)	<1.0	NS (4.9)	NS (11)	NS (14)	NS (18)	NS (22)	26
AE101R-5	NA	<50 (1.0)	<1.0	<50 (3.9)	<50 (8.2)	<20 (11)	14	16	20
AE101R-6	NA	<25 (1.2)	1.2	<10	<20	52	250	310	340
AE102RR-4	NA	<10 (1.0)	<1.0	<20 (1.0)	<20 (1.0)	<20 (1.0)	<2.5 (1.0)	<2.5 (1.0)	<2.5 (1.0)
AE102RR-5	NA	<25 (1.0)	<1.0	<50 (1.0)	<50 (1.0)	<100 (1.0)	<10 (1.0)	<10 (1.0)	<5.0 (1.0)
AE102RR-6	NA	<100 (2.7)	2.7	<100 (2.7)	<100 (2.7)	<200 (2.7)	<10 (2.7)	<10 (2.7)	<10 (2.7)
AE103R-5	NA	<100 (50)	<50	<200 (81)	<200 (128)	<200 (159)	190	270	64
AE103R-6	NA	<50	<50	<200 (75)	<200 (112)	NS (136)	NS (161)	NS (185)	210
AE103R-7	NA	<100 (42)	<50 (42)	<100 (42)	<100 (42)	<100 (42)	42	68	31
AE104R-4	NA	<50 (3.3)	3.3	<200 (13)	<100 (29)	<100 (39)	49	63	27
AE104R-5	NA	<20 (3.3)	3.3	<200 (18)	<100 (41)	<100 (56)	71	91	43
AE104R-6	NA	<50 (4.1)	4.1	<200 (16)	<200 (33)	<200 (44)	56	75	20
AE105R-4	NA	<1.0	<1.0	<5.0 (1.0)	<5.0 (1.1)	<5.0 (1.1)	<2.0 (1.2)	1.2	1.6
AE105R-5	NA	<1.0	<1.0	NS (1.0)	<5.0 (1.0)	<1.0	<1.0	<1.0	1.1
AE106R-4	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE106R-5	NA	<1.0	<1.0	NS (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0
AE108R-4	NA	<1.0	<1.0	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE108R-5	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-3	NA	NA	NA	<5.0 (1.0)	<1.0	<1.0	<1.0	<1.0	<1.0
AE109R-4	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<10 (1.0)	<2.0 (1.0)	<1.0	<1.0
AE109R-5	NA	NA	NA	<10 (1.0)	<10 (1.0)	<20 (1.0)	<2.5 (1.0)	<1.0	1.3
AE109R-6	NA	NA	NA	<5.0 (2.5)	<5.0 (2.9)	<10 (3.2)	<2.5	3.7	6.2
AE109R-7	NA	NA	NA	<5.0 (1.0)	<5.0 (1.0)	<2.0 (1.0)	<1.0	11	3.8
AE109R-8	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-3	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-4	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-5	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE110R-6	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE110R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-4	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE111R-5	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-6	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE111R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE112R-5	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-6	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
AE112R-7	NA	NA	NA	<1.0	<1.0	NS (1.0)	NS (1.0)	NS (1.0)	<1.0
AE26R-5	NA	NA	NA	<20 (5.0)	<50 (12)	<5.0	<10	<10	32
AE28R-4	NA	NA	NA	<100 (1.0)	<100 (1.0)	<1.0	<50 (38)	76	130
AE29R-6	NA	NA	NA	2	1.8	<5.0 (2.6)	<2.5	<2.0	4.9
BRW-1R4	NS	NS	NS	NS	NS	NS	NS	NS	NS
EMW-11R3	140	NS (30)	12	<100 (12)	<100 (11)	<100 (11)	<20 (11)	<20 (10)	<10

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

1,4-Dioxane Lower Bedrock Input Data

	Sep. 2009	Mar. 2015	Mar. 2016	Sep. 2017	Sep. 2018	Sep. 2019	Sep. 2020	Sep. 2021
AE101R-4	NA	3.4	NS	NS	NS	NS	NS	NS
AE101R-5	NA	NA	9	17	17	16	15	18
AE101R-6	NA	4.3	2.8	6.8	8.5	11	9.6	9.2
AE102RR-4	NA	NA	4.4	5.7	6.8	6	5.2	8.1
AE102RR-5	NA	13	10	14	NS	NS	NS	NS
AE102RR-6	NA	21	10	22	23	26	25	25
AE103R-5	NA	32	34	47	48	36	37	38
AE103R-6	NA	NA	18	30	NS	NS	NS	NS
AE103R-7	NA	NA	17	26	NS	NS	NS	NS
AE104R-4	NA	16	11	26	19	19	17	22
AE104R-5	NA	14	17	22	NS	NS	NS	NS
AE104R-6	NA	15	10	24	24	20	21	21
AE105R-4	NA	NA	NA	5.9	6.3	5.3	5.3	5.5
AE106R-4	NA	1	NS	NS	NS	NS	NS	NS
AE106R-5	NA	<0.20	NS (0.28)	0.4	0.37	0.27	0.4	0.4
AE108R-4	NA	2.3	NS	NS	NS	NS	NS	NS
AE108R-5	NA	1.6	NS	NS	NS	NS	NS	NS
AE109R-5	NA	NA	4.8	3	2.1	1.4	1.7	NS
AE109R-6	NA	NA	0.82	1.4	NS	NS	NS	NS
AE109R-7	NA	NA	6.5	1.6	1.4	1.6	1.5	1.5
AE110R-6	NA	NA	8	1.4	1.4	1.3	1.3	1.4
AE110R-7	NA	NA	12	0.78	NS	NS	NS	NS
AE111R-4	NA	NA	<0.20	NS	NS	NS	NS	NS
AE111R-5	NA	NA	<0.20	NS	NS	NS	NS	NS
AE111R-6	NA	NA	<0.20	NS	NS	NS	NS	NS
AE111R-7	NA	NA	0.22	NS	NS	NS	NS	NS
AE112R-5	NA	NA	0.33	NS	NS	NS	NS	NS
AE112R-6	NA	NA	<0.20	NS	NS	NS	NS	NS
AE112R-7	NA	NA	<0.20	NS	NS	NS	NS	NS
AE26R-5	NA	NA	20	43	29	34	27	28
AE28R-4	NA	NA	32	NS	NS	NS	NS	NS
AE29R-6	NA	NA	23	42	43	50	43	43
BRW-1R4	5.7	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations in µg/l

NA: Well not installed or abandoned.

<5.00: Analyte not detected. Detection limit used.

NS (21.0): Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Interpolated between two sampling events.

Non-Sampled Well

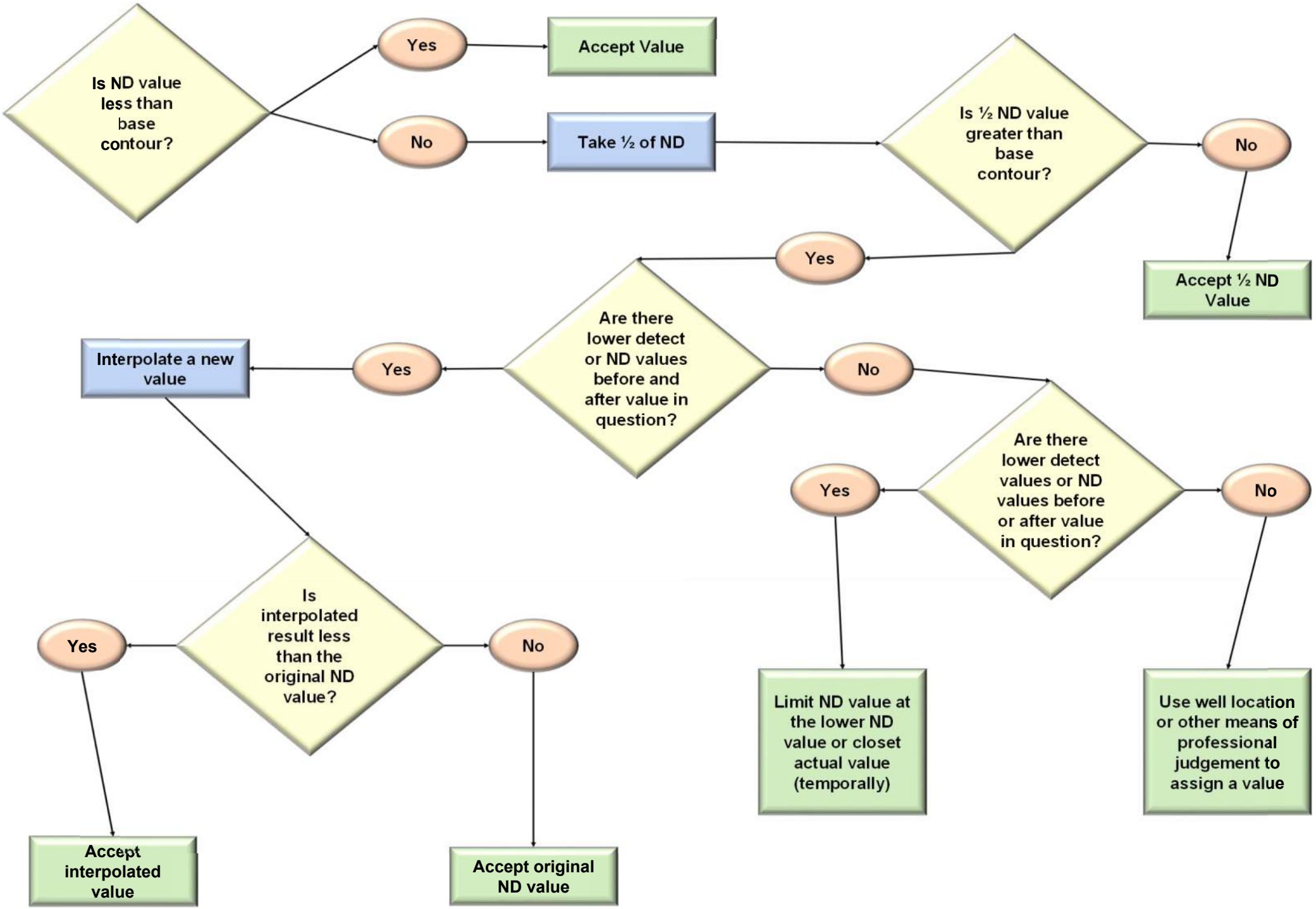
Geochemical Lower Bedrock Input Data

	Jan. 1990	Jan. 1990	Jan. 1990	Jan. 1990
AE101R-4	NS	NS	NS	-56
AE101R-5	NS	NS	NS	-43
AE101R-6	NS	NS	NS	-116
AE102RR-4	NS	NS	NS	-39
AE102RR-5	NS	NS	NS	-37
AE102RR-6	NS	NS	NS	-96
AE103R-5	0.49	29	60	48
AE103R-6	NS	NS	NS	-20
AE103R-7	NS	NS	NS	-34
AE104R-4	NS	NS	NS	-138
AE104R-5	NS	NS	NS	-161
AE104R-6	NS	NS	NS	-159
AE105R-4	NS	NS	NS	-45
AE105R-5	NS	NS	NS	-58
AE106R-4	NS	NS	NS	-40
AE106R-5	NS	NS	NS	-37
AE108R-4	NS	NS	NS	-12
AE108R-5	NS	NS	NS	-53
AE109R-3	NS	NS	NS	-110
AE109R-4	NS	NS	NS	-154
AE109R-5	NS	NS	NS	-172
AE109R-6	NS	NS	NS	-160
AE109R-7	NS	NS	NS	-165
AE109R-8	NS	NS	NS	-165
AE110R-3	NS	NS	NS	-138
AE110R-4	NS	NS	NS	-127
AE110R-5	NS	NS	NS	-123
AE110R-6	NS	NS	NS	-105
AE110R-7	NS	NS	NS	-99
AE111R-4	NS	NS	NS	-156
AE111R-5	NS	NS	NS	-155
AE111R-6	NS	NS	NS	-127
AE111R-7	NS	NS	NS	-152
AE112R-5	NS	NS	NS	-111
AE112R-6	1.3	0.25	1,400	-98
AE112R-7	NS	NS	NS	-110
AE26R-5	NS	NS	NS	-218
AE28R-4	NS	NS	NS	-275
AE29R-6	0.61	1.1	<2.0	-177
EMW-11R3	NS	NS	NS	-117

Notes:

All concentrations in µg/l

<5.00: Analyte not detected. Detection limit used.



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Ricker Method® Plume Stability Characteristics PCE Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-98	8.69	118	7.86
Mar-00	8.55	107	7.05
Mar-01	8.05	78.6	4.85
Sep-01	8.73	122	8.17
Sep-02	7.94	73.8	4.49
Sep-03	7.11	42.4	2.31
Mar-05	6.22	28.8	1.38
Sep-05	6.07	27.9	1.30
Sep-11	5.75	25.9	1.14
Sep-14	11.7	190	17.1
Mar-15	11.2	226	19.4
Mar-16	19.4	274	40.8
Sep-17	17.5	283	38.0
Sep-18	16.6	246	31.3
Sep-19	16.3	256	32.0
Sep-20	16.0	238	29.2
Sep-21	16.2	237	29.4

Ricker Method® Plume Stability Characteristics TCE Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-98	8.79	132	8.90
Mar-00	8.97	151	10.4
Mar-01	8.46	106	6.87
Sep-01	9.15	172	12.1
Sep-02	8.58	114	7.50
Sep-03	8.26	80.2	5.08
Mar-05	8.72	127	8.50
Sep-05	8.83	143	9.66
Sep-11	8.88	142	9.66
Sep-14	13.9	292	31.1
Mar-15	15.2	406	47.2
Mar-16	21.0	422	67.8
Sep-17	22.7	393	68.5
Sep-18	22.3	378	64.6
Sep-19	21.1	374	60.5
Sep-20	20.6	350	55.4
Sep-21	21.1	321	52.0

Ricker Method® Plume Stability Characteristics cis-1,2-DCE Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-98	4.41	16.5	0.56
Mar-00	1.67	8.15	0.10
Mar-01	3.53	12.8	0.35
Sep-01	6.60	37.8	1.92
Sep-02	5.71	25.9	1.14
Sep-03	4.71	17.1	0.62
Mar-05	5.22	28.5	1.14
Sep-05	5.76	33.2	1.47
Sep-11	8.18	88.3	5.54
Sep-14	9.79	35.3	2.65
Mar-15	10.6	33.4	2.72
Mar-16	16.4	54.4	6.83
Sep-17	17.8	85.5	11.7
Sep-18	20.3	81.2	12.6
Sep-19	20.9	89.5	14.3
Sep-20	20.6	82.2	13.0
Sep-21	21.4	70.2	11.5

Ricker Method® Plume Stability Characteristics Vinyl Chloride Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-98	0.04	2.19	0.00
Mar-00	2.27	3.98	0.07
Mar-01	3.02	5.35	0.12
Sep-01	4.62	16.6	0.59
Sep-02	3.63	7.43	0.21
Sep-03	2.85	4.98	0.11
Mar-05	3.89	8.84	0.26
Sep-05	4.03	9.78	0.30
Sep-11	4.41	8.11	0.27
Sep-14	3.06	5.23	0.12
Mar-15	2.46	4.67	0.09
Mar-16	6.29	5.19	0.25
Sep-17	8.31	6.23	0.40
Sep-18	8.00	7.26	0.45
Sep-19	10.4	9.59	0.77
Sep-20	11.5	11.6	1.02
Sep-21	12.2	11.4	1.06

Ricker Method® Plume Stability Characteristics 1,4-Dioxane Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (nmol/L)**	**Mass Indicator (moles)**
Sep-09	6.25	0.89	0.04
Mar-15	11.8	2.50	0.23
Mar-16	16.9	3.38	0.44
Sep-17	20.0	4.12	0.63
Sep-18	19.9	3.87	0.59
Sep-19	19.4	3.72	0.55
Sep-20	19.7	3.58	0.54
Sep-21	19.8	3.68	0.56

Ricker Method® Plume Stability Characteristics Chloroethenes Lower Bedrock			
Event	**Area (acres)**	**Average Concentration (nmol/L)**	**Mass Indicator (moles)**
Sep-98	8.53	1,847	54.8
Mar-00	8.71	1,850	56.1
Mar-01	8.21	1,384	39.5
Sep-01	8.89	2,497	77.2
Sep-02	8.33	1,554	45.0
Sep-03	8.02	987	27.5
Mar-05	8.45	1,372	40.3
Sep-05	8.57	1,542	46.0
Sep-11	8.60	2,148	64.3
Sep-14	13.6	3,550	168
Mar-15	14.8	4,456	229
Mar-16	22.6	4,828	379
Sep-17	22.2	5,149	398
Sep-18	23.2	4,593	371
Sep-19	22.6	4,688	369
Sep-20	21.9	4,457	339
Sep-21	22.9	4,038	321

Ricker Method® Plume Stability Characteristics PCE Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-92	0.06	5.39	0.00
Mar-93	0.00	5.00	0.00
Sep-93	0.00	5.00	0.00
Sep-97	0.00	5.00	0.00
Sep-98	3.69	19.3	0.27
Sep-99	4.22	26.3	0.42
Mar-00	4.38	29.2	0.49
Sep-01	6.44	177	4.38
Sep-02	6.41	177	4.36
Sep-03	4.37	50.6	0.85
Mar-04	4.86	44.0	0.82
Sep-04	4.22	28.7	0.46
Mar-05	6.17	130	3.07
Sep-05	5.87	49.8	1.12
Sep-08	5.46	39.3	0.82
Sep-09	5.87	47.3	1.06
Sep-11	6.43	73.3	1.81
Sep-12	7.16	165	4.52
Sep-14	12.8	191	9.39
Mar-15	13.5	187	9.65
Mar-16	15.7	347	20.9
Sep-17	15.6	338	20.2
Sep-18	15.3	297	17.4
Sep-19	14.8	359	20.3
Sep-20	14.4	316	17.5
Sep-21	14.3	339	18.5

Ricker Method® Plume Stability Characteristics TCE Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-92	0.47	6.31	0.01
Mar-93	0.00	5.00	0.00
Sep-93	0.00	5.00	0.00
Sep-97	0.00	5.00	0.00
Sep-98	3.99	22.3	0.34
Sep-99	5.11	48.1	0.94
Mar-00	5.36	59.6	1.23
Sep-01	6.87	292	7.69
Sep-02	6.74	254	6.57
Sep-03	6.00	136	3.13
Mar-04	5.72	87.7	1.92
Sep-04	5.01	48.4	0.93
Mar-05	7.42	440	12.5
Sep-05	7.44	207	5.90
Sep-08	6.76	142	3.69
Sep-09	7.49	193	5.54
Sep-11	7.85	255	7.68
Sep-12	7.80	282	8.44
Sep-14	16.6	281	17.9
Mar-15	15.9	377	23.1
Mar-16	17.5	460	30.9
Sep-17	17.9	459	31.6
Sep-18	17.6	468	31.6
Sep-19	17.4	494	33.0
Sep-20	17.0	419	27.4
Sep-21	17.0	421	27.4

Ricker Method® Plume Stability Characteristics cis-1,2-DCE Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-92	0.00	5.00	0.00
Mar-93	0.00	5.00	0.00
Sep-93	0.00	5.00	0.00
Sep-97	0.00	5.00	0.00
Sep-98	0.88	7.31	0.02
Sep-99	2.47	13.2	0.12
Mar-00	2.83	15.5	0.17
Sep-01	4.53	41.6	0.72
Sep-02	4.40	37.8	0.64
Sep-03	4.80	109	2.00
Mar-04	3.65	23.6	0.33
Sep-04	4.22	33.5	0.54
Mar-05	5.29	32.0	0.65
Sep-05	4.71	24.2	0.44
Sep-08	5.33	34.3	0.70
Sep-09	6.14	64.5	1.52
Sep-11	6.57	105	2.65
Sep-12	5.96	53.8	1.23
Sep-14	10.9	28.2	1.18
Mar-15	11.8	42.4	1.92
Mar-16	13.9	51.2	2.73
Sep-17	14.7	56.8	3.19
Sep-18	15.5	62.2	3.70
Sep-19	15.5	64.6	3.83
Sep-20	15.9	66.8	4.06
Sep-21	16.9	66.2	4.30

Ricker Method® Plume Stability Characteristics Vinyl Chloride Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-92	0.00	2.00	0.00
Mar-93	0.00	2.00	0.00
Sep-93	0.00	2.00	0.00
Sep-97	0.00	2.00	0.00
Sep-98	0.00	2.00	0.00
Sep-99	0.00	2.00	0.00
Mar-00	0.00	2.00	0.00
Sep-01	5.15	11.5	0.23
Sep-02	5.52	15.1	0.32
Sep-03	4.64	23.7	0.42
Mar-04	3.96	6.14	0.09
Sep-04	5.28	12.6	0.26
Mar-05	4.49	9.16	0.16
Sep-05	3.76	5.92	0.09
Sep-08	5.00	8.16	0.16
Sep-09	5.32	10.1	0.21
Sep-11	5.67	13.2	0.29
Sep-12	4.88	7.44	0.14
Sep-14	6.56	3.97	0.10
Mar-15	5.21	3.82	0.08
Mar-16	9.97	8.08	0.31
Sep-17	10.8	7.91	0.33
Sep-18	11.5	10.2	0.45
Sep-19	12.0	9.40	0.43
Sep-20	12.4	13.1	0.62
Sep-21	12.5	11.9	0.57

Ricker Method® Plume Stability Characteristics 1,4-dioxane Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Mar-08	8.62	3.02	0.10
Sep-08	10.5	3.67	0.15
Sep-09	11.2	4.59	0.20
Sep-12	10.2	2.48	0.10
Mar-15	17.3	2.57	0.17
Mar-16	18.1	2.63	0.18
Sep-17	18.2	3.23	0.23
Sep-18	18.7	3.32	0.24
Sep-19	18.5	3.24	0.23
Sep-20	18.3	2.93	0.21
Sep-21	18.5	3.06	0.22

Ricker Method® Plume Stability Characteristics Chloroethenes Middle Bedrock			
Event	**Area (acres)**	**Average Concentration (nmol/L)**	**Mass Indicator (moles)**
Sep-92	0.42	59.3	0.04
Mar-93	0.00	0.00	0.00
Sep-93	0.00	0.00	0.00
Sep-97	0.00	0.00	0.00
Sep-98	3.81	307	2.04
Sep-99	4.92	585	5.00
Mar-00	5.14	709	6.34
Sep-01	6.61	3,777	43.4
Sep-02	6.57	3,497	39.9
Sep-03	6.03	2,434	25.5
Mar-04	5.50	1,160	11.1
Sep-04	5.57	915	8.86
Mar-05	8.26	3,878	55.7
Sep-05	7.55	1,984	26.1
Sep-08	7.17	1,553	19.4
Sep-09	7.63	2,306	30.6
Sep-11	7.95	3,320	45.9
Sep-12	7.62	3,638	48.2
Sep-14	16.2	3,319	93.7
Mar-15	15.5	4,288	115
Mar-16	17.1	6,009	179
Sep-17	17.7	5,895	181
Sep-18	17.6	5,770	177
Sep-19	17.4	6,276	190
Sep-20	17.7	5,375	166
Sep-21	18.4	5,283	169

Ricker Method® Plume Stability Characteristics PCE Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	6.53	55.3	0.46
Mar-92	6.37	53.7	0.44
Sep-92	11.7	200	2.98
Mar-93	6.57	53.2	0.45
Sep-93	8.24	104	1.10
Mar-94	6.94	66.5	0.59
Sep-94	7.52	88.2	0.85
Mar-95	8.17	125	1.30
Sep-95	8.53	151	1.65
Mar-96	8.63	151	1.66
Sep-96	8.50	118	1.28
Mar-97	8.56	118	1.29
Sep-97	8.25	95.7	1.01
Mar-98	7.52	83.3	0.80
Sep-98	6.84	90.5	0.79
Mar-99	8.07	35.1	0.36
Sep-99	7.52	30.0	0.29
Mar-00	9.95	105	1.34
Sep-00	10.1	152	1.95
Mar-01	9.88	155	1.96
Sep-01	9.09	148	1.72
Sep-02	8.44	138	1.49
Sep-03	8.83	194	2.19
Mar-05	7.70	108	1.06
Sep-05	8.17	144	1.50
Sep-08	5.95	73.0	0.56
Sep-09	6.28	83.2	0.67
Sep-11	6.63	90.6	0.77
Sep-12	6.77	106	0.92
Sep-13	7.36	359	3.38
Mar-14	6.90	222	1.95
Sep-14	8.97	290	3.33
Mar-15	8.96	242	2.78
Mar-16	9.83	411	5.16
Sep-17	9.98	340	4.34
Sep-18	9.61	311	3.82
Sep-19	7.82	539	5.39
Sep-20	8.21	439	4.61
Sep-21	7.29	505	4.70

Ricker Method® Plume Stability Characteristics TCE Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	7.69	148	1.46
Mar-92	7.06	77.8	0.70
Sep-92	14.0	110	1.97
Mar-93	8.64	68.8	0.76
Sep-93	8.78	144	1.61
Mar-94	8.04	109	1.12
Sep-94	8.55	141	1.54
Mar-95	9.11	177	2.06
Sep-95	9.47	201	2.43
Mar-96	9.42	170	2.05
Sep-96	9.70	174	2.15
Mar-97	9.57	156	1.91
Sep-97	9.54	151	1.84
Mar-98	8.94	133	1.51
Sep-98	7.80	101	1.01
Mar-99	9.52	59.9	0.73
Sep-99	9.50	35.5	0.43
Mar-00	10.9	116	1.62
Sep-00	10.8	157	2.18
Mar-01	11.0	181	2.55
Sep-01	10.7	180	2.46
Sep-02	10.4	179	2.37
Sep-03	10.6	278	3.78
Mar-05	9.65	209	2.58
Sep-05	9.59	227	2.78
Sep-08	7.65	106	1.04
Sep-09	7.78	134	1.34
Sep-11	7.89	174	1.76
Sep-12	7.90	161	1.62
Sep-13	8.55	970	10.6
Mar-14	8.11	472	4.90
Sep-14	11.5	616	9.08
Mar-15	11.6	689	10.2
Mar-16	11.3	646	9.30
Sep-17	11.4	639	9.33
Sep-18	11.1	633	8.96
Sep-19	9.31	921	11.0
Sep-20	9.75	746	9.30
Sep-21	9.45	748	9.03

Ricker Method® Plume Stability Characteristics cis-1,2-DCE Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	0.00	5.00	0.00
Mar-92	2.68	11.4	0.04
Sep-92	2.73	19.6	0.07
Mar-93	3.81	35.2	0.17
Sep-93	3.98	41.9	0.21
Mar-94	3.96	66.2	0.34
Sep-94	4.00	67.5	0.35
Mar-95	4.04	68.2	0.35
Sep-95	4.06	67.6	0.35
Mar-96	4.08	66.0	0.34
Sep-96	4.70	73.1	0.44
Mar-97	4.47	66.1	0.38
Sep-97	5.07	82.6	0.54
Mar-98	5.62	94.4	0.68
Sep-98	4.21	80.6	0.43
Mar-99	6.63	101	0.86
Sep-99	5.37	32.2	0.22
Mar-00	6.32	31.9	0.26
Sep-00	6.30	33.2	0.27
Mar-01	6.66	34.1	0.29
Sep-01	6.50	35.8	0.30
Sep-02	6.37	37.3	0.30
Sep-03	6.62	44.7	0.38
Mar-05	6.54	38.9	0.33
Sep-05	6.19	24.0	0.19
Sep-08	6.12	24.9	0.19
Sep-09	6.24	25.3	0.20
Sep-11	6.38	26.2	0.21
Sep-12	6.34	25.1	0.20
Sep-13	6.29	23.8	0.19
Mar-14	7.21	27.9	0.26
Sep-14	8.52	27.3	0.30
Mar-15	8.82	57.3	0.65
Mar-16	9.14	51.7	0.60
Sep-17	9.45	59.5	0.72
Sep-18	10.8	63.0	0.87
Sep-19	11.3	68.2	0.98
Sep-20	10.6	73.6	1.00
Sep-21	9.93	70.5	0.89

Ricker Method® Plume Stability Characteristics Vinyl Chloride Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	3.96	46.2	0.23
Mar-92	3.84	35.9	0.18
Sep-92	4.39	31.2	0.18
Mar-93	4.62	26.7	0.16
Sep-93	3.81	48.1	0.23
Mar-94	3.24	31.5	0.13
Sep-94	3.13	35.5	0.14
Mar-95	3.11	34.5	0.14
Sep-95	3.02	28.9	0.11
Mar-96	3.37	33.3	0.14
Sep-96	4.47	33.1	0.19
Mar-97	3.73	30.1	0.14
Sep-97	4.05	28.5	0.15
Mar-98	4.26	28.6	0.16
Sep-98	3.51	32.1	0.14
Mar-99	4.97	24.8	0.16
Sep-99	4.66	21.8	0.13
Mar-00	5.02	19.0	0.12
Sep-00	4.63	18.7	0.11
Mar-01	3.95	19.5	0.10
Sep-01	3.55	19.2	0.09
Sep-02	3.62	13.7	0.06
Sep-03	4.91	5.30	0.03
Mar-05	5.32	5.31	0.04
Sep-05	4.60	3.52	0.02
Sep-08	2.86	2.89	0.01
Sep-09	2.75	2.78	0.01
Sep-11	2.83	2.67	0.01
Sep-12	2.50	2.52	0.01
Sep-13	1.71	2.48	0.01
Mar-14	1.45	2.48	0.00
Sep-14	3.96	3.83	0.02
Mar-15	3.69	3.77	0.02
Mar-16	6.88	6.84	0.06
Sep-17	7.31	8.49	0.08
Sep-18	7.94	9.37	0.10
Sep-19	7.68	9.46	0.09
Sep-20	7.70	10.6	0.10
Sep-21	6.82	16.3	0.14

Ricker Method® Plume Stability Characteristics 1,4-dioxane Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-09	11.7	1.97	0.03
Sep-12	8.64	1.47	0.02
Sep-13	2.18	0.77	0.00
Mar-14	3.33	2.39	0.01
Mar-15	15.7	2.11	0.04
Mar-16	13.0	2.09	0.03
Sep-17	13.7	2.77	0.05
Sep-18	13.6	2.57	0.04
Sep-19	12.9	2.64	0.04
Sep-20	11.7	1.94	0.03
Sep-21	13.4	2.62	0.04

Ricker Method® Plume Stability Characteristics Chloroethenes Upper Bedrock			
Event	**Area (acres)**	**Average Concentration (nmol/L)**	**Mass Indicator (moles)**
Sep-89	8.32	1,654	7.98
Mar-92	7.21	1,213	5.07
Sep-92	14.2	1,996	16.5
Mar-93	9.35	1,067	5.79
Sep-93	9.48	2,047	11.2
Mar-94	8.20	1,681	7.99
Sep-94	8.60	2,059	10.3
Mar-95	9.13	2,510	13.3
Sep-95	9.51	2,775	15.3
Mar-96	9.60	2,564	14.3
Sep-96	9.54	2,593	14.3
Mar-97	9.66	2,302	12.9
Sep-97	9.66	2,262	12.7
Mar-98	9.08	2,225	11.7
Sep-98	8.11	1,849	8.69
Mar-99	9.92	1,505	8.66
Sep-99	9.67	758	4.25
Mar-00	11.0	1,771	11.3
Sep-00	11.0	2,330	14.9
Mar-01	11.0	2,548	16.2
Sep-01	10.7	2,457	15.2
Sep-02	10.4	2,348	14.1
Sep-03	10.9	3,322	21.0
Mar-05	10.1	2,324	13.6
Sep-05	10.1	2,511	14.7
Sep-08	8.87	1,184	6.09
Sep-09	9.07	1,417	7.45
Sep-11	8.89	1,790	9.23
Sep-12	8.76	1,797	9.12
Sep-13	9.19	8,759	46.6
Mar-14	8.74	4,625	23.4
Sep-14	11.5	6,263	41.9
Mar-15	11.6	6,844	45.9
Mar-16	11.4	7,491	49.4
Sep-17	11.4	7,281	47.9
Sep-18	11.4	6,958	46.1
Sep-19	11.9	8,396	57.7
Sep-20	11.1	7,808	50.1
Sep-21	10.6	7,974	49.1

Ricker Method® Plume Stability Characteristics PCE Overburden			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	4.42	13.7	1.64
Sep-91	6.06	10.6	1.75
Mar-92	7.22	9.71	1.91
Sep-92	14.6	14.0	5.58
Mar-93	5.67	8.73	1.35
Sep-93	3.86	8.00	0.84
Mar-94	4.93	7.67	1.03
Sep-94	5.39	8.00	1.17
Mar-95	5.48	9.03	1.35
Sep-95	4.43	8.13	0.98
Mar-96	4.01	8.69	0.95
Sep-96	4.80	17.2	2.25
Sep-97	3.95	16.5	1.78
Mar-98	3.50	16.0	1.52
Sep-98	16.0	10.8	4.71
Mar-99	12.6	10.0	3.44
Sep-99	7.12	10.1	1.96
Mar-00	3.86	11.8	1.24
Sep-00	3.80	12.1	1.25
Mar-01	3.90	12.0	1.27
Sep-01	4.18	11.6	1.32
Mar-02	4.44	11.4	1.38
Sep-02	4.59	11.3	1.42
Sep-03	4.74	11.5	1.48
Sep-05	3.20	8.12	0.71
Sep-08	0.87	6.72	0.16
Mar-09	1.38	10.2	0.38
Sep-09	1.20	8.99	0.29
Mar-10	1.17	7.31	0.23
Mar-11	1.23	24.7	0.83
Sep-11	1.29	26.0	0.91
Mar-12	1.66	18.2	0.82
Sep-12	1.80	12.9	0.63
Mar-13	1.50	12.5	0.51
Sep-13	1.84	20.3	1.02
Mar-14	2.16	40.7	2.39
Sep-14	6.75	48.9	8.98
Mar-15	3.98	51.1	5.53
Mar-16	4.11	46.4	5.18
Sep-17	4.18	19.2	2.19
Sep-18	4.79	19.8	2.58
Sep-19	3.93	41.0	4.38
Sep-20	4.00	19.0	2.06
Sep-21	4.62	15.8	1.98

Ricker Method® Plume Stability Characteristics TCE Overburden			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	3.60	13.8	1.35
Sep-91	4.27	10.2	1.19
Mar-92	5.44	9.05	1.34
Sep-92	14.5	14.1	5.57
Mar-93	5.88	8.67	1.39
Sep-93	4.02	7.96	0.87
Mar-94	5.13	7.64	1.06
Sep-94	5.64	7.95	1.22
Mar-95	5.81	8.93	1.41
Sep-95	4.74	8.07	1.04
Mar-96	4.34	8.59	1.01
Sep-96	5.26	16.6	2.38
Sep-97	4.31	16.1	1.88
Mar-98	3.77	15.6	1.60
Sep-98	16.2	10.8	4.76
Mar-99	12.8	10.0	3.48
Sep-99	7.13	10.1	1.96
Mar-00	3.86	11.8	1.24
Sep-00	3.80	12.1	1.25
Mar-01	3.89	12.0	1.27
Sep-01	4.18	11.7	1.33
Mar-02	4.44	11.4	1.38
Sep-02	4.59	11.3	1.42
Sep-03	4.74	11.5	1.48
Sep-05	3.20	8.12	0.71
Sep-08	0.86	6.72	0.16
Mar-09	1.38	10.2	0.38
Sep-09	1.20	8.99	0.29
Mar-10	1.17	7.31	0.23
Mar-11	1.23	24.7	0.83
Sep-11	1.29	26.0	0.91
Mar-12	1.66	18.2	0.82
Sep-12	1.80	12.9	0.63
Mar-13	1.50	12.5	0.51
Sep-13	1.84	20.3	1.02
Mar-14	2.16	40.7	2.39
Sep-14	6.75	48.9	8.98
Mar-15	3.98	51.1	5.53
Mar-16	4.24	45.1	5.20
Sep-17	4.24	18.9	2.18
Sep-18	4.78	20.0	2.61
Sep-19	3.94	41.0	4.40
Sep-20	3.93	19.3	2.07
Sep-21	4.78	15.8	2.05

Ricker Method® Plume Stability Characteristics cis-1,2-DCE Overburden			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	0.00	5.00	0.00
Sep-91	0.30	6.40	0.05
Mar-92	0.22	6.63	0.04
Sep-92	1.18	13.4	0.43
Mar-93	13.3	11.1	4.01
Sep-93	13.4	14.6	5.33
Mar-94	14.1	13.8	5.30
Sep-94	13.9	13.4	5.04
Mar-95	13.2	13.2	4.71
Sep-95	12.1	13.0	4.30
Mar-96	10.6	13.3	3.85
Sep-96	10.6	11.9	3.43
Sep-97	8.50	13.9	3.22
Mar-98	7.86	15.9	3.40
Sep-98	14.5	17.8	7.04
Mar-99	12.8	19.3	6.72
Sep-99	9.56	22.6	5.87
Mar-00	8.56	25.1	5.85
Sep-00	8.92	24.6	5.98
Mar-01	9.22	24.2	6.06
Sep-01	9.47	23.8	6.13
Mar-02	10.4	22.6	6.41
Sep-02	11.1	22.0	6.66
Sep-03	11.9	21.8	7.03
Sep-05	11.5	15.1	4.71
Sep-08	11.1	17.1	5.17
Mar-09	13.1	17.4	6.19
Sep-09	15.2	16.2	6.68
Mar-10	14.6	15.2	6.03
Mar-11	14.2	16.8	6.48
Sep-11	13.1	16.7	5.91
Mar-12	13.4	17.1	6.21
Sep-12	12.2	14.8	4.91
Mar-13	12.3	15.0	5.00
Sep-13	12.7	15.2	5.22
Mar-14	13.8	15.0	5.64
Sep-14	19.3	14.5	7.63
Mar-15	21.1	13.9	7.95
Mar-16	19.9	12.5	6.76
Sep-17	21.8	11.9	7.07
Sep-18	19.4	10.6	5.61
Sep-19	17.4	9.43	4.46
Sep-20	17.3	9.74	4.57
Sep-21	16.0	9.06	3.94

Ricker Method® Plume Stability Characteristics Vinyl Chloride Overburden			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-89	1.99	3.76	0.20
Sep-91	2.19	4.14	0.25
Mar-92	2.22	4.25	0.26
Sep-92	4.74	6.76	0.87
Mar-93	4.93	7.07	0.95
Sep-93	4.57	5.90	0.73
Mar-94	5.50	5.06	0.76
Sep-94	4.87	6.27	0.83
Mar-95	3.85	6.42	0.67
Sep-95	3.89	5.85	0.62
Mar-96	2.20	7.10	0.43
Sep-96	1.38	2.86	0.11
Sep-97	2.77	9.79	0.74
Mar-98	2.51	13.0	0.88
Sep-98	2.86	12.5	0.97
Mar-99	2.87	12.9	1.01
Sep-99	2.90	13.1	1.03
Mar-00	2.93	13.2	1.05
Sep-00	2.95	13.4	1.07
Mar-01	2.98	13.5	1.09
Sep-01	3.01	13.6	1.11
Mar-02	3.06	13.6	1.13
Sep-02	3.11	13.6	1.15
Sep-03	3.22	13.5	1.18
Sep-05	5.45	4.22	0.62
Sep-08	2.09	5.89	0.33
Mar-09	3.56	8.57	0.83
Sep-09	3.79	8.15	0.84
Mar-10	3.77	8.14	0.83
Mar-11	3.56	6.70	0.65
Sep-11	3.56	6.45	0.62
Mar-12	4.35	7.83	0.93
Sep-12	4.28	5.71	0.66
Mar-13	4.21	5.45	0.62
Sep-13	4.54	5.39	0.67
Mar-14	4.84	5.27	0.69
Sep-14	4.64	4.38	0.55
Mar-15	5.00	4.05	0.55
Mar-16	5.05	5.12	0.70
Sep-17	3.89	4.65	0.49
Sep-18	4.70	3.49	0.45
Sep-19	5.52	3.03	0.45
Sep-20	4.98	2.84	0.38
Sep-21	4.10	2.92	0.33

Ricker Method® Plume Stability Characteristics 1,4-dioxane Overburden			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Mar-12	2.07	0.48	0.03
Sep-12	6.10	0.44	0.07
Sep-13	9.43	0.43	0.11
Mar-14	9.44	0.43	0.11
Mar-15	9.49	0.56	0.15
Mar-16	18.4	0.60	0.30
Sep-17	23.8	0.69	0.45
Sep-18	20.4	0.83	0.46
Sep-19	19.9	0.64	0.35
Sep-20	18.1	0.55	0.27
Sep-21	18.6	0.51	0.26

Ricker Method® Plume Stability Characteristics Chloroethanes Overburden			
Event	**Area (acres)**	**Average Concentration (nmol/L)**	**Mass Indicator (moles)**
Sep-89	4.26	202	10.6
Sep-91	6.07	146	10.9
Mar-92	7.26	133	11.9
Sep-92	16.1	215	42.8
Mar-93	17.5	158	34.1
Sep-93	16.3	177	35.6
Mar-94	17.7	168	36.8
Sep-94	17.3	174	37.0
Mar-95	16.5	174	35.4
Sep-95	15.3	164	30.9
Mar-96	14.0	157	27.2
Sep-96	13.2	192	31.2
Sep-97	11.8	219	31.8
Mar-98	11.0	235	32.0
Sep-98	21.6	260	69.3
Mar-99	18.6	262	60.1
Sep-99	11.7	324	47.0
Mar-00	9.48	365	42.6
Sep-00	9.71	362	43.4
Mar-01	10.0	356	44.1
Sep-01	10.4	350	44.9
Mar-02	11.4	332	46.7
Sep-02	12.1	322	48.2
Sep-03	13.0	315	50.5
Sep-05	13.7	183	31.0
Sep-08	11.1	202	27.6
Mar-09	13.2	229	37.3
Sep-09	15.1	210	39.2
Mar-10	14.7	197	35.8
Mar-11	13.9	234	40.2
Sep-11	12.9	238	37.8
Mar-12	13.4	247	40.9
Sep-12	13.7	188	31.7
Mar-13	13.3	190	31.1
Sep-13	13.8	209	35.4
Mar-14	14.5	258	46.1
Sep-14	20.5	377	95.2
Mar-15	21.2	288	75.3
Mar-16	20.6	271	68.8
Sep-17	22.0	184	50.1
Sep-18	20.8	178	45.5
Sep-19	18.8	220	51.2
Sep-20	17.9	168	36.9
Sep-21	16.9	159	33.2

Groundwater Plume Analytics® Services

Former General Electric Facility

Wilmington, MA

Prepared For:
Lockheed Martin Corporation

DRAFT

December 17, 2021

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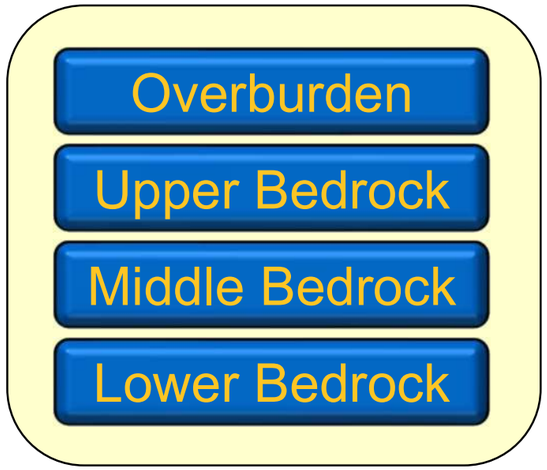
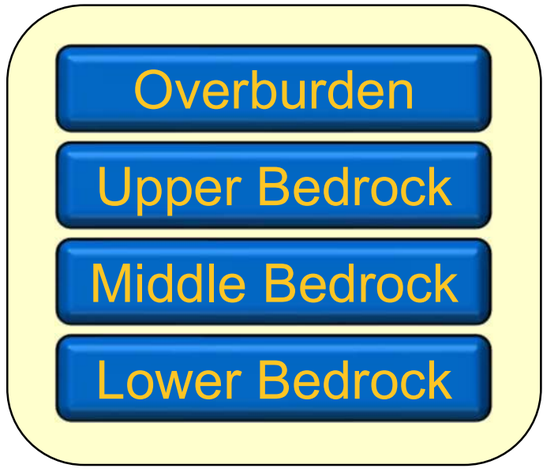
Plume Analytics® Services

Well Sufficiency Analysis



Flux Comparison



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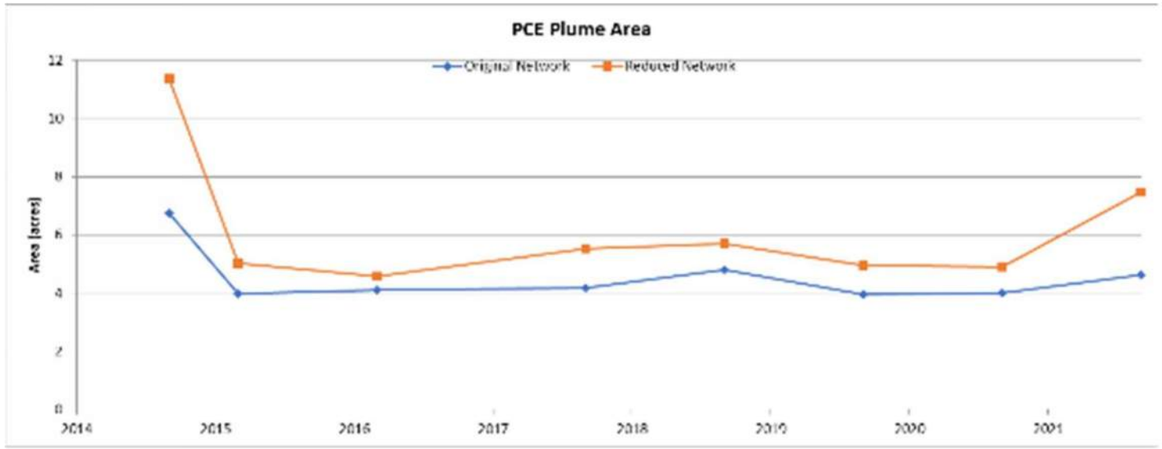


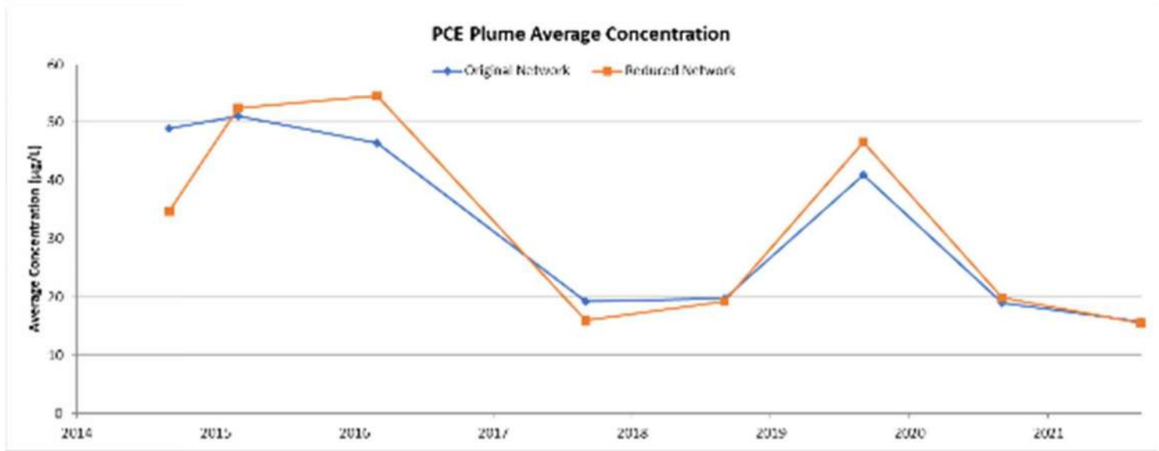
43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: No Trend 55% Confidence
R: No Trend 68% Confidence

Reduced Network Trends
MK: No Trend 55% Confidence
R: No Trend 51% Confidence

Average RPD: 27.5%

Correlation: 0.96



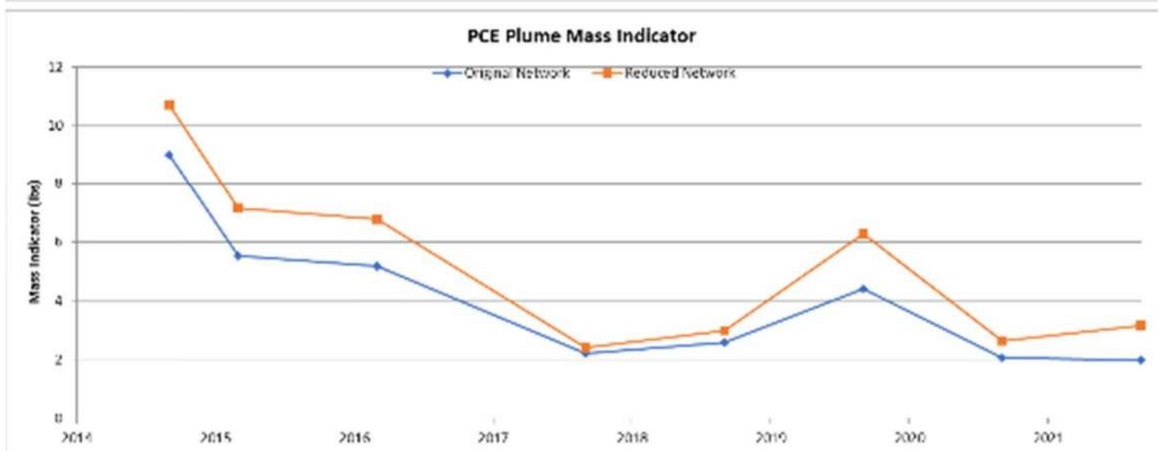
43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: Decreasing Trend 99% Confidence
R: Decreasing Trend 98% Confidence

Reduced Network Trends
MK: No Trend 86% Confidence
R: No Trend 90% Confidence

Average RPD: 11.6%

Correlation: 0.97



43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend 99% Confidence

Reduced Network Trends
MK: Decreasing Trend 95% Confidence
R: Decreasing Trend 97% Confidence

Average RPD: 24.8%

Correlation: 0.99

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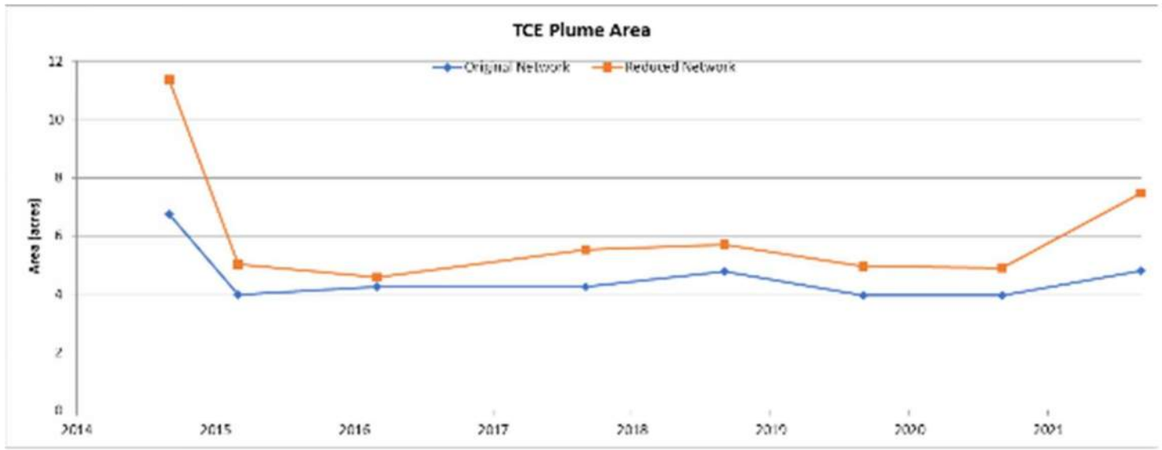


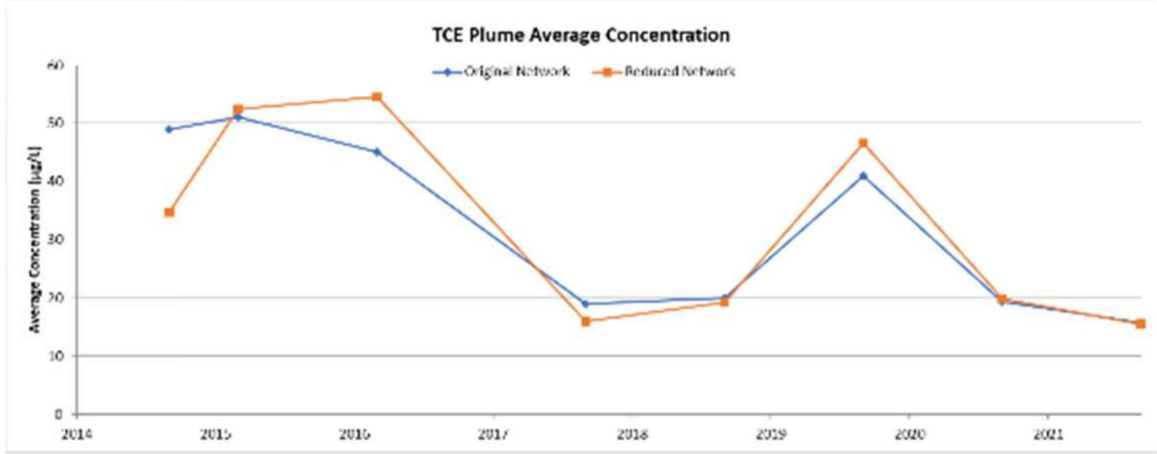
43 off 70 Wells Removed
61% Reduction

Original Network Trends
MK: No Trend 75% Confidence
R: No Trend 67% Confidence

Reduced Network Trends
MK: No Trend 55% Confidence
R: No Trend 51% Confidence

Average RPD: 26.6%

Correlation: 0.97



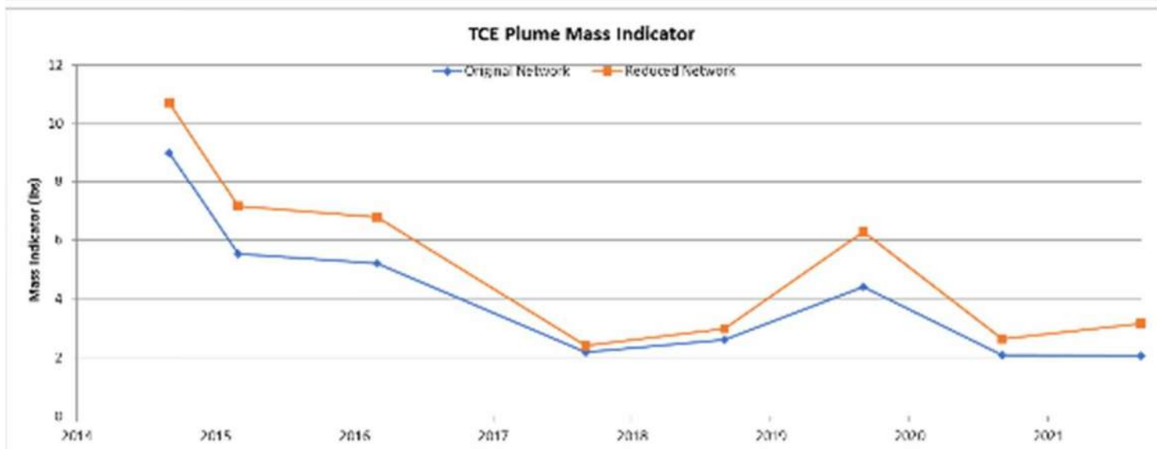
43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: Decreasing Trend 98% Confidence
R: Decreasing Trend 98% Confidence

Reduced Network Trends
MK: No Trend 86% Confidence
R: No Trend 90% Confidence

Average RPD: 11.7%

Correlation: 0.91



43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend 99% Confidence

Reduced Network Trends
MK: Decreasing Trend 95% Confidence
R: Decreasing Trend 97% Confidence

Average RPD: 24.2%

Correlation: 0.99

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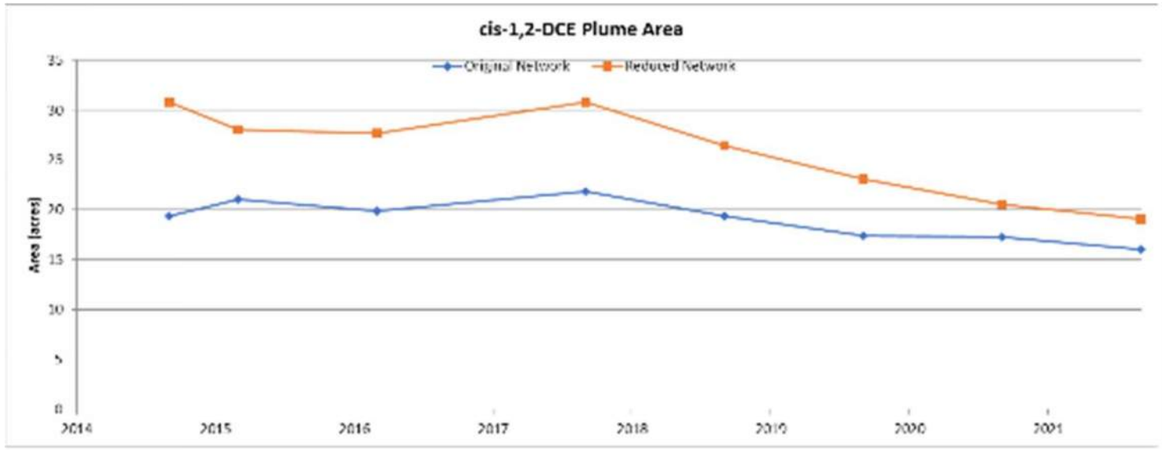


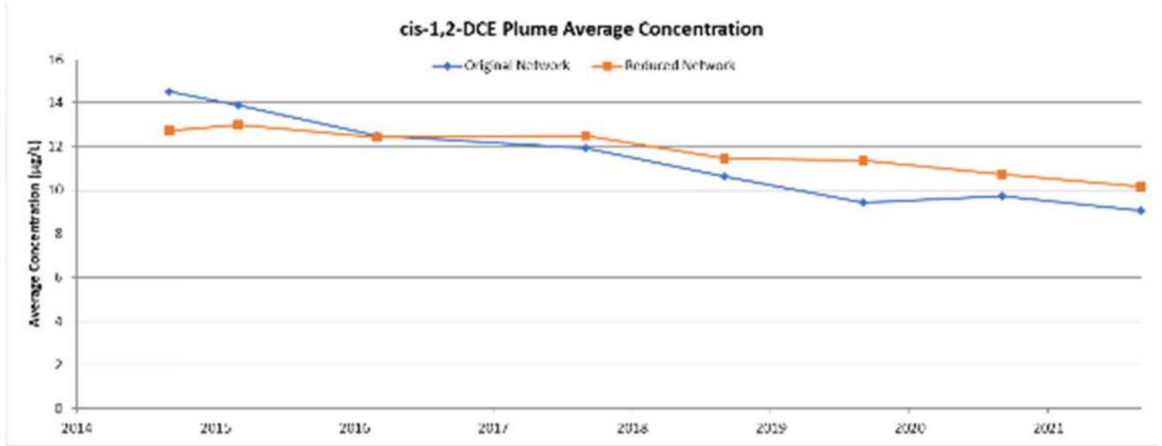
43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: Decreasing Trend 97% Confidence
R: Decreasing Trend 98% Confidence

Reduced Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend >99% Confidence

Average RPD: 29.3%

Correlation: 0.90



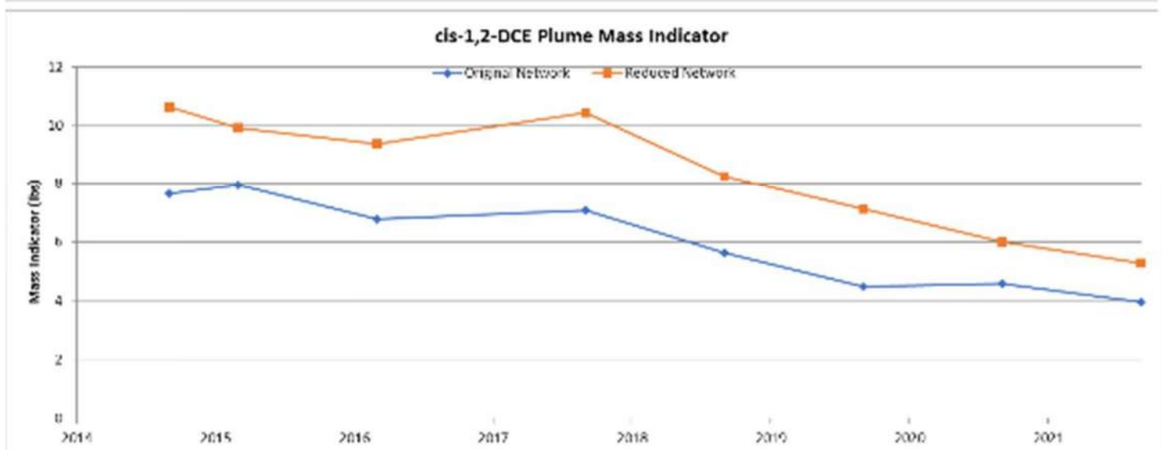
43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend >99% Confidence

Reduced Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend >99% Confidence

Average RPD: 9.0%

Correlation: 0.92



43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend >99% Confidence

Reduced Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend >99% Confidence

Average RPD: 33.2%

Correlation: 0.96

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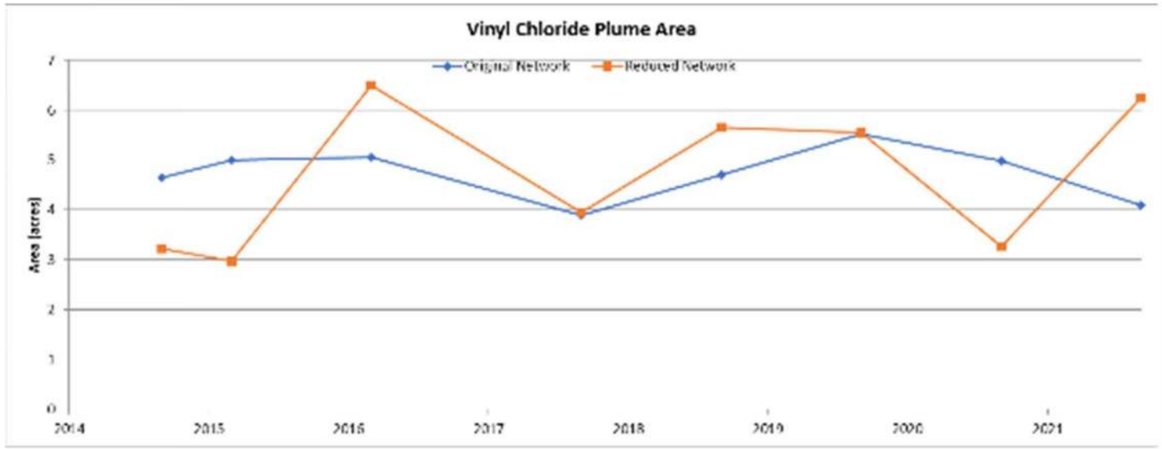


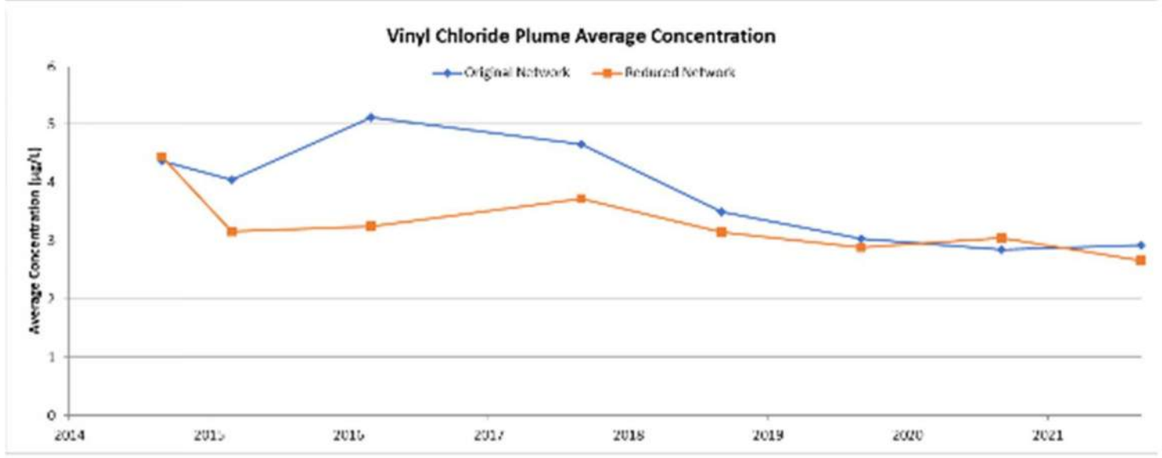
43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: No Trend 45% Confidence
R: No Trend 25% Confidence

Reduced Network Trends
MK: No Trend 80% Confidence
R: No Trend 71% Confidence

Average RPD: 27.0%

Correlation: 0.03



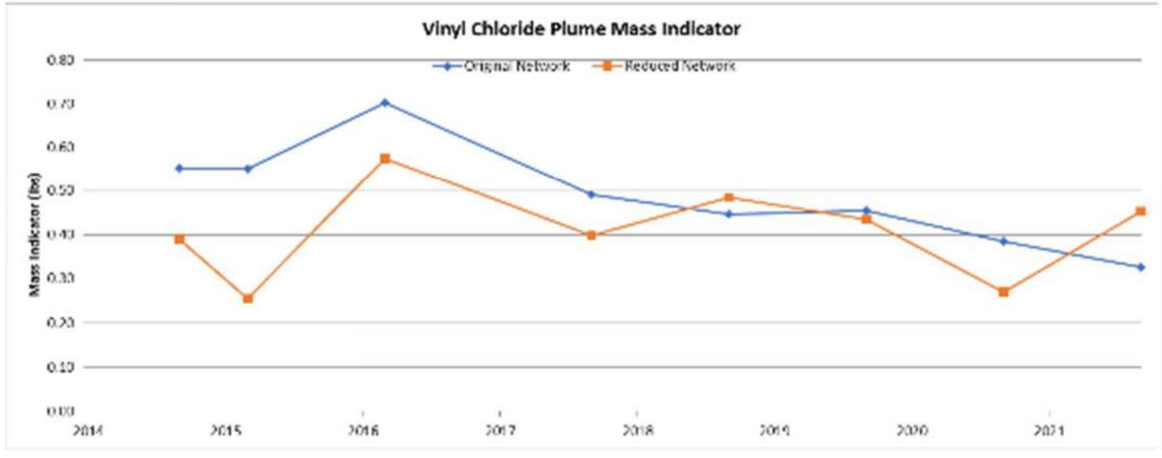
43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: Decreasing Trend 98% Confidence
R: Decreasing Trend 99% Confidence

Reduced Network Trends
MK: Decreasing Trend 99% Confidence
R: Decreasing Trend 97% Confidence

Average RPD: 15.6%

Correlation: 0.61



43 of 70 Wells Removed
61% Reduction

Original Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend >99% Confidence

Reduced Network Trends
MK: No Trend 64% Confidence
R: No Trend 14% Confidence

Average RPD: 28.7%

Correlation: 0.32

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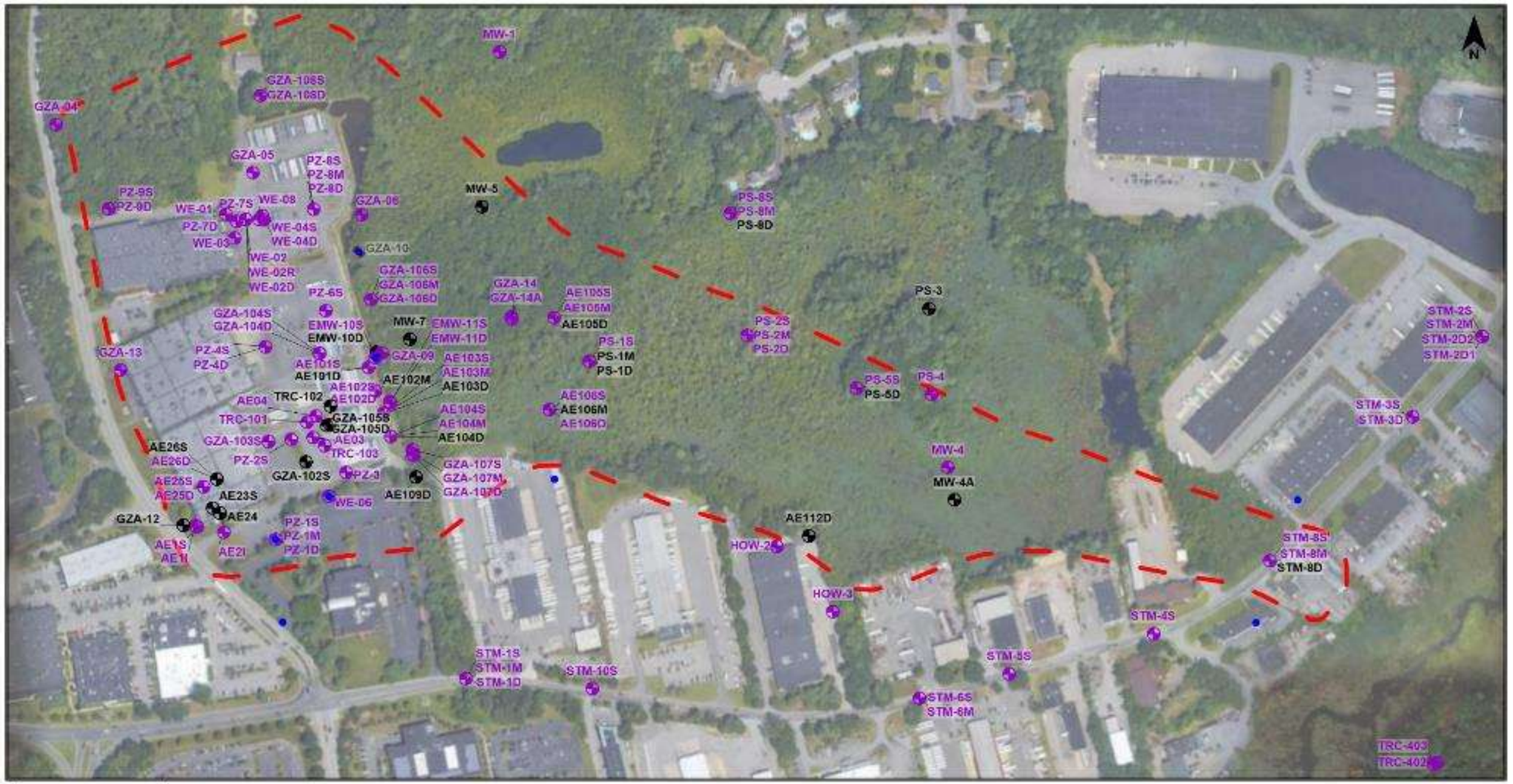
Overburden
Well Sufficiency Network



0 ft 450 ft 900 ft

MW-4 Kept Monitor Well

MW-5 Removed Monitor Well

Control Point

MCP Site Boundary

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Well Sufficiency Analysis US Pat. No. 10,304,223



0 ft 450 ft 900 ft

Note: Reduced wells not shown

Chloroethenes
Overburden
Sep-2014

Concentration (nmol/L)

4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0

LEGEND

MW-4 Monitor Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Plume Characteristics

Plume Area: **31.8 acres**
Plume Average Concentration: **302 nmol/L**
Plume Mass Indicator: **119 moles**

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Well Sufficiency Analysis US Pat. No. 10,304,223

Overburden Well Sufficiency Summary (43 Wells Removed)									
	RPD			Correlation			Trend Conclusion		
Constituent	Area	Conc	Mass	Area	Conc	Mass	Area	Conc	Mass
PCE	27.5%	11.6%	24.8%	0.96	0.92	0.99	Same	Decreasing Trend - No Trend	Same
TCE	26.6%	11.7%	24.2%	0.97	0.91	0.99	Same	Decreasing Trend - No Trend	Same
cis-1,2-DCE	29.3%	9.0%	33.2%	0.9	0.92	0.96	Same	Same	Same
Vinyl Chloride	27.0%	15.6%	28.7%	0.03	0.61	0.32	Same	Same	Decreasing Trend - No Trend

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Overburden Well Sufficiency Analysis Summary							
AE03	Remove	EMW-11D	Remove	MW-7	--	STM-1S	Remove
AE04	Remove	EMW-11S	Remove	PS-1D	--	STM-2D1	Remove
AE101D	--	GZA-04	Remove	PS-1M	--	STM-2D2	Remove
AE101S	Remove	GZA-05	Remove	PS-1S	Remove	STM-2M	Remove
AE102D	Remove	GZA-06	Remove	PS-2D	Remove	STM-2S	Remove
AE102M	--	GZA-09	Remove	PS-2M	Remove	STM-3D	Remove
AE102S	Remove	GZA-10	--	PS-2S	Remove	STM-3S	Remove
AE103D	--	GZA-102S	--	PS-3	--	STM-4S	Remove
AE103M	Remove	GZA-103S	Remove	PS-4	Remove	STM-5S	Remove
AE103S	Remove	GZA-104D	Remove	PS-5D	--	STM-6M	Remove
AE104D	--	GZA-104S	Remove	PS-5S	Remove	STM-6S	Remove
AE104M	Remove	GZA-105D	--	PS-8D	--	STM-8D	--
AE104S	Remove	GZA-105S	--	PS-8M	Remove	STM-8M	Remove
AE105D	--	GZA-106D	Remove	PS-8S	Remove	STM-8S	Remove
AE105M	Remove	GZA-106M	Remove	PZ-1D	Remove	TRC-101	Remove
AE105S	Remove	GZA-106S	Remove	PZ-1M	Remove	TRC-102	--
AE106D	Remove	GZA-107D	Remove	PZ-1S	Remove	TRC-103	Remove
AE106M	--	GZA-107M	Remove	PZ-2S	Remove	TRC-402	Remove
AE106S	Remove	GZA-107S	Remove	PZ-3	Remove	TRC-403	Remove
AE109D	--	GZA-108D	Remove	PZ-4D	Remove	W-01	Remove
AE112D	--	GZA-108S	Remove	PZ-4S	Remove	W-02	Remove
AE1I	Remove	GZA-12	--	PZ-6S	Remove	WE-01	Remove
AE1S	Remove	GZA-13	Remove	PZ-7D	Remove	WE-02	Remove
AE23S	--	GZA-14	Remove	PZ-7S	Remove	WE-02D	Remove
AE24	--	GZA-14A	Remove	PZ-8D	Remove	WE-02R	Remove
AE25D	Remove	HOW-2	Remove	PZ-8M	Remove	WE-03	Remove
AE25S	Remove	HOW-3	Remove	PZ-8S	Remove	WE-04D	Remove
AE26D	Remove	MW-1	Remove	PZ-9D	Remove	WE-04S	Remove
AE26S	--	MW-2	Remove	PZ-9S	Remove	WE-06	Remove
AE2I	Remove	MW-4	Remove	STM-10S	Remove	WE-08	Remove
EMW-10D	--	MW-4A	--	STM-1D	Remove		
EMW-10S	Remove	MW-5	--	STM-1M	Remove		

-- Kept in analysis

Overburden Proposed Network		
AE101D	AE24	MW-5
AE102M	AE26S	MW-7
AE103D	EMW-10D	PS-1D
AE104D	GZA-10	PS-1M
AE105D	GZA-102S	PS-3
AE106M	GZA-105D	PS-5D
AE109D	GZA-105S	PS-8D
AE112D	GZA-12	STM-8D
AE23S	MW-4A	TRC-102

Count 27

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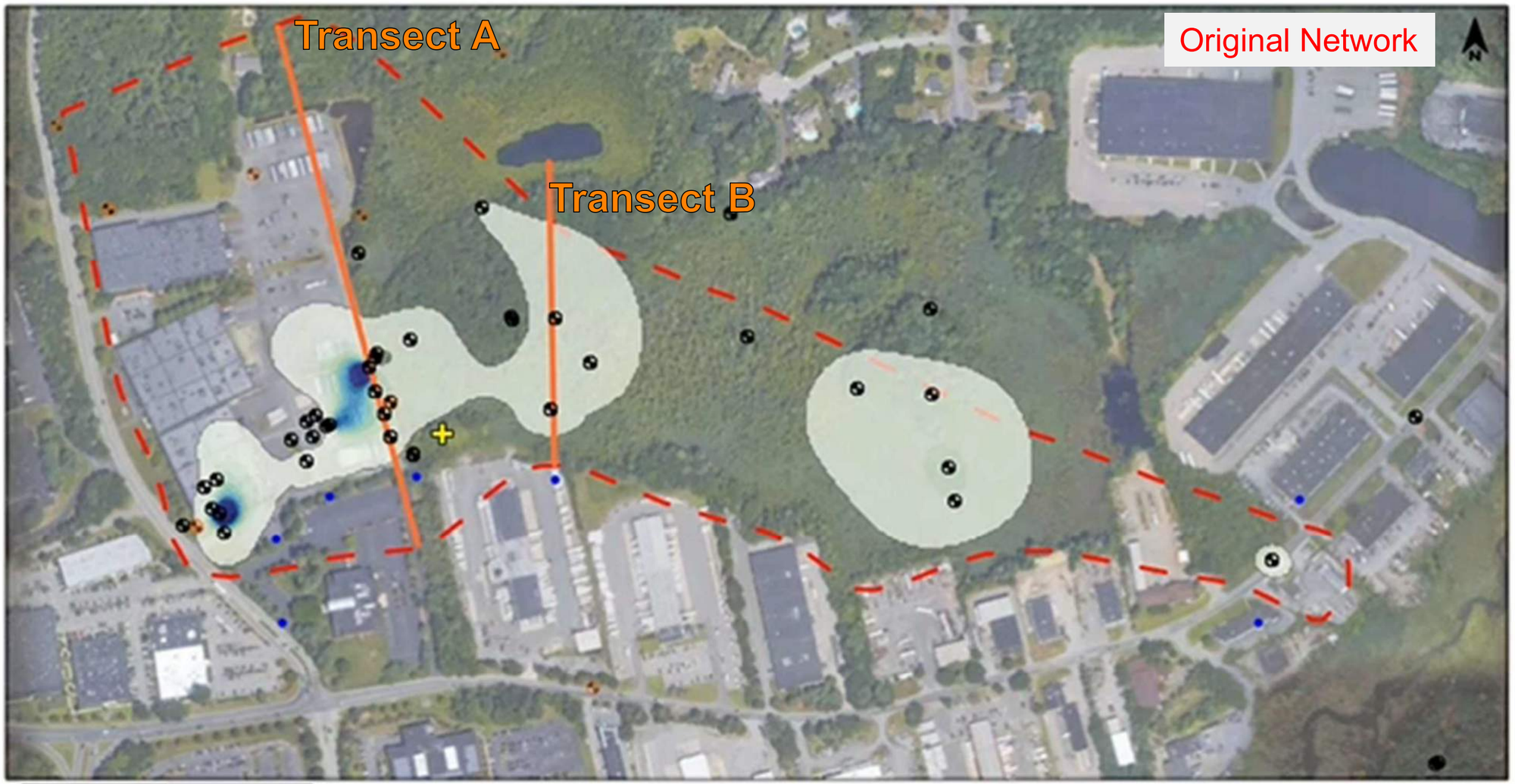

Chloroethenes Overburden Sep-2014

Concentration (nmol/L)

4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well
MW-5 Hanging Well
Plume Center of Mass
Control Point
MCP Site Boundary

Transect A

Average Concentration: **1,262 nmol/L**
Mass Flux: **19.15 mol/yr**

Transect B

Average Concentration: **157 nmol/L**
Mass Flux: **3.40 mol/yr**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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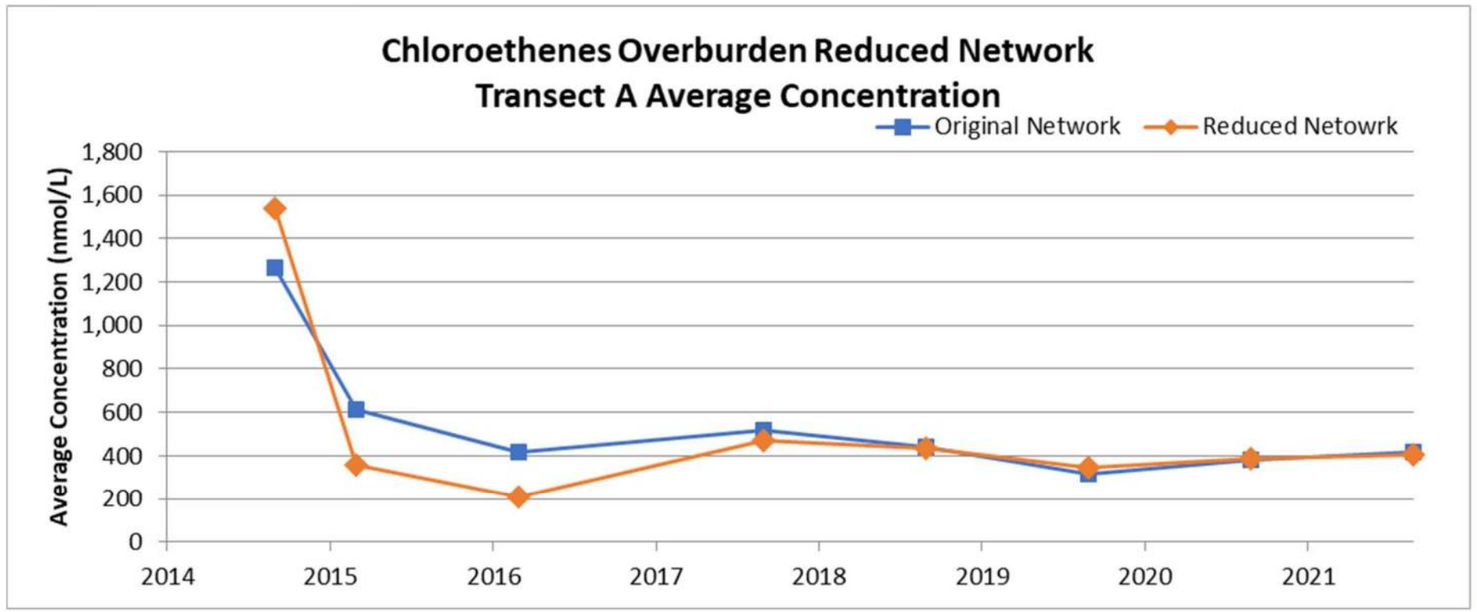
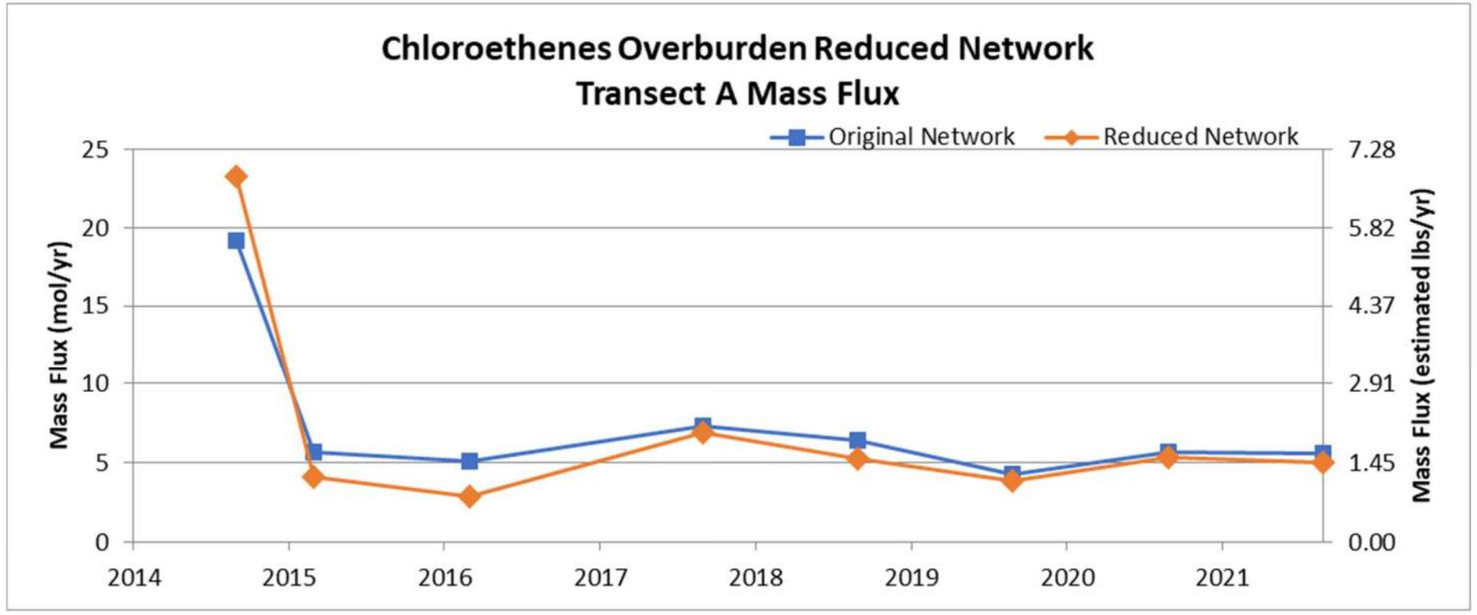


Average RPD: 20.5%

Correlation: 0.95



Average RPD: 19.7%

Correlation: 0.99

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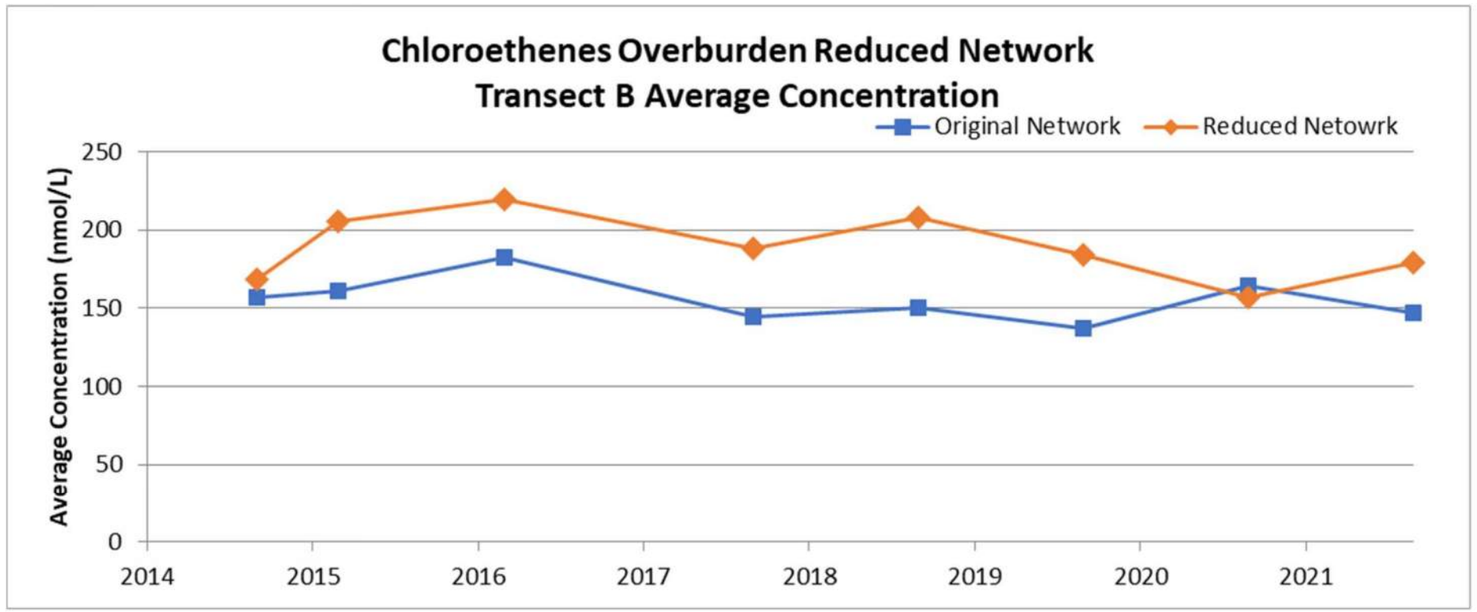
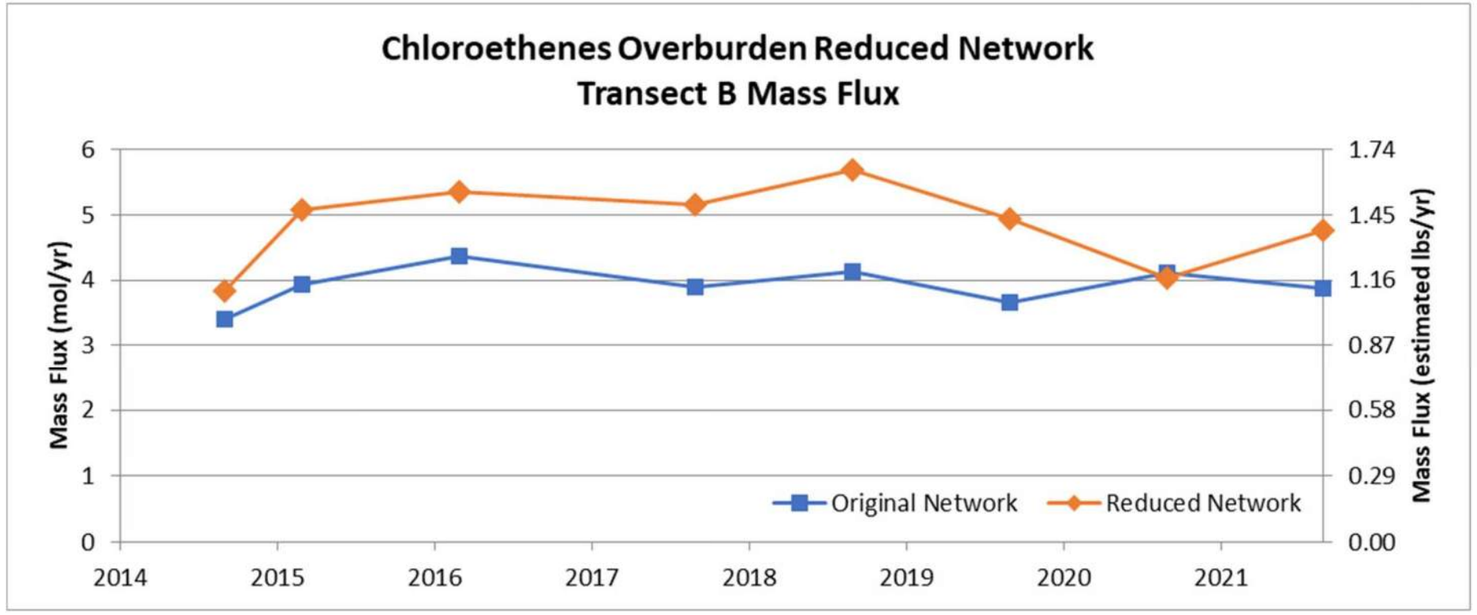


Average RPD: 20.2%

Correlation: 0.32



Average RPD: 21.2%

Correlation: 0.58

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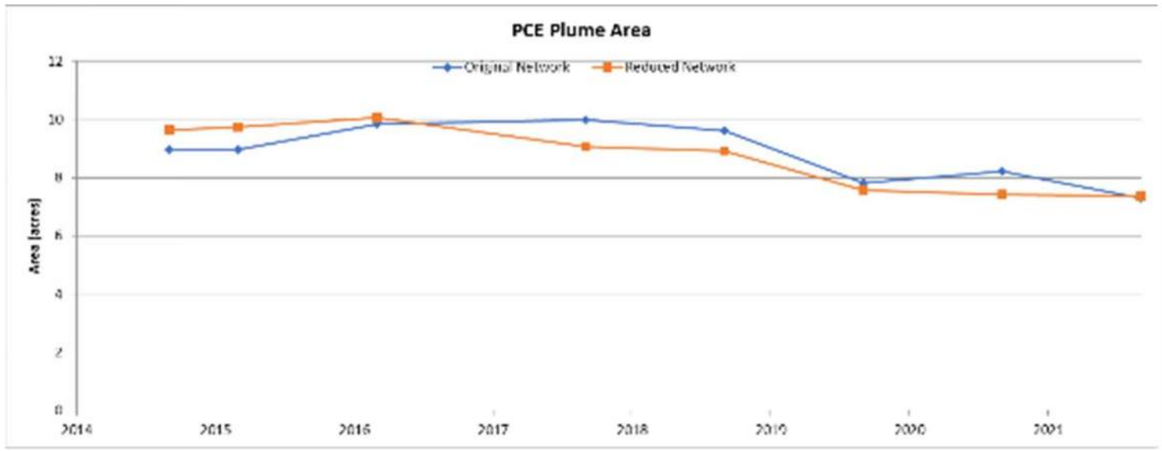


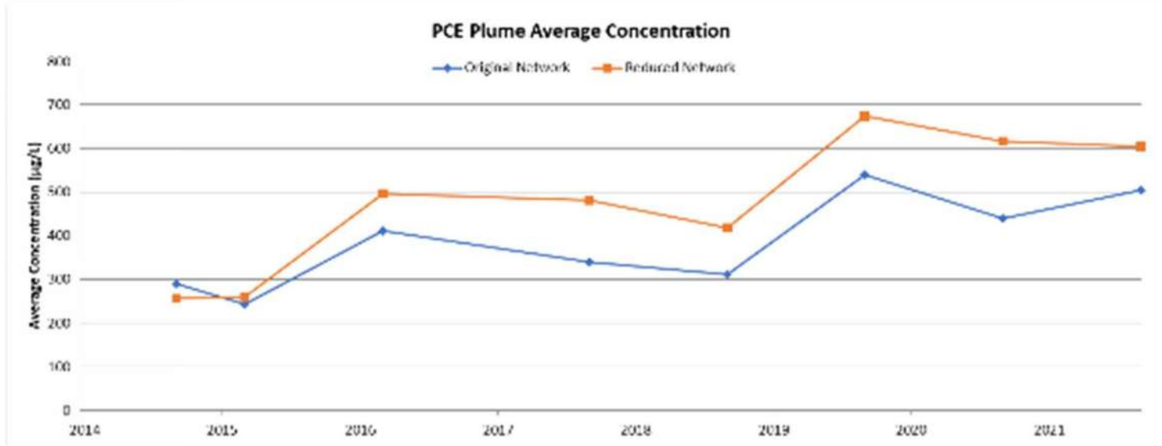
9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Decreasing Trend 91% Confidence
R: Decreasing Trend 93% Confidence

Reduced Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend >99% Confidence

Average RPD: 6.2%

Correlation: 0.81



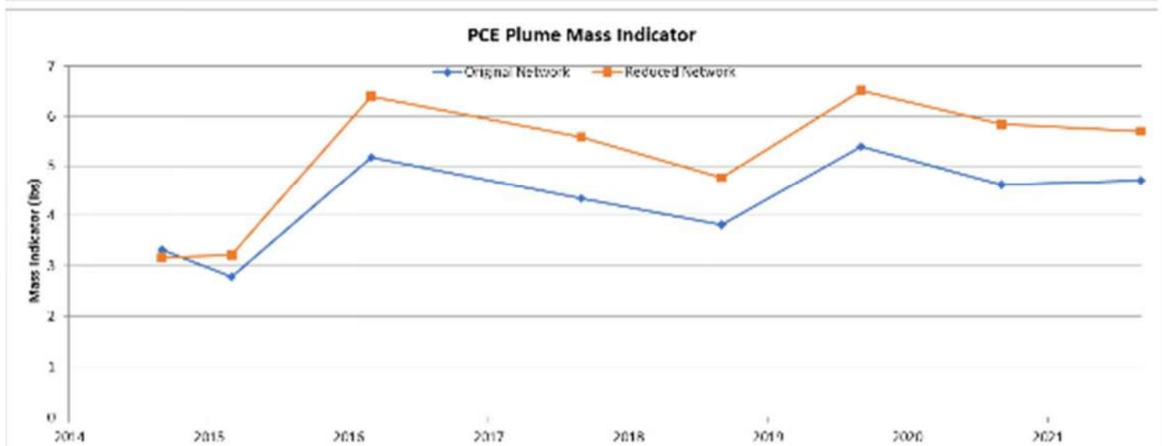
9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Increasing Trend 97% Confidence
R: Increasing Trend 98% Confidence

Reduced Network Trends
MK: Increasing Trend 97% Confidence
R: Increasing Trend 99% Confidence

Average RPD: 21.9%

Correlation: 0.94



9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Increasing Trend 91% Confidence
R: Increasing Trend 91% Confidence

Reduced Network Trends
MK: Increasing Trend 91% Confidence
R: Increasing Trend 94% Confidence

Average RPD: 18.7%

Correlation: 0.97

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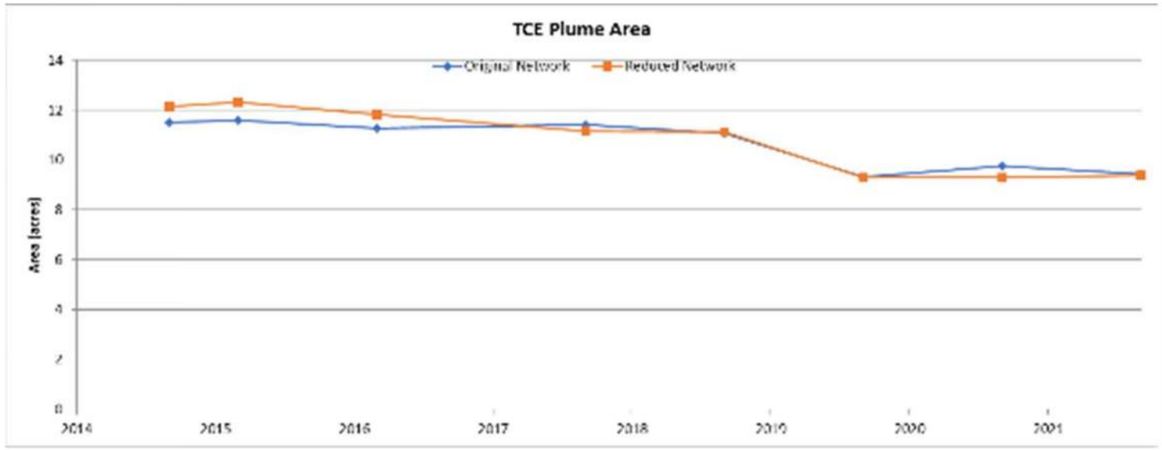


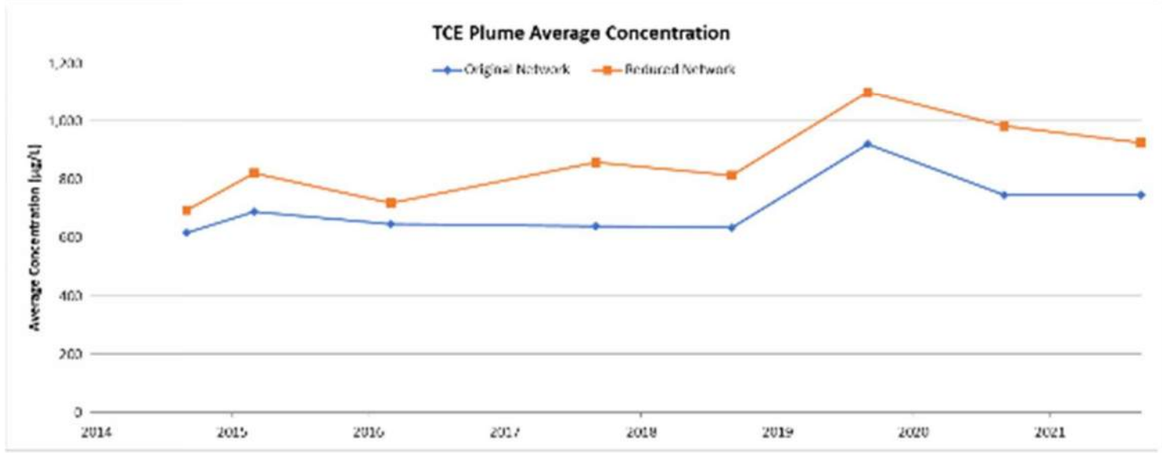
9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Decreasing Trend 99% Confidence
R: Decreasing Trend >99% Confidence

Reduced Network Trends
MK: Decreasing Trend 99% Confidence
R: Decreasing Trend >99% Confidence

Average RPD: 3.1%

Correlation: 0.97



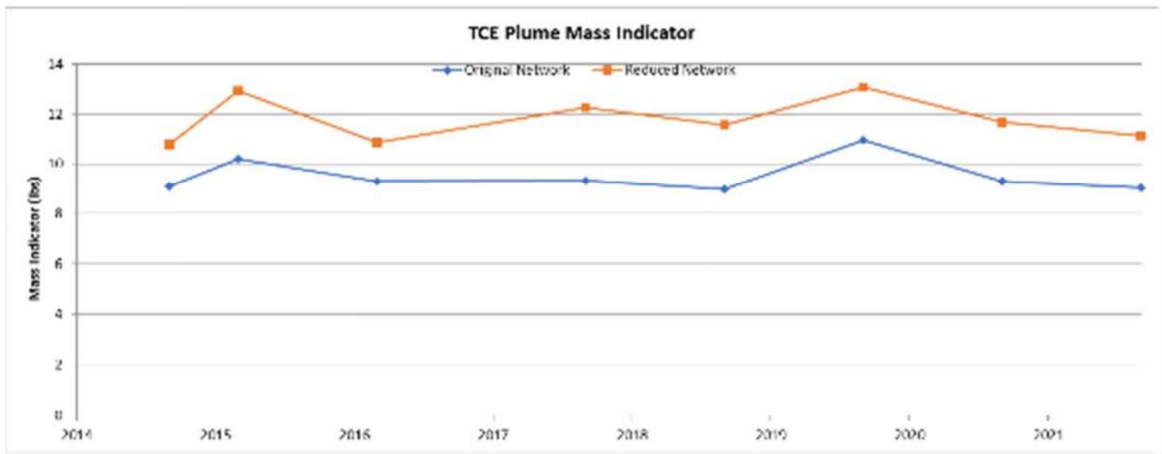
9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Increasing Trend 91% Confidence
R: No Trend 89% Confidence

Reduced Network Trends
MK: Increasing Trend 97% Confidence
R: Increasing Trend 98% Confidence

Average RPD: 20.1%

Correlation: 0.91



9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: No Trend 64% Confidence
R: No Trend 8% Confidence

Reduced Network Trends
MK: No Trend 64% Confidence
R: No Trend 13% Confidence

Average RPD: 21.2%

Correlation: 0.84

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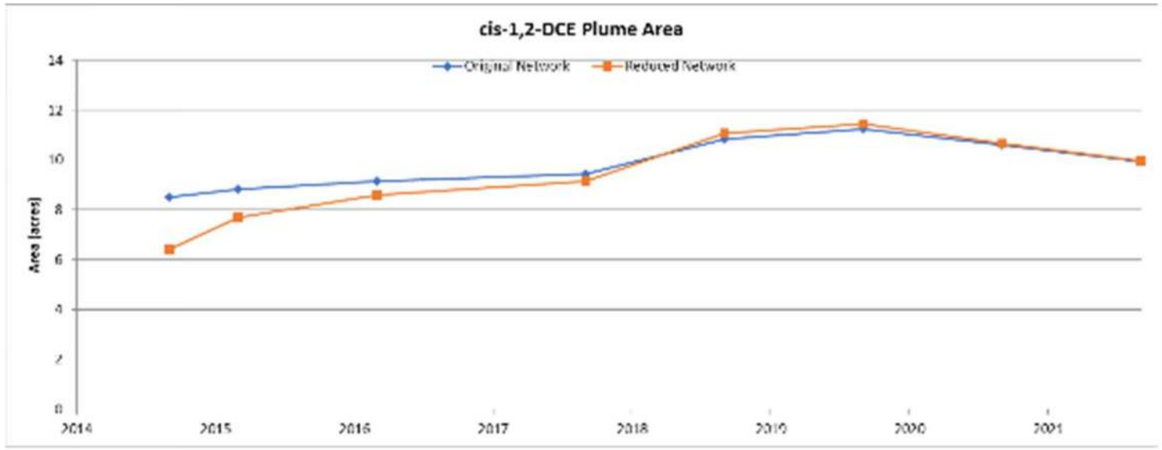


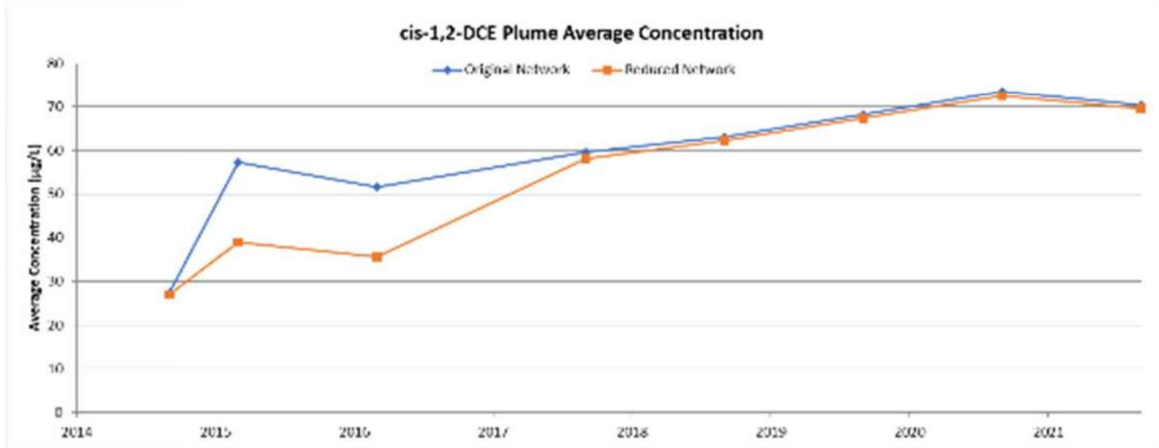
9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Increasing Trend 98% Confidence
R: Increasing Trend 98% Confidence

Reduced Network Trends
MK: Increasing Trend 98% Confidence
R: Increasing Trend 99% Confidence

Average RPD: 6.9%

Correlation: 0.97



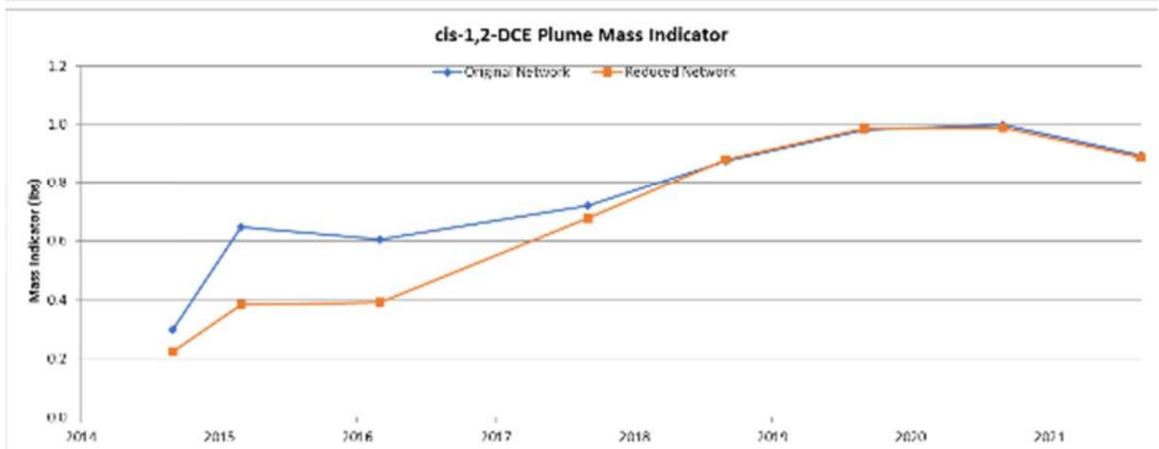
9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend 99% Confidence

Reduced Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Average RPD: 10.4%

Correlation: 0.90



9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Reduced Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Average RPD: 16.5%

Correlation: 0.96

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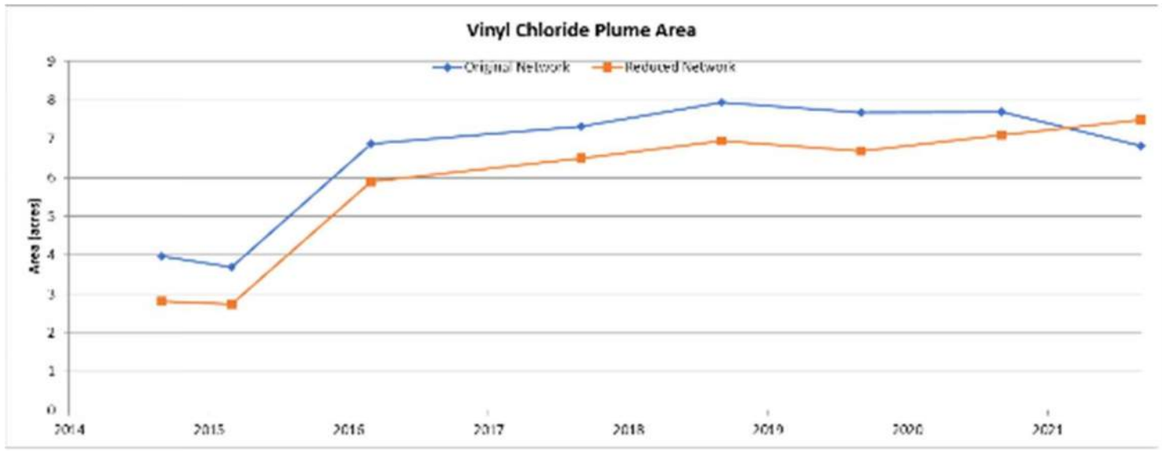


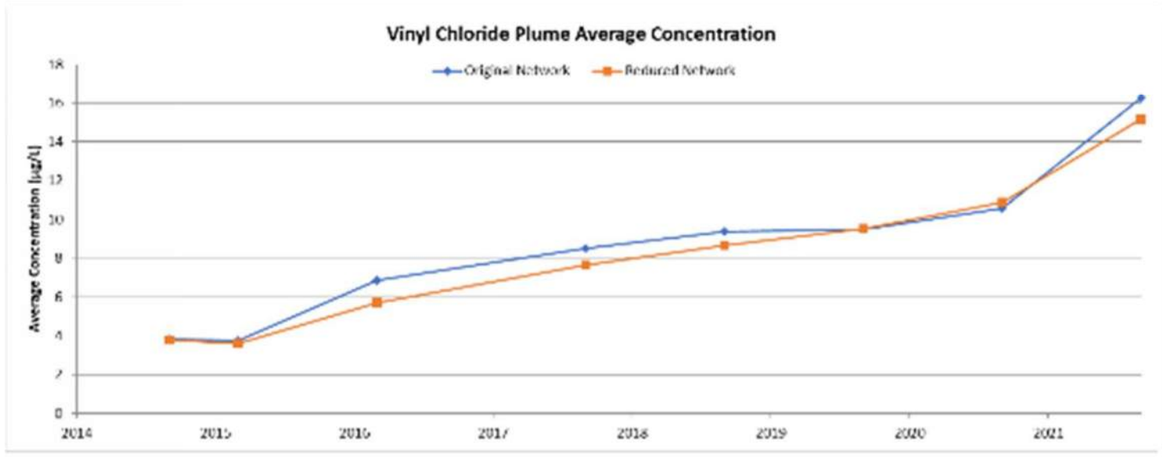
9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Increasing Trend 91% Confidence
R: Increasing Trend 97% Confidence

Reduced Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Average RPD: 16.9%

Correlation: 0.95



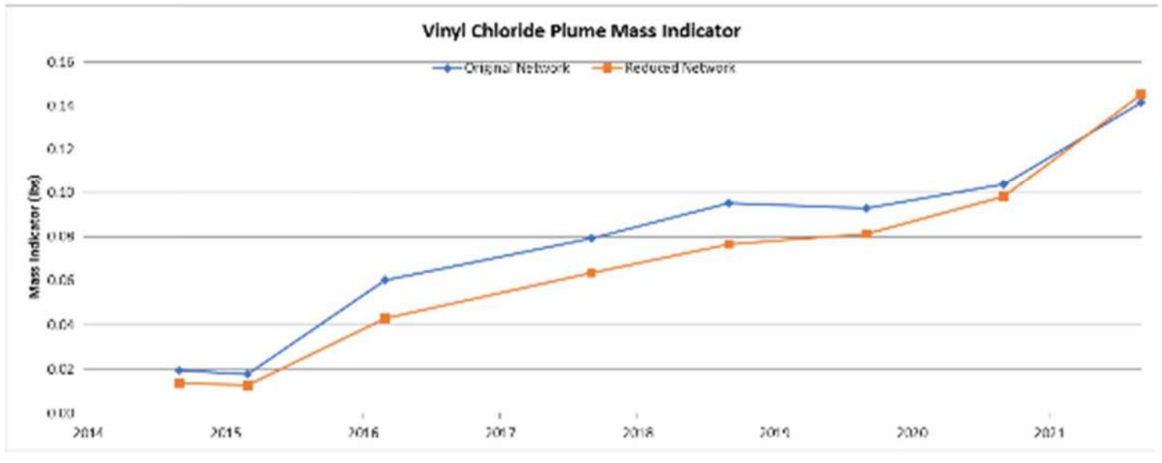
9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Reduced Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Average RPD: 6.5%

Correlation: 0.99



9 of 30 Wells Removed
30% Reduction

Original Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Reduced Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Average RPD: 20.9%

Correlation: 0.99

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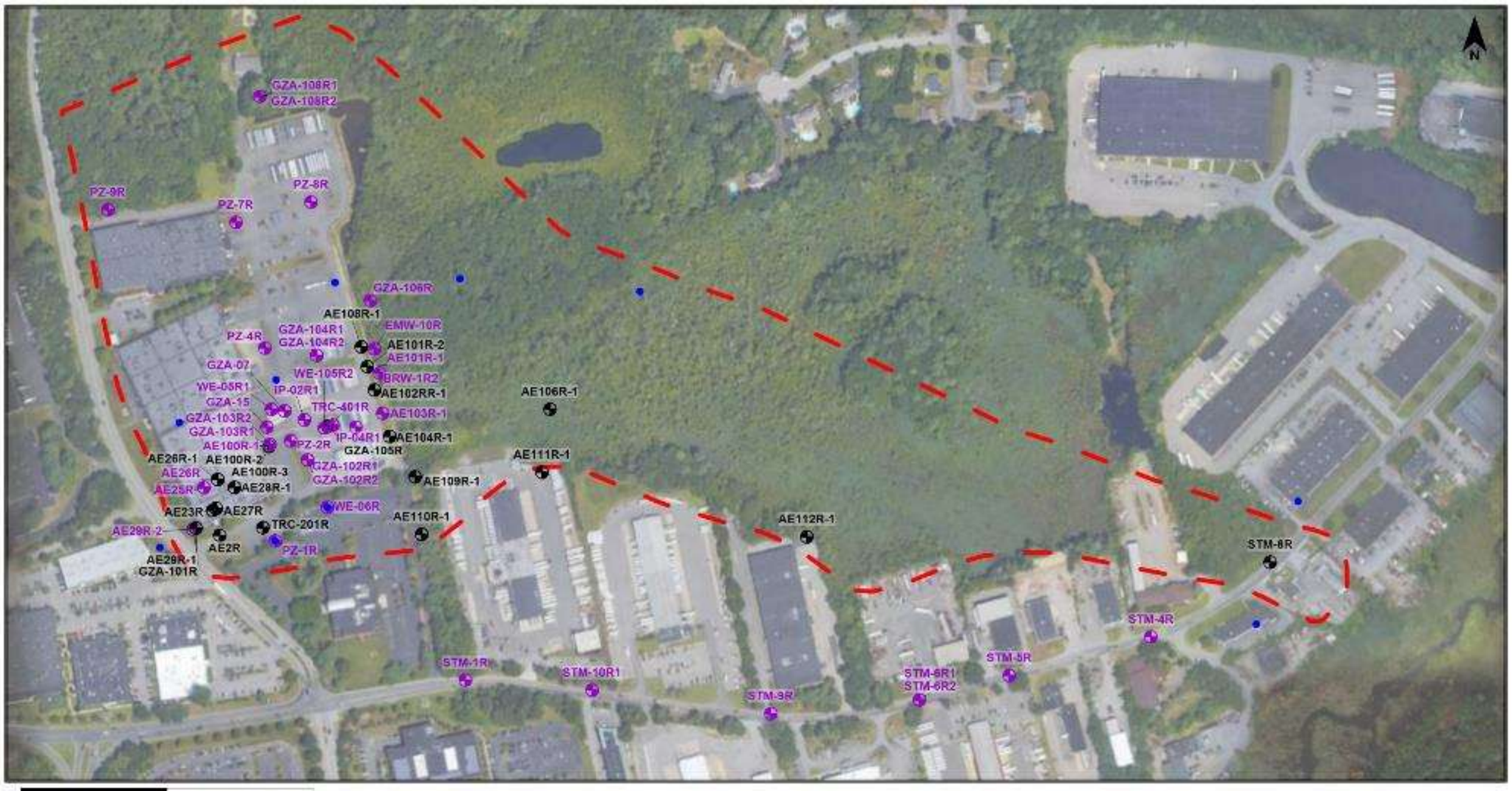
Upper Bedrock
Well Sufficiency Network



AE109R-1 Kept Monitor Well

STM-1R Removed Monitor Well

Control Point

MCP Site Boundary

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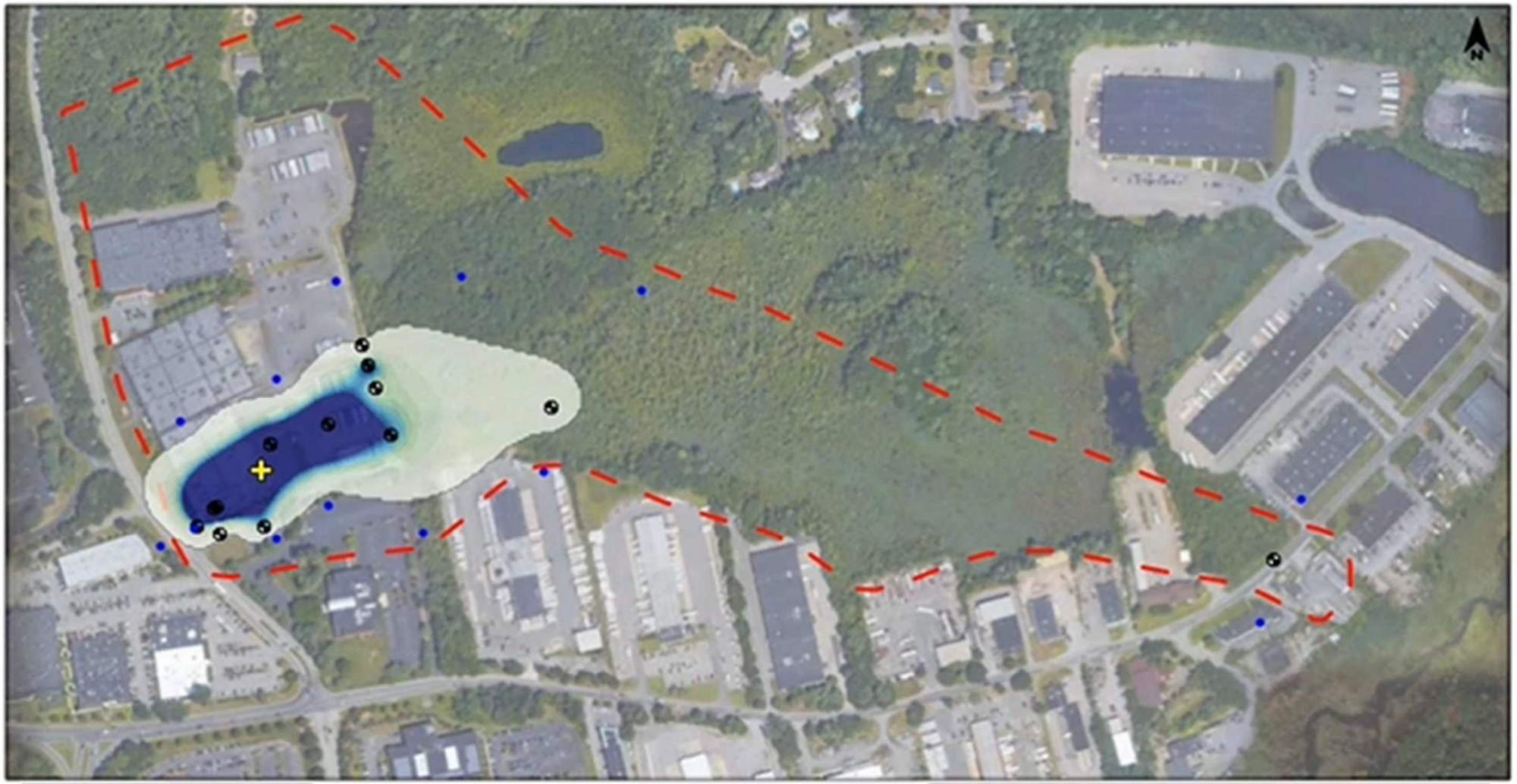
Well Sufficiency Analysis US Pat. No. 10,304,223



Chloroethenes
Upper Bedrock
Sep-2014

Concentration (nmol/L)

- 4,500
- 4,000
- 3,500
- 3,000
- 2,500
- 2,000
- 1,500
- 1,000
- 500
- 0

0 ft — 450 ft — 900 ft

Note: Reduced wells not shown

LEGEND

- MW-4 Monitor Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **11.9 acres**
Plume Average Concentration: **6,819 nmol/L**
Plume Mass Indicator: **46.9 moles**

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Well Sufficiency Analysis US Pat. No. 10,304,223

Upper Bedrock Well Sufficiency Summary (9 Wells Removed)									
	RPD			Correlation			Trend Conclusion		
Constituent	Area	Conc	Mass	Area	Conc	Mass	Area	Conc	Mass
PCE	6.2%	21.9%	18.7%	0.81	0.94	0.97	Same	Same	Same
TCE	3.1%	20.1%	21.2%	0.97	0.91	0.84	Same	No Trend/Increasing Trend - Increasing Trend	Same
cis-1,2-DCE	6.9%	10.4%	16.5%	0.97	0.9	0.96	Same	Same	Same
Vinyl Chloride	16.9%	6.5%	20.9%	0.95	0.99	0.99	Same	Same	Same

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Upper Bedrock Well Sufficiency Analysis Summary					
AE100R-1	Remove	AE29R-1	--	PZ-1R	Remove
AE100R-2	--	AE29R-2	Remove	PZ-2R	Remove
AE100R-3	--	AE2R	--	PZ-4R	Remove
AE101R-1	Remove	BRW-1R2	Remove	PZ-7R	Remove
AE101R-2	--	EMW-10R	Remove	PZ-8R	Remove
AE102RR-1	--	GZA-07	Remove	PZ-9R	Remove
AE103R-1	Remove	GZA-101R	--	STM-10R1	Remove
AE104R-1	--	GZA-102R1	Remove	STM-1R	Remove
AE106R-1	--	GZA-102R2	Remove	STM-4R	Remove
AE108R-1	--	GZA-103R1	Remove	STM-5R	Remove
AE109R-1	--	GZA-103R2	Remove	STM-6R1	Remove
AE110R-1	--	GZA-104R1	Remove	STM-6R2	Remove
AE111R-1	--	GZA-104R2	Remove	STM-8R	--
AE112R-1	--	GZA-105R	--	STM-9R	Remove
AE23R	--	GZA-106R	Remove	TRC-201R	--
AE25R	Remove	GZA-108R1	Remove	TRC-401R	Remove
AE26R	Remove	GZA-108R2	Remove	WE-05R1	Remove
AE26R-1	--	GZA-15	Remove	WE-06R	Remove
AE27R	--	IP-02R1	Remove	WE-105R2	Remove
AE28R-1	--	IP-04R1	Remove		

-- Kept in analysis

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Upper Bedrock Proposed Network		
AE100R-2	AE109R-1	AE28R-1
AE100R-3	AE110R-1	AE29R-1
AE101R-2	AE111R-1	AE2R
AE102RR-1	AE112R-1	GZA-101R
AE104R-1	AE23R	GZA-105R
AE106R-1	AE26R-1	STM-8R
AE108R-1	AE27R	TRC-201R

Count 21

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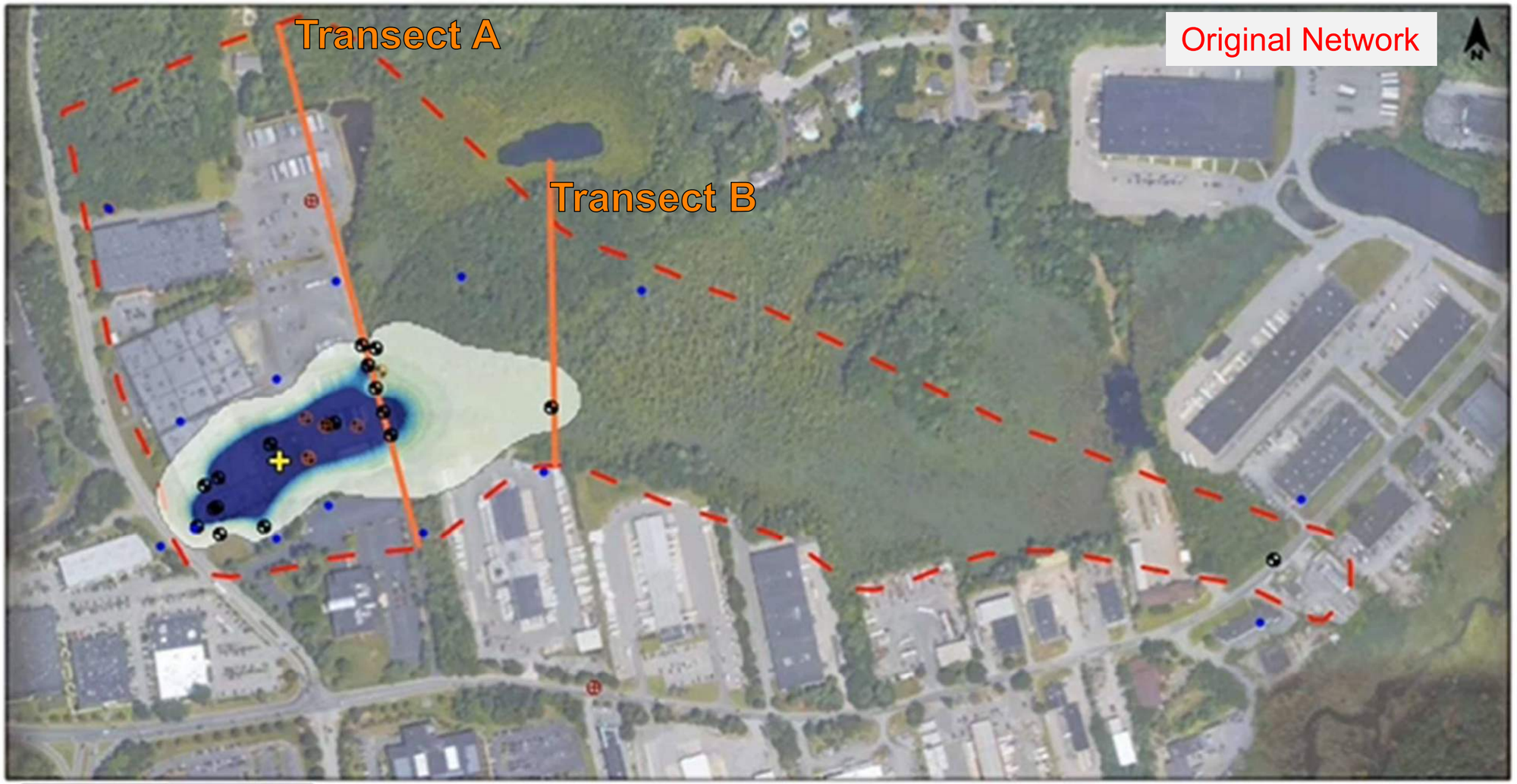

Chloroethenes
Upper Bedrock
Sep-2014

Concentration (nmol/L)

4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well

MW-5 Hanging Well

Plume Center of Mass

Control Point

MCP Site Boundary

Transect A

Average Concentration: **4,897 nmol/L**
Mass Flux: **0.25 mol/yr**

Transect B

Average Concentration: **96 nmol/L**
Mass Flux: **0.0020 mol/yr**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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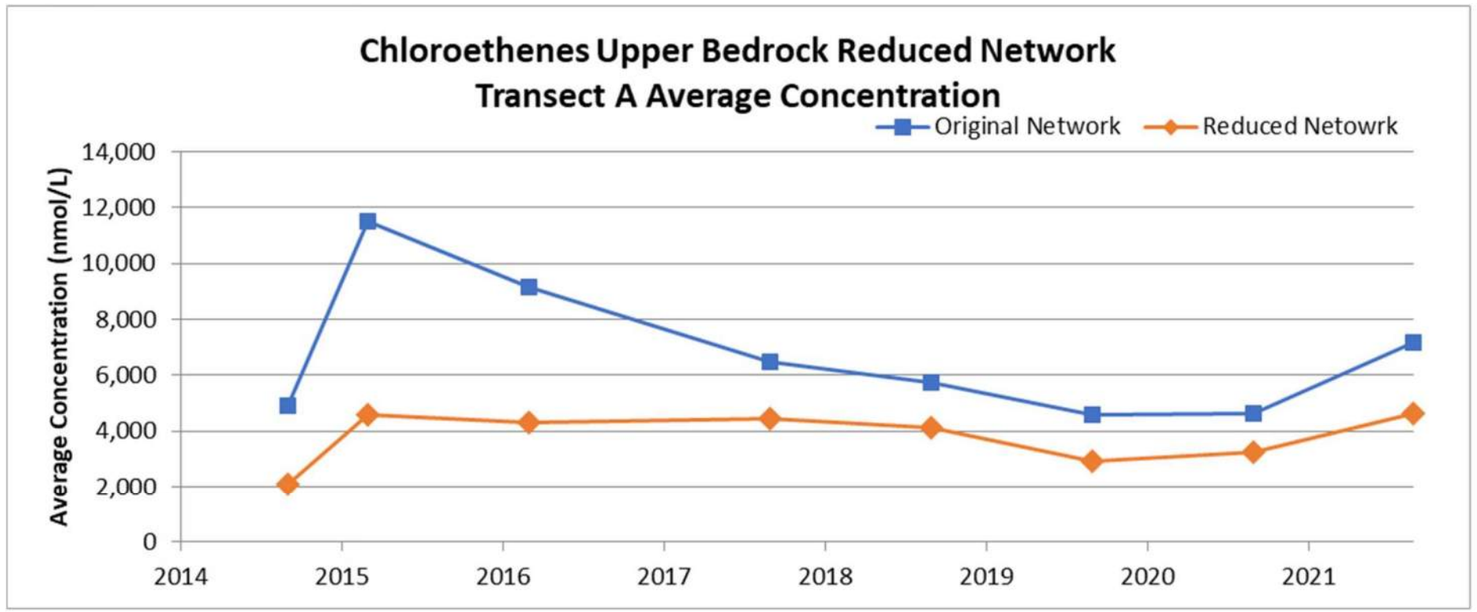
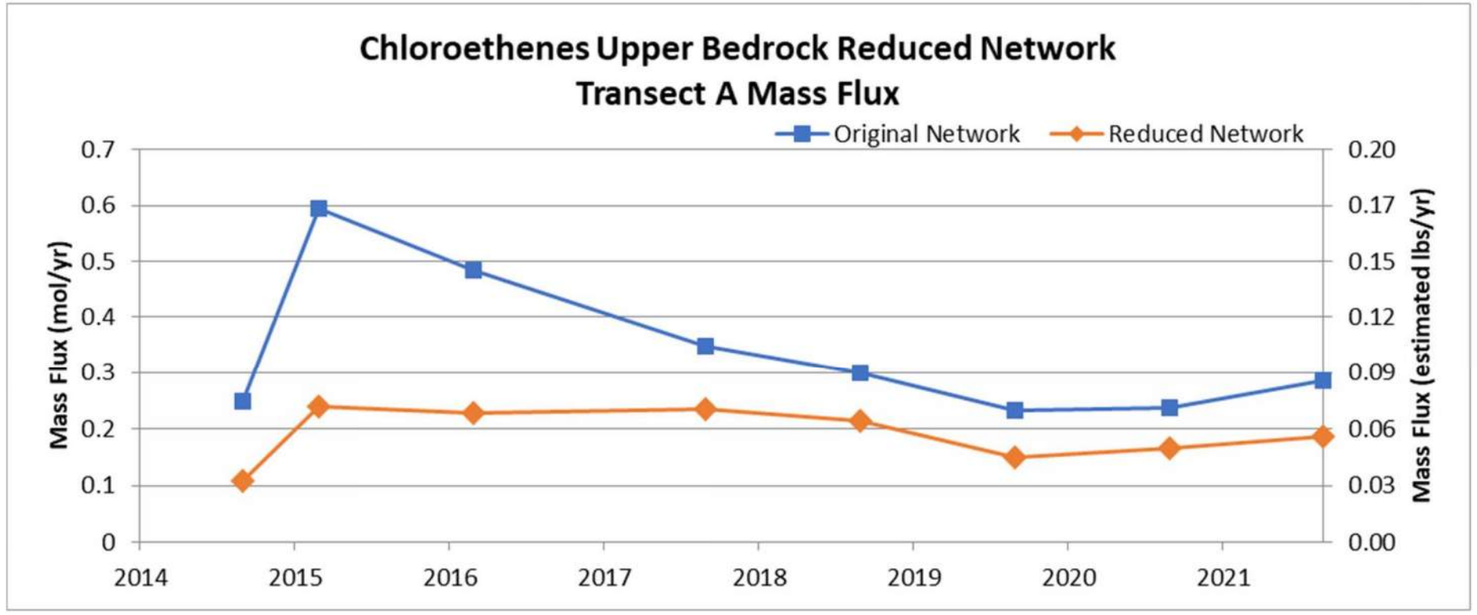


Average RPD: 53.8%

Correlation: 0.69



Average RPD: 53.4%

Correlation: 0.75

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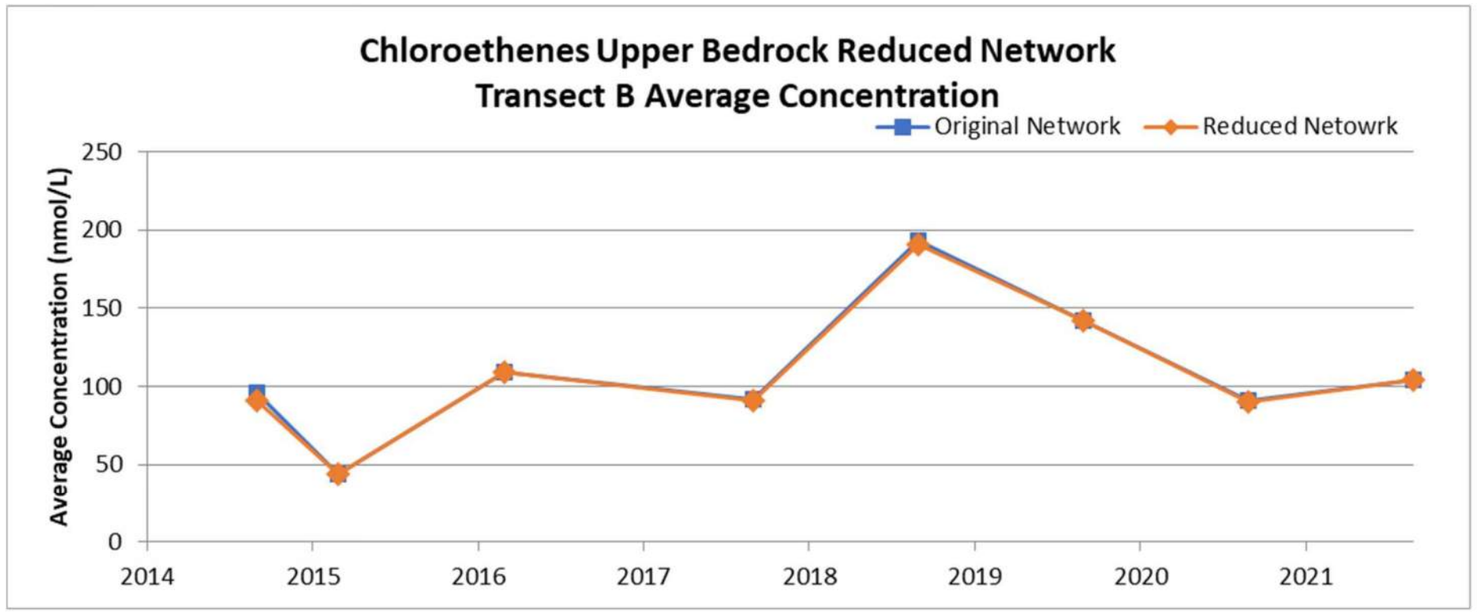
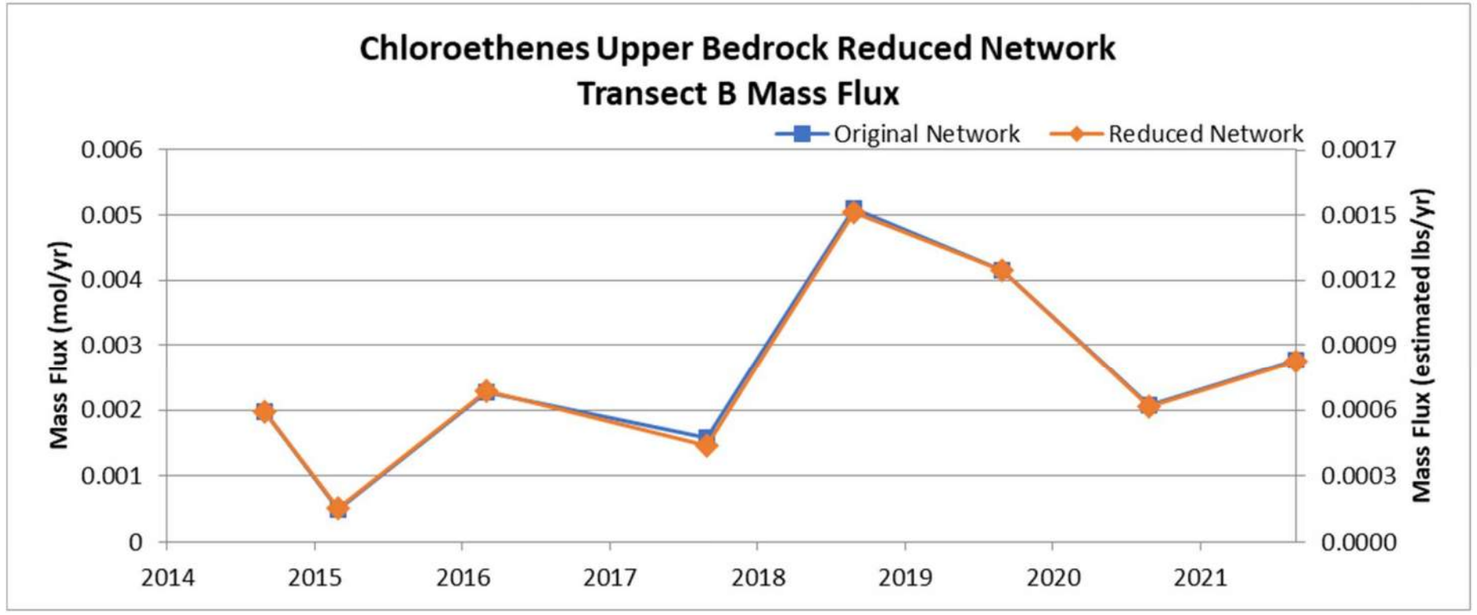


Average RPD: 1.2%

Correlation: 1.00



Average RPD: 1.4%

Correlation: 1.00

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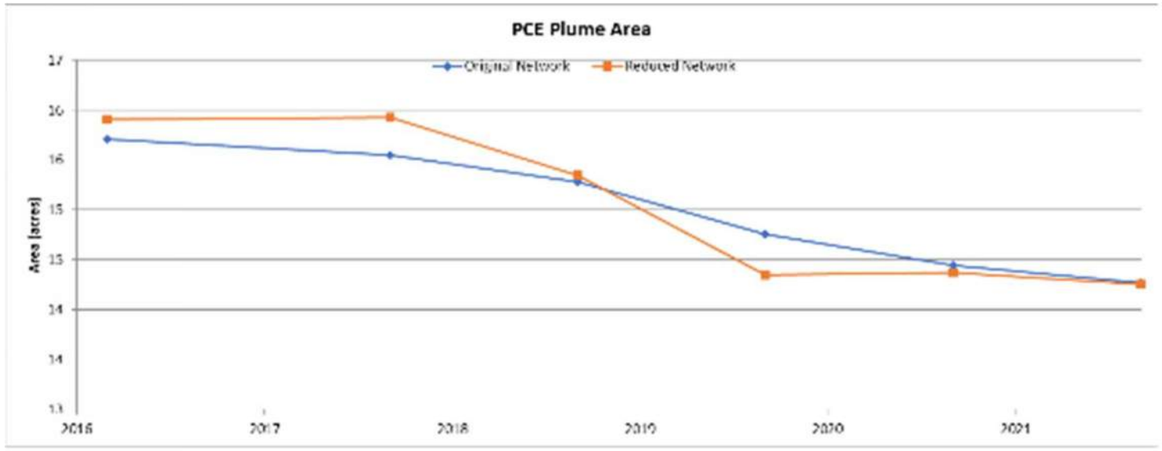


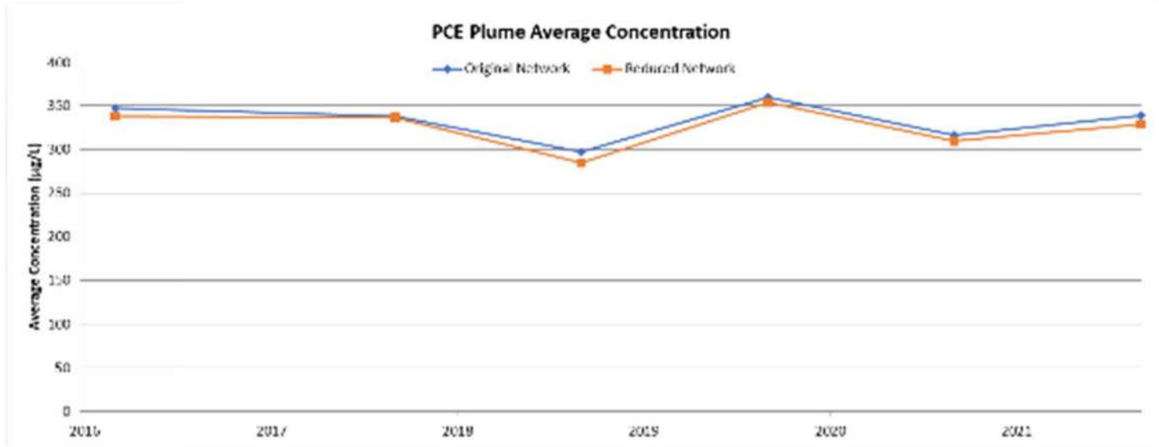
17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend >99% Confidence

Reduced Network Trends
MK: Decreasing Trend 97% Confidence
R: Decreasing Trend 99% Confidence

Average RPD: 1.2%

Correlation: 0.97



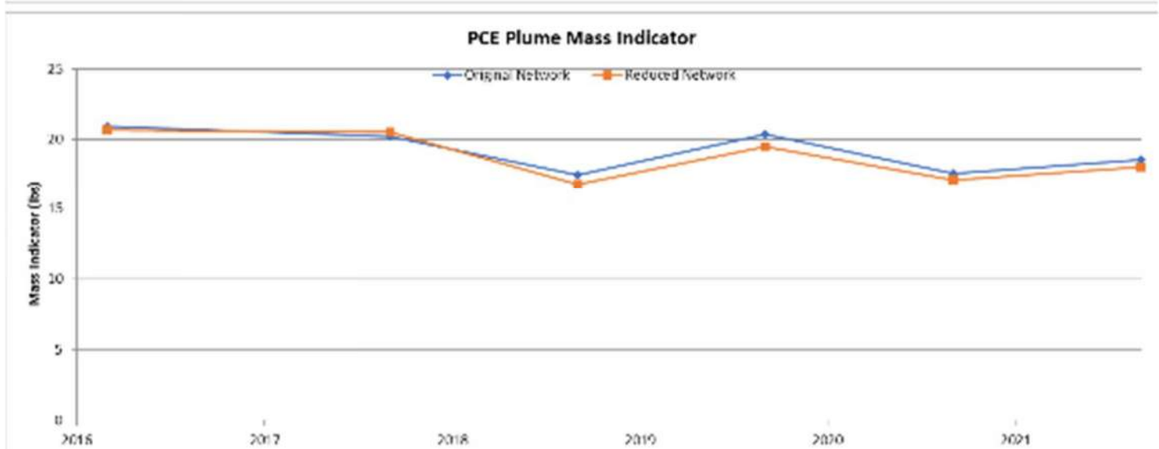
17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: No Trend 50% Confidence
R: No Trend 20% Confidence

Reduced Network Trends
MK: No Trend 64% Confidence
R: No Trend 21% Confidence

Average RPD: 2.3%

Correlation: 0.99



17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: No Trend 77% Confidence
R: No Trend 80% Confidence

Reduced Network Trends
MK: No Trend 86% Confidence
R: No Trend 85% Confidence

Average RPD: 2.8%

Correlation: 0.97

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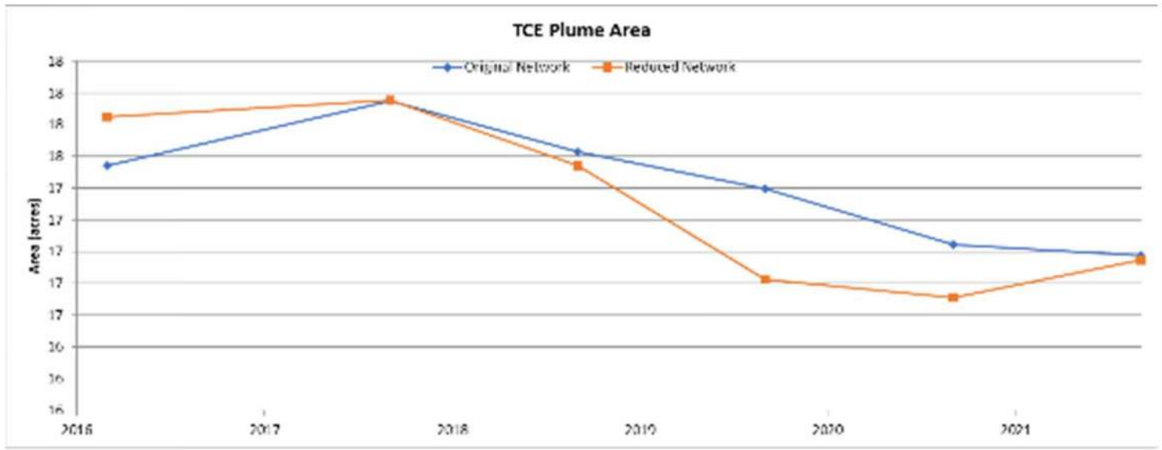


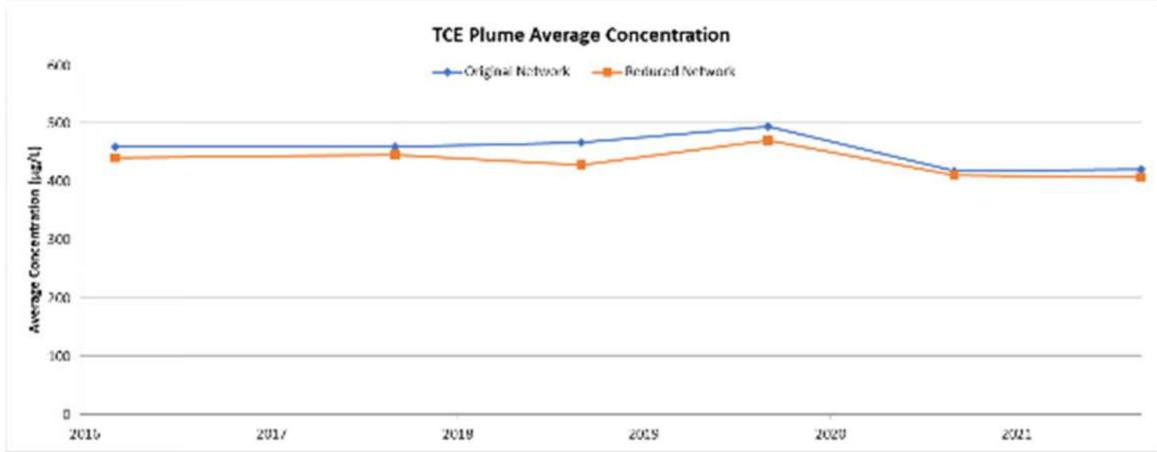
17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: Decreasing Trend 97% Confidence
R: Decreasing Trend 94% Confidence

Reduced Network Trends
MK: Decreasing Trend 93% Confidence
R: Decreasing Trend 97% Confidence

Average RPD: 1.3%

Correlation: 0.85



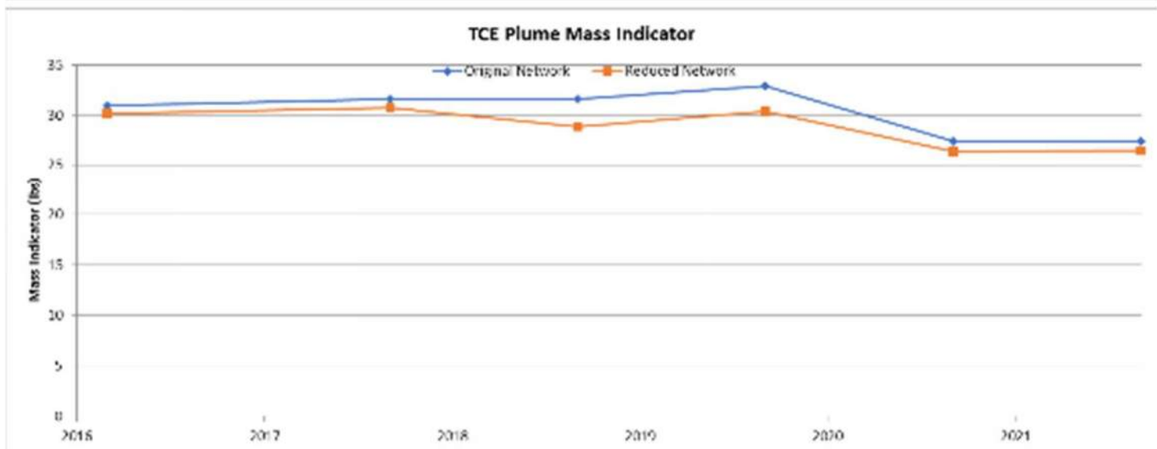
17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: No Trend 64% Confidence
R: No Trend 72% Confidence

Reduced Network Trends
MK: No Trend 86% Confidence
R: No Trend 72% Confidence

Average RPD: 4.3%

Correlation: 0.93



17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: No Trend 50% Confidence
R: No Trend 83% Confidence

Reduced Network Trends
MK: No Trend 86% Confidence
R: Decreasing Trend 94% Confidence

Average RPD: 5.0%

Correlation: 0.92

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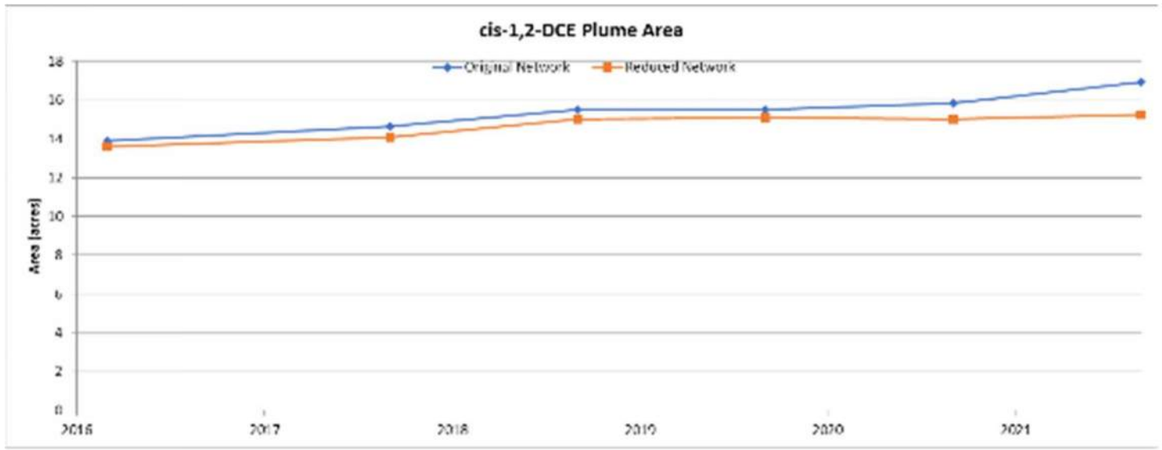


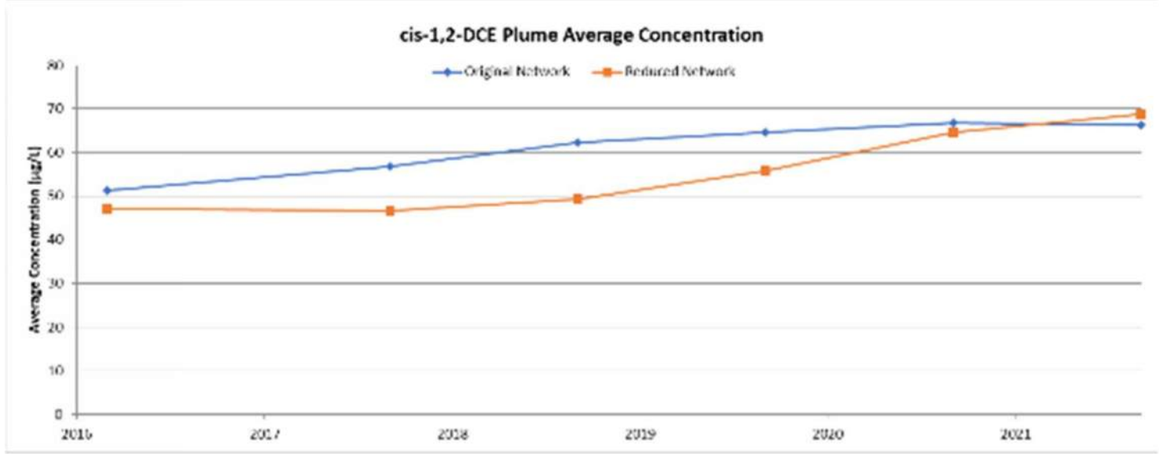
17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: Increasing Trend 99% Confidence
R: Increasing Trend >99% Confidence

Reduced Network Trends
MK: Increasing Trend 97% Confidence
R: Increasing Trend 98% Confidence

Average RPD: 4.6%

Correlation: 0.90



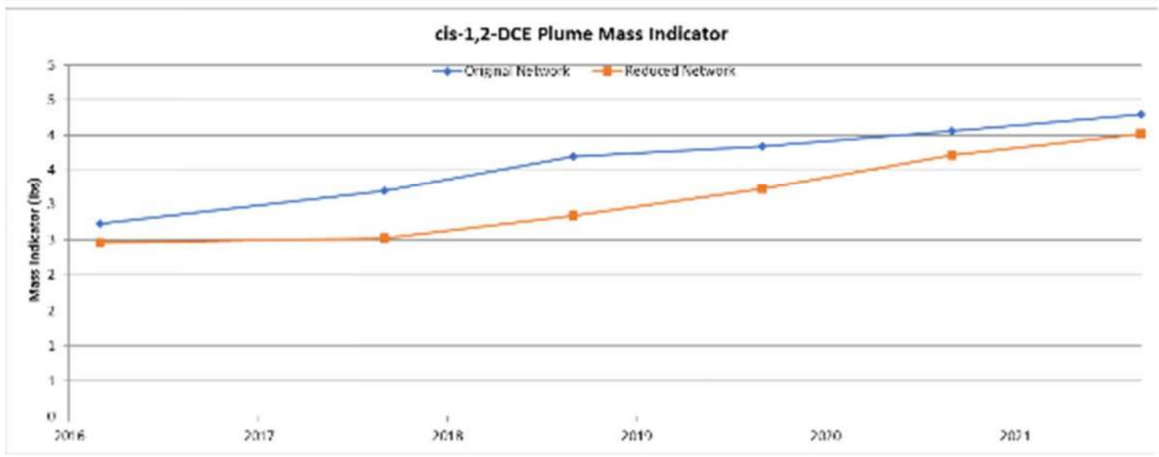
17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: Increasing Trend 99% Confidence
R: Increasing Trend >99% Confidence

Reduced Network Trends
MK: Increasing Trend 99% Confidence
R: Increasing Trend 99% Confidence

Average RPD: 12.7%

Correlation: 0.81



17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Reduced Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Average RPD: 15.6%

Correlation: 0.93

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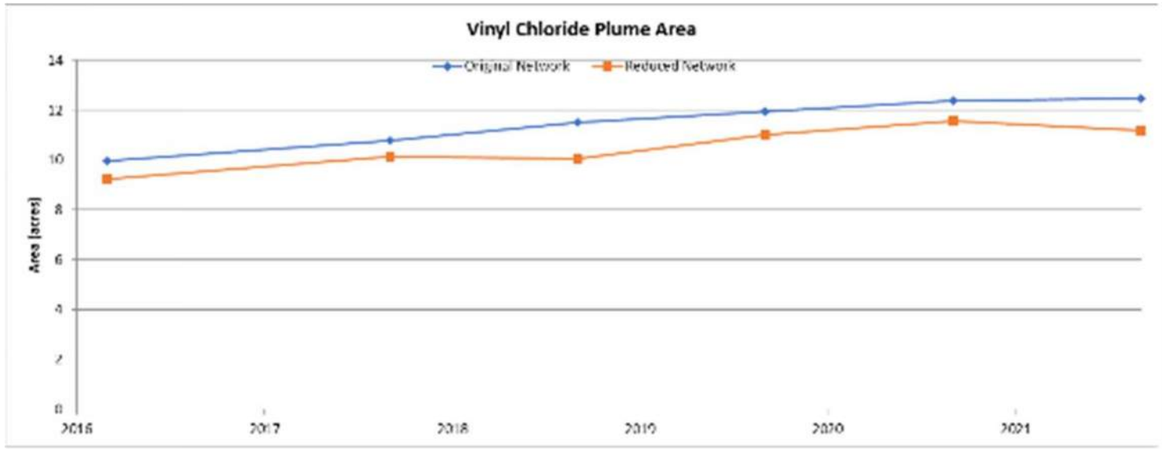


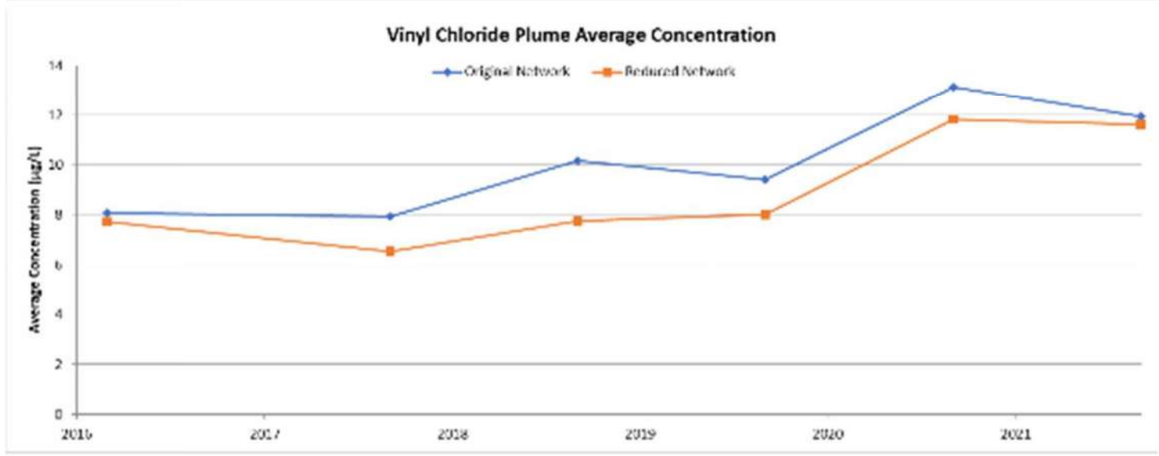
17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Reduced Network Trends
MK: Increasing Trend 97% Confidence
R: Increasing Trend 99% Confidence

Average RPD: 8.8%

Correlation: 0.95



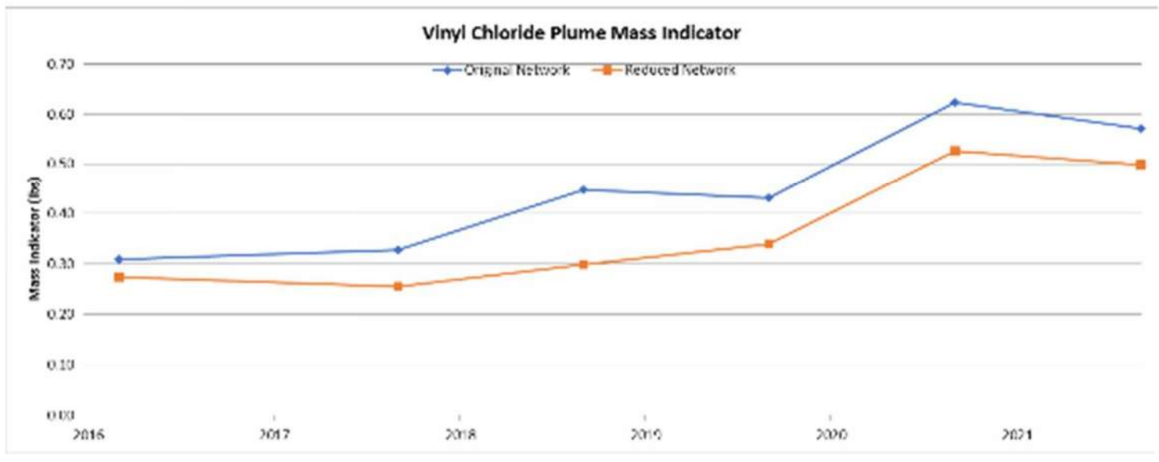
17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: Increasing Trend 93% Confidence
R: Increasing Trend 98% Confidence

Reduced Network Trends
MK: Increasing Trend 97% Confidence
R: Increasing Trend 95% Confidence

Average RPD: 13.2%

Correlation: 0.94



17 of 43 Wells Removed
40% Reduction

Original Network Trends
MK: Increasing Trend 97% Confidence
R: Increasing Trend 99% Confidence

Reduced Network Trends
MK: Increasing Trend 97% Confidence
R: Increasing Trend 98% Confidence

Average RPD: 21.9%

Correlation: 0.96

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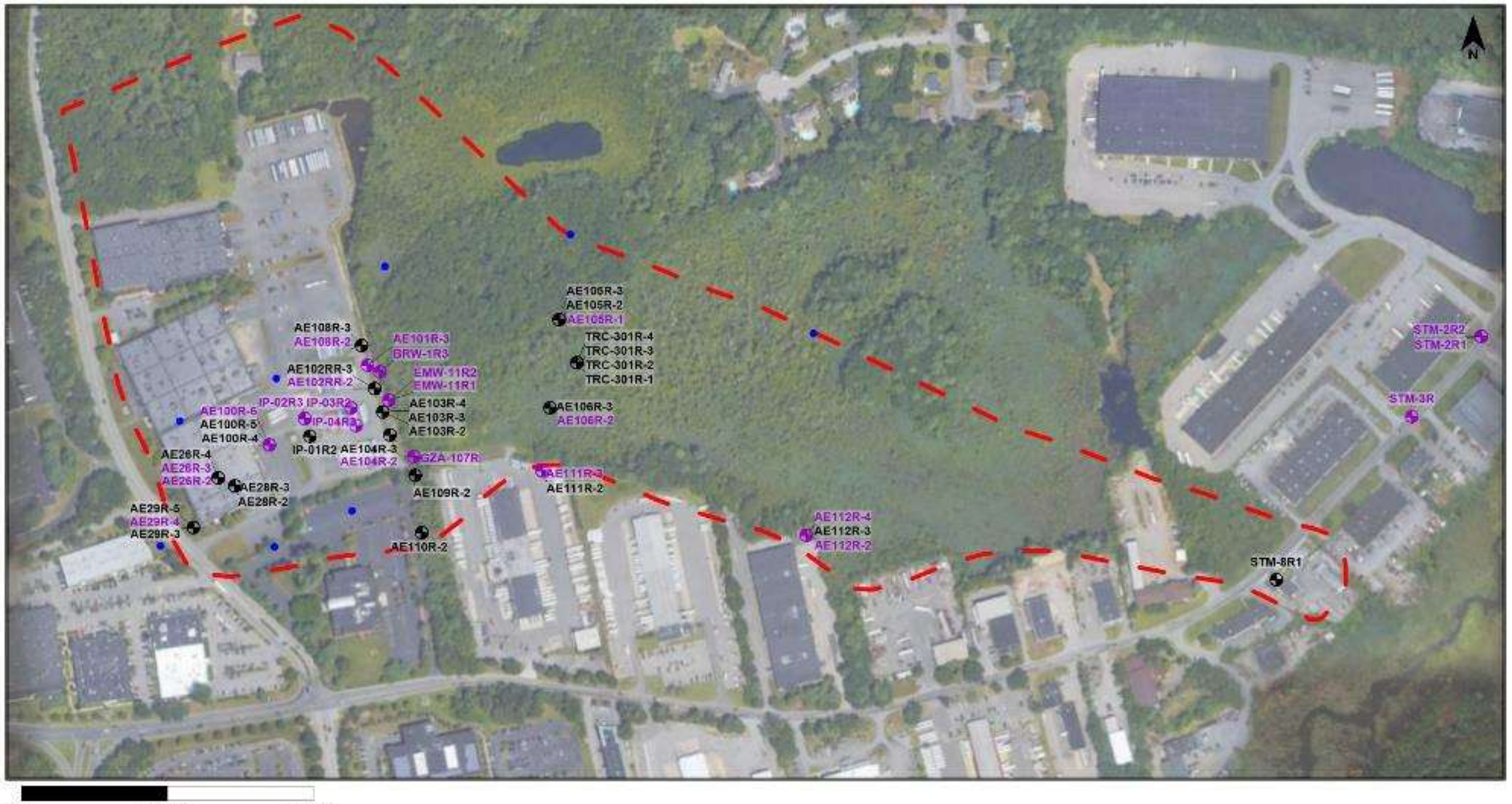
Middle Bedrock
Well Sufficiency Network



0 ft 450 ft 900 ft

AE28R-3 Kept Monitor Well

GZA-107R Removed Monitor Well

Control Point

MCP Site Boundary

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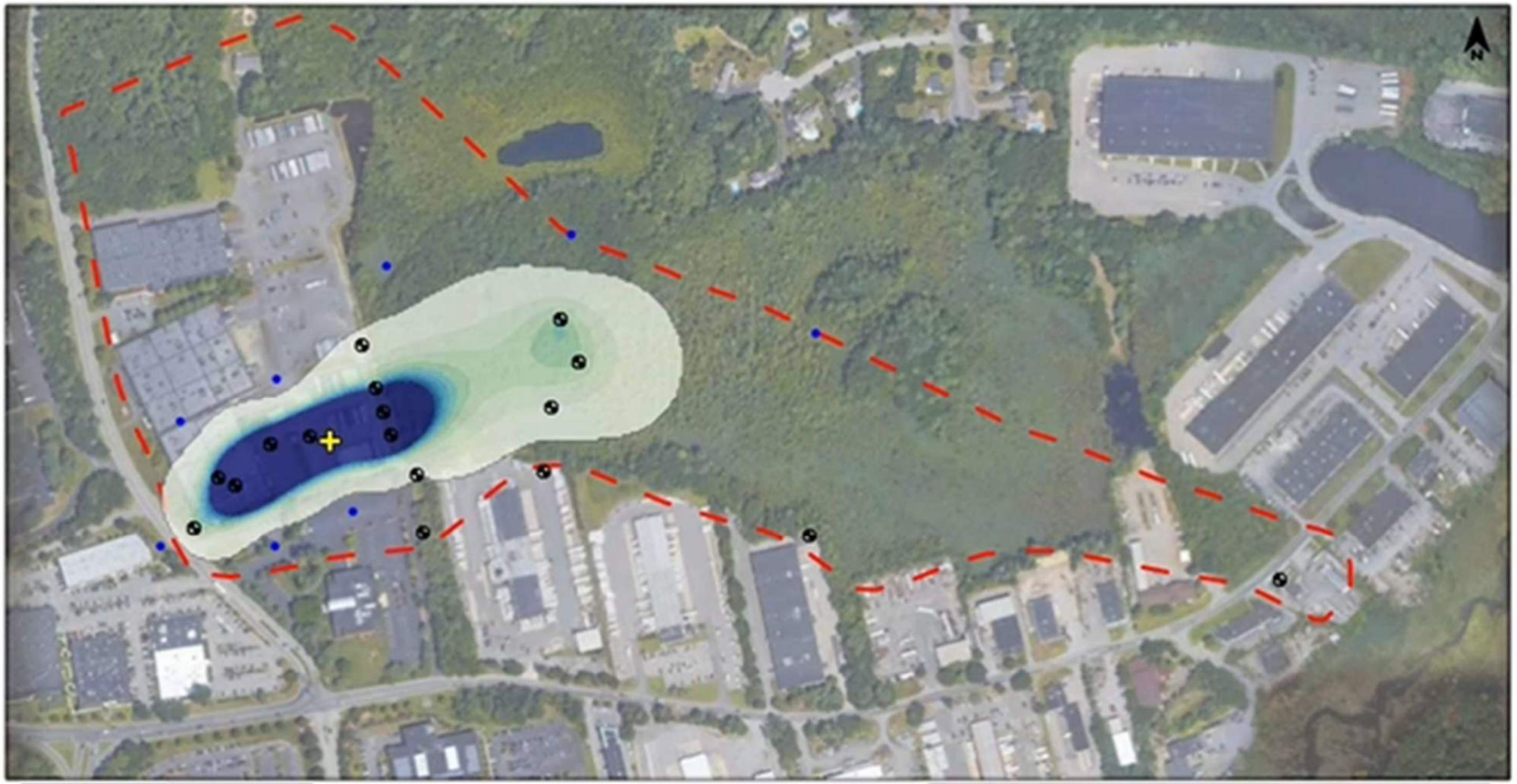

Chloroethenes
Middle Bedrock
Mar-2016

Concentration (nmol/L)

- 4,500
- 4,000
- 3,500
- 3,000
- 2,500
- 2,000
- 1,500
- 1,000
- 500
- 0

0 ft — 450 ft — 900 ft

Note: Reduced wells not shown

LEGEND

- MW-4 Monitor Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **17.4 acres**
Plume Average Concentration: **5,735 nmol/L**
Plume Mass Indicator: **174 moles**

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Middle Bedrock Well Sufficiency Summary (17 Wells Removed)									
	RPD			Correlation			Trend Conclusion		
Constituent	Area	Conc	Mass	Area	Conc	Mass	Area	Conc	Mass
PCE	1.2%	2.3%	2.8%	0.97	0.99	0.97	Same	Same	Same
TCE	1.3%	4.3%	5.0%	0.85	0.93	0.92	Same	Same	No Trend - No Trend/Decreasing Trend
cis-1,2-DCE	4.6%	12.2%	15.6%	0.9	0.81	0.93	Same	Same	Same
Vinyl Chloride	8.8%	13.2%	21.9%	0.95	0.94	0.96	Same	Same	Same

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Middle Bedrock Well Sufficiency Analysis Summary					
AE100R-4	--	AE108R-3	--	BRW-1R3	Remove
AE100R-5	--	AE109R-2	--	EMW-11R1	Remove
AE100R-6	Remove	AE110R-2	--	EMW-11R2	Remove
AE101R-3	Remove	AE111R-2	--	GZA-107R	Remove
AE102RR-2	--	AE111R-3	Remove	IP-01R2	--
AE102RR-3	Remove	AE112R-2	Remove	IP-02R3	Remove
AE103R-2	--	AE112R-3	--	IP-03R2	Remove
AE103R-3	--	AE112R-4	Remove	IP-04R3	Remove
AE103R-4	--	AE26R-2	Remove	STM-2R1	Remove
AE104R-2	Remove	AE26R-3	Remove	STM-2R2	Remove
AE104R-3	--	AE26R-4	--	STM-3R	Remove
AE105R-1	Remove	AE28R-2	--	STM-8R1	--
AE105R-2	--	AE28R-3	--	TRC-301R-1	--
AE105R-3	--	AE29R-3	--	TRC-301R-2	--
AE106R-2	Remove	AE29R-4	Remove	TRC-301R-3	--
AE106R-3	--	AE29R-5	--	TRC-301R-4	--
AE108R-2	Remove				

-- Kept in analysis

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Middle Bedrock Proposed Network		
AE100R-4	AE106R-3	AE29R-3
AE100R-5	AE108R-3	AE29R-5
AE102RR-2	AE109R-2	IP-01R2
AE103R-2	AE110R-2	STM-8R1
AE103R-3	AE111R-2	TRC-301R-1
AE103R-4	AE112R-3	TRC-301R-2
AE104R-3	AE26R-4	TRC-301R-3
AE105R-2	AE28R-2	TRC-301R-4
AE105R-3	AE28R-3	

Count 26

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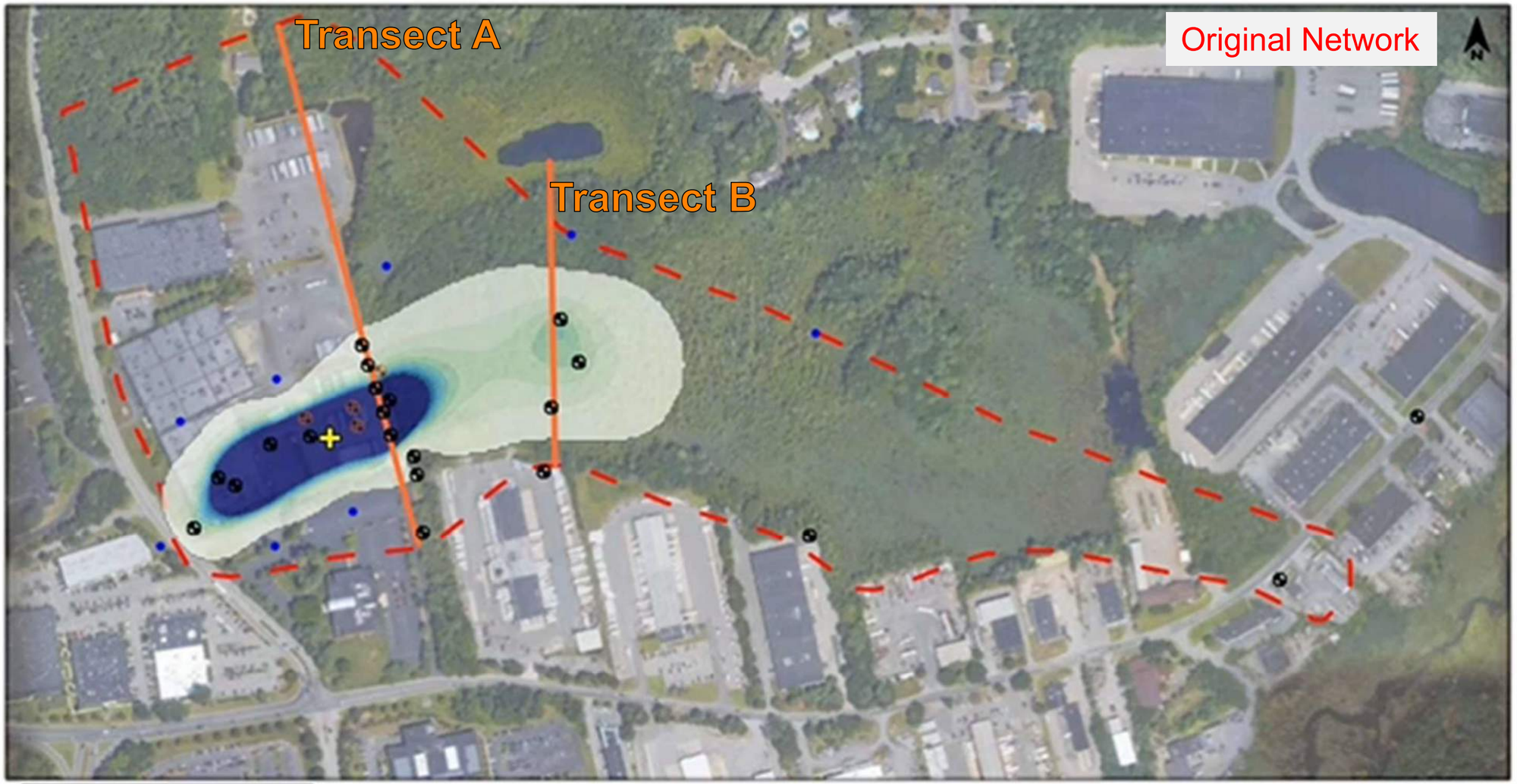

Chloroethenes
Middle Bedrock
Mar-2016

Concentration (nmol/L)

4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well

MW-5 Hanging Well

Plume Center of Mass

Control Point

MCP Site Boundary

Transect A

Average Concentration: **28,924 nmol/L**
Mass Flux: **4.54 mol/yr**

Transect B

Average Concentration: **934 nmol/L**
Mass Flux: **0.157 mol/yr**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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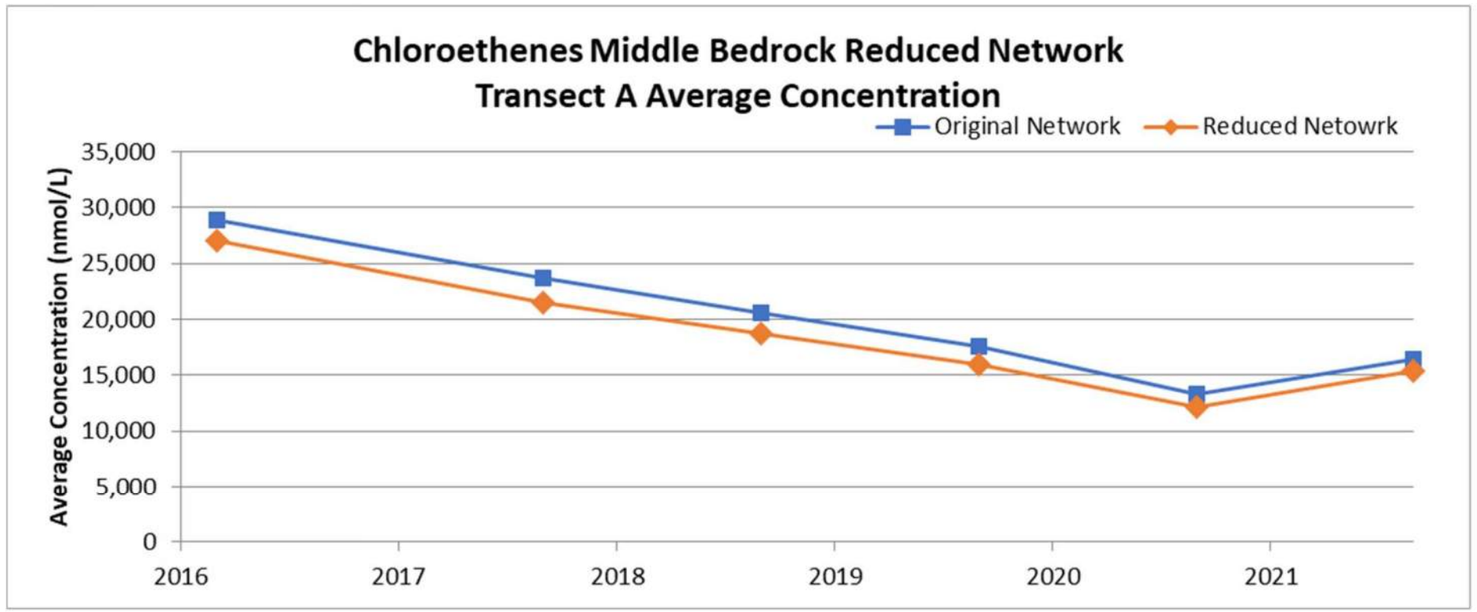
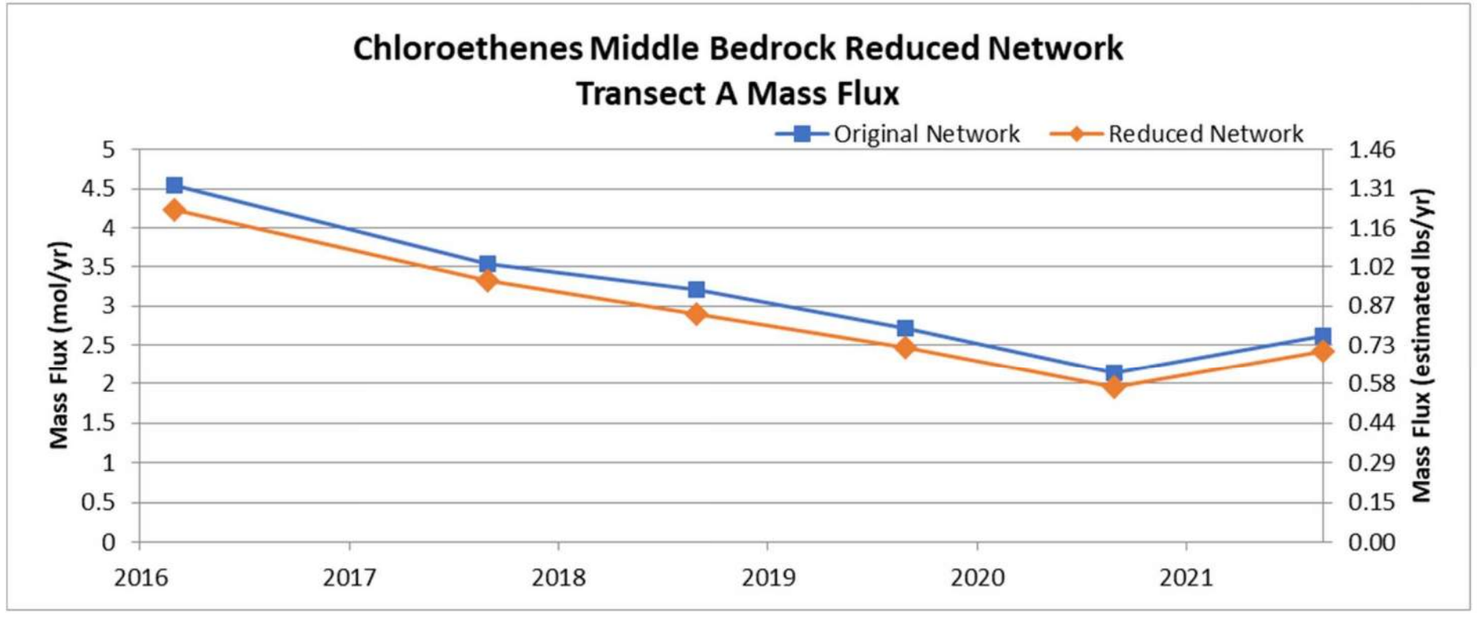


Average RPD: 8.4%

Correlation: 1.00



Average RPD: 8.3%

Correlation: 1.00

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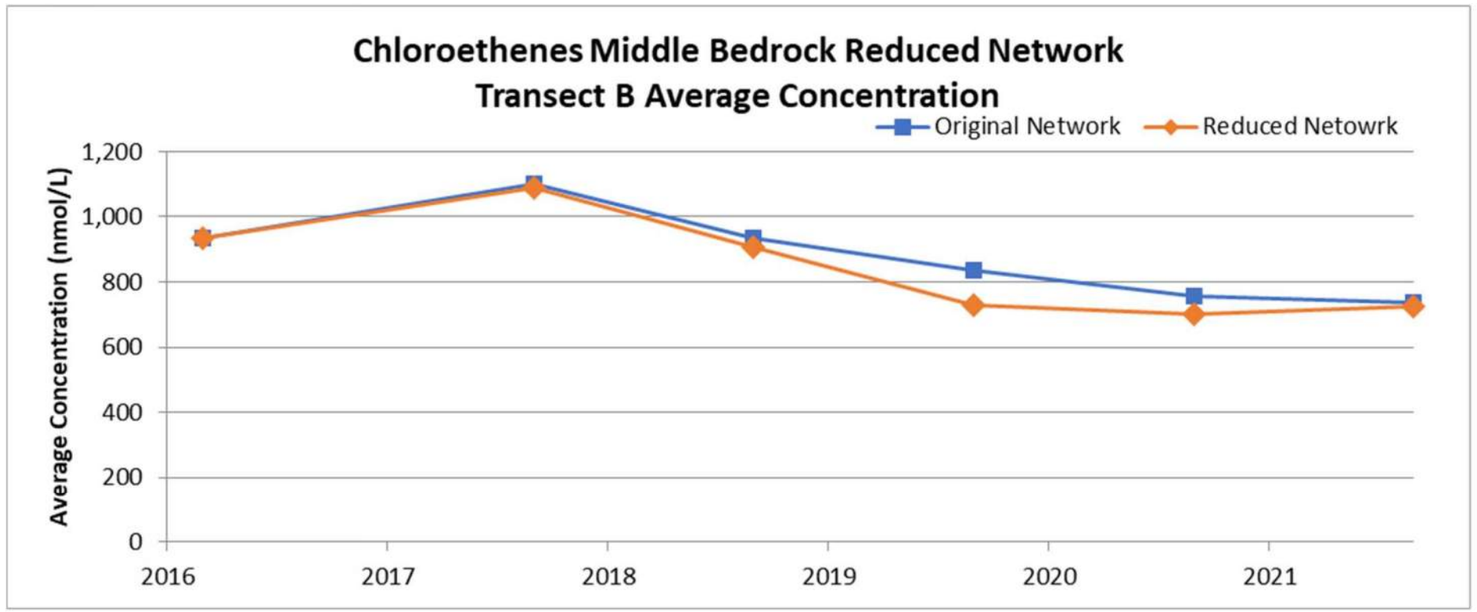
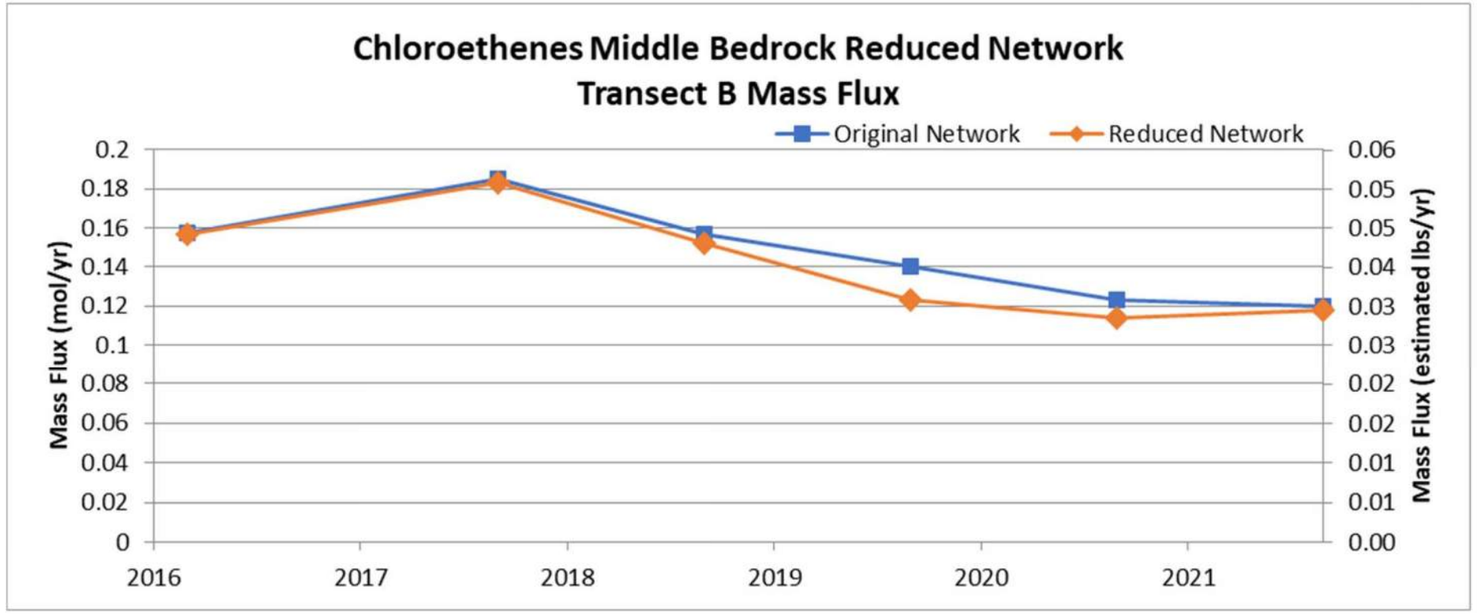


Average RPD: 4.5%

Correlation: 0.97



Average RPD: 4.5%

Correlation: 0.98

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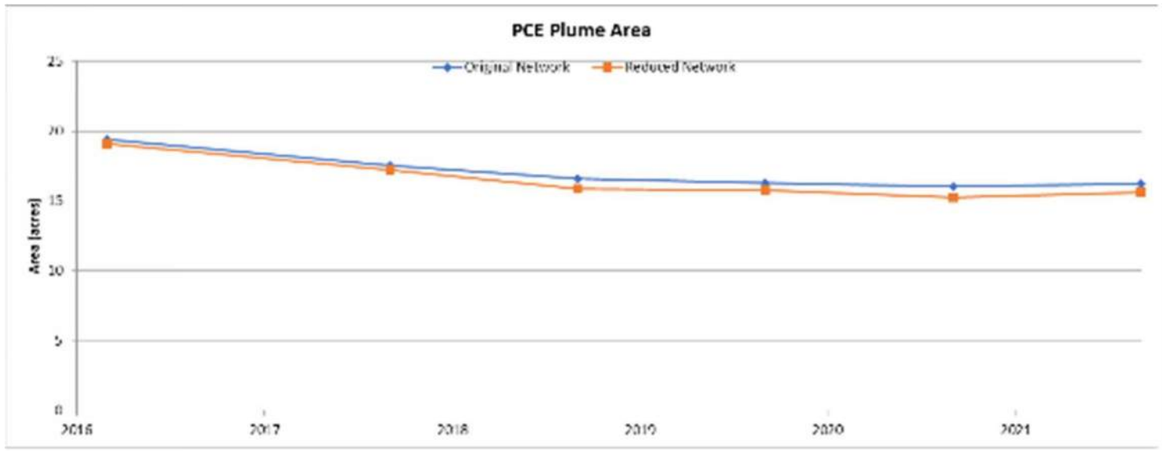


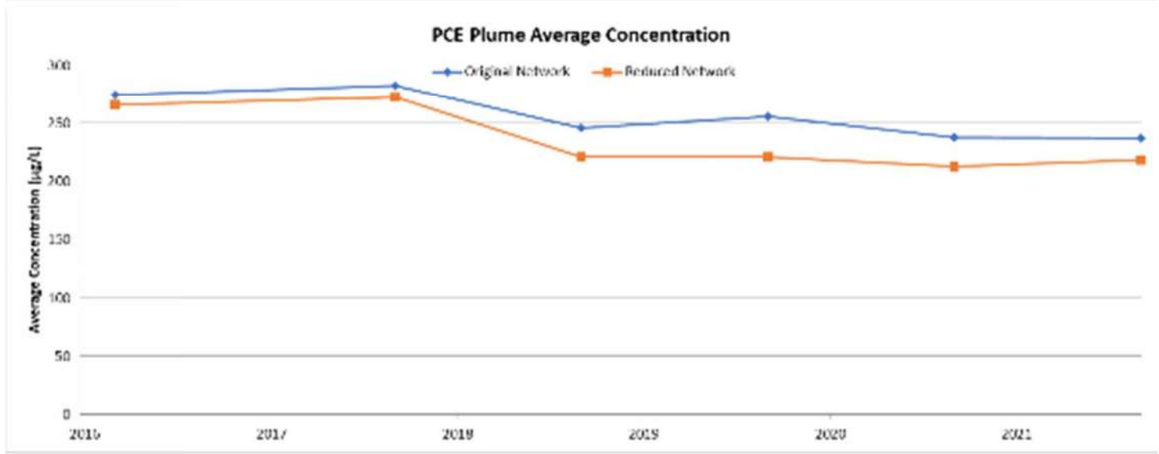
18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: Decreasing Trend 99% Confidence
R: Decreasing Trend 99% Confidence

Reduced Network Trends
MK: Decreasing Trend 99% Confidence
R: Decreasing Trend 98% Confidence

Average RPD: 3.5%

Correlation: 1.00



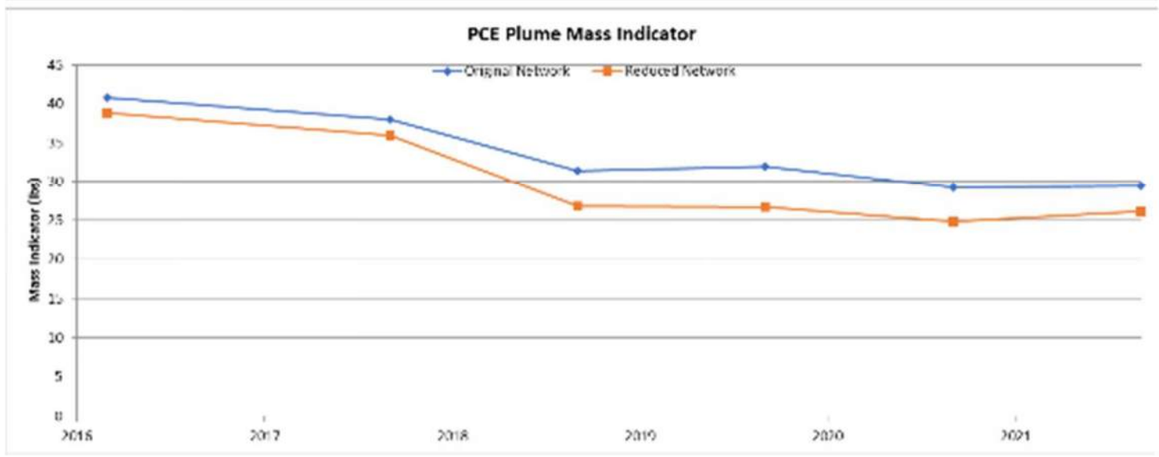
18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: Decreasing Trend 97% Confidence
R: Decreasing Trend 97% Confidence

Reduced Network Trends
MK: Decreasing Trend 93% Confidence
R: Decreasing Trend 96% Confidence

Average RPD: 8.6%

Correlation: 0.95



18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: Decreasing Trend 97% Confidence
R: Decreasing Trend 99% Confidence

Reduced Network Trends
MK: Decreasing Trend 99% Confidence
R: Decreasing Trend 98% Confidence

Average RPD: 12.0%

Correlation: 0.99

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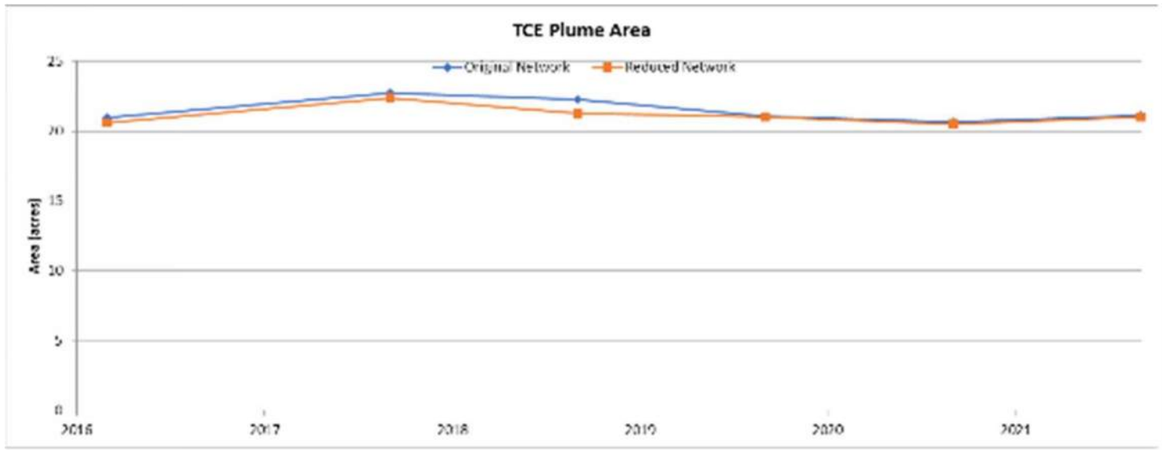


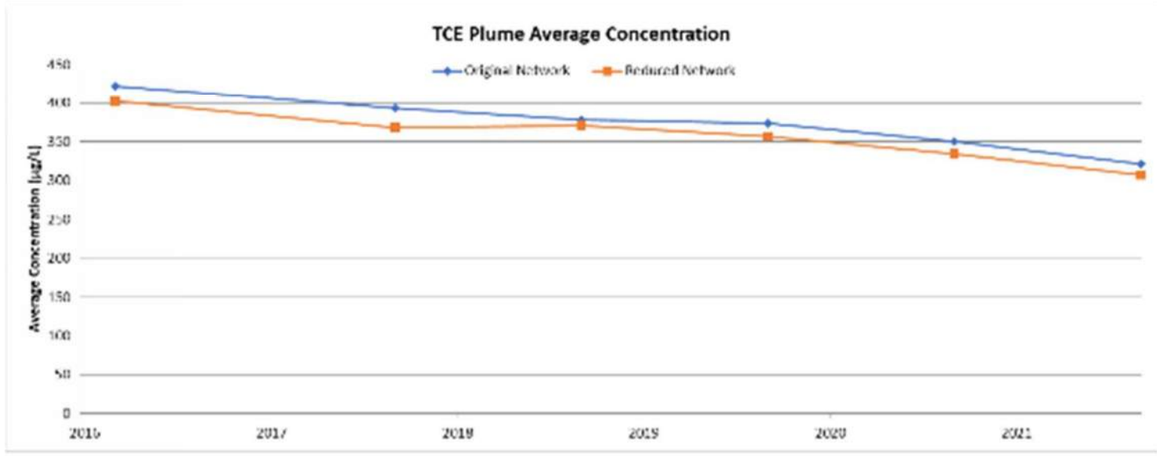
18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: No Trend 64% Confidence
R: No Trend 54% Confidence

Reduced Network Trends
MK: No Trend 64% Confidence
R: No Trend 34% Confidence

Average RPD: 1.6%

Correlation: 0.91



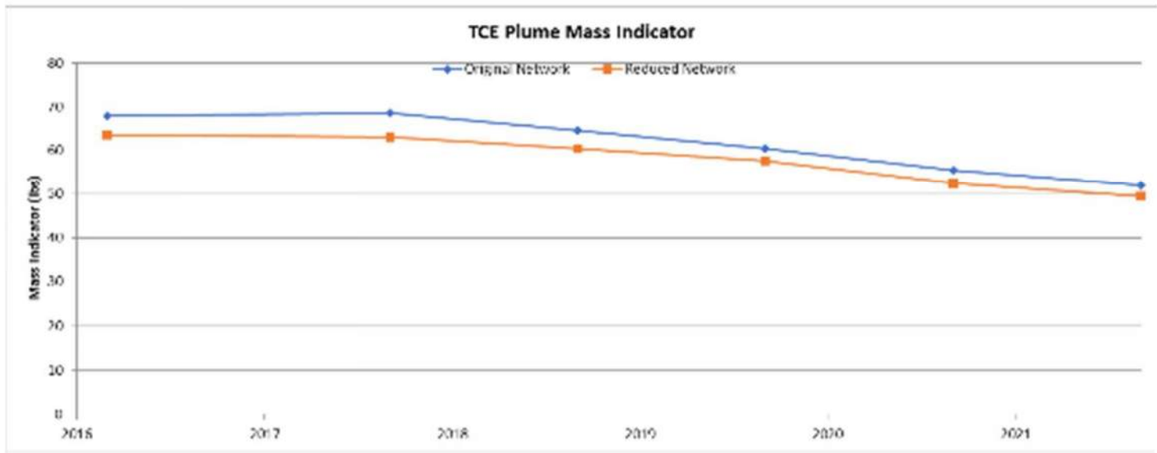
18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend >99% Confidence

Reduced Network Trends
MK: Decreasing Trend 99% Confidence
R: Decreasing Trend >99% Confidence

Average RPD: 4.5%

Correlation: 0.99



18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: Decreasing Trend 99% Confidence
R: Decreasing Trend >99% Confidence

Reduced Network Trends
MK: Decreasing Trend >99% Confidence
R: Decreasing Trend >99% Confidence

Average RPD: 6.1%

Correlation: 1.00

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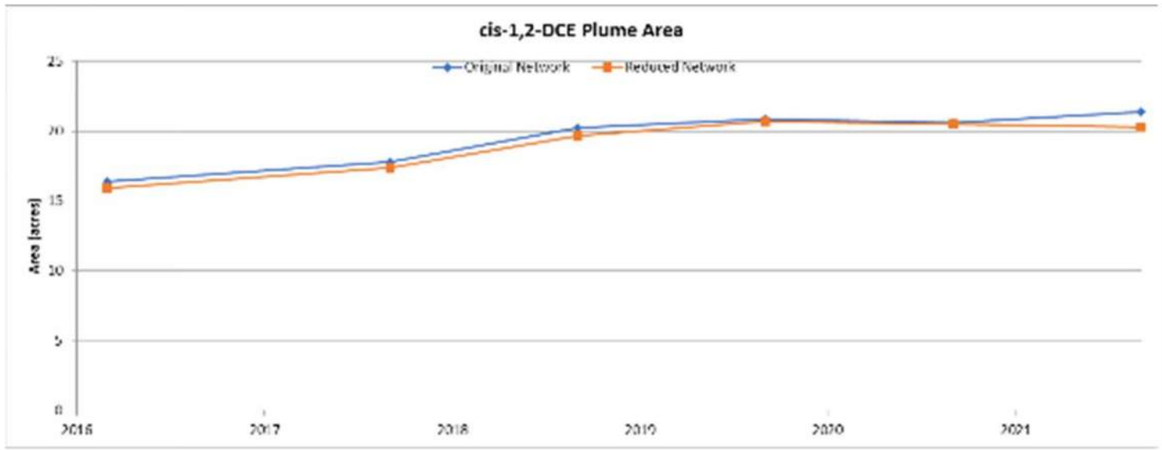


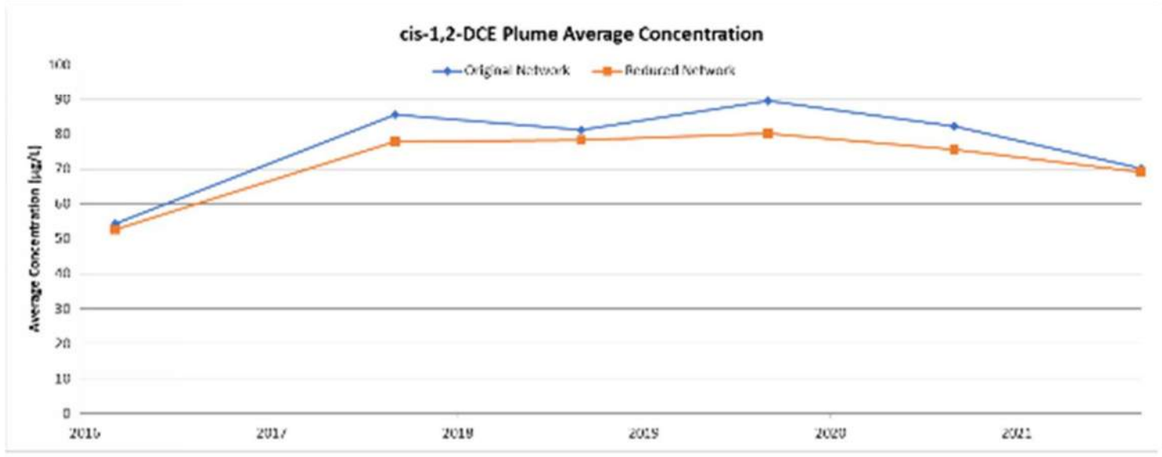
18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: Increasing Trend 99% Confidence
R: Increasing Trend 99% Confidence

Reduced Network Trends
MK: Increasing Trend 93% Confidence
R: Increasing Trend 98% Confidence

Average RPD: 2.5%

Correlation: 0.98



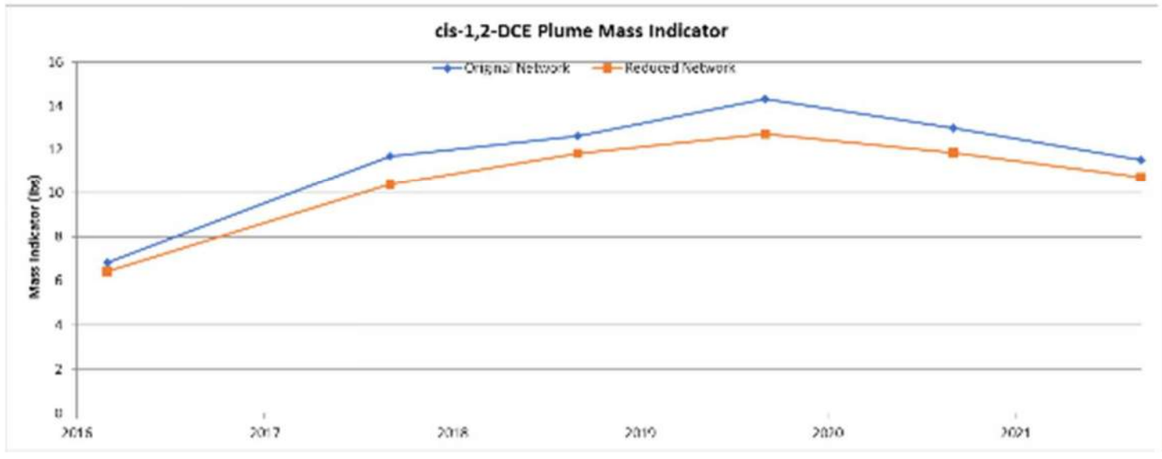
18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: No Trend 50% Confidence
R: No Trend 60% Confidence

Reduced Network Trends
MK: No Trend 50% Confidence
R: No Trend 68% Confidence

Average RPD: 6.2%

Correlation: 0.98



18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: No Trend 77% Confidence
R: No Trend 86% Confidence

Reduced Network Trends
MK: No Trend 86% Confidence
R: No Trend 88% Confidence

Average RPD: 8.7%

Correlation: 0.99

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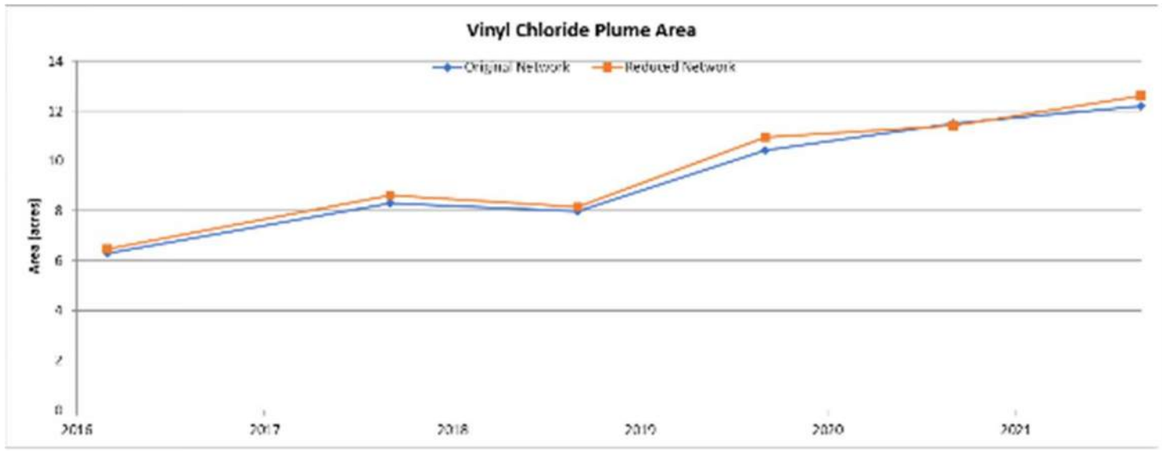


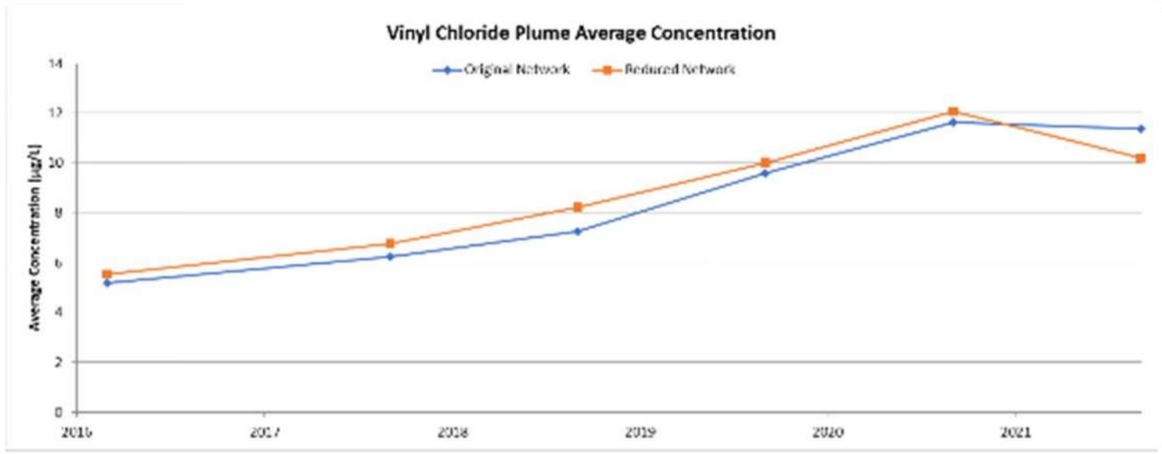
18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: Increasing Trend 99% Confidence
R: Increasing Trend >99% Confidence

Reduced Network Trends
MK: Increasing Trend 99% Confidence
R: Increasing Trend >99% Confidence

Average RPD: 2.9%

Correlation: 1.00



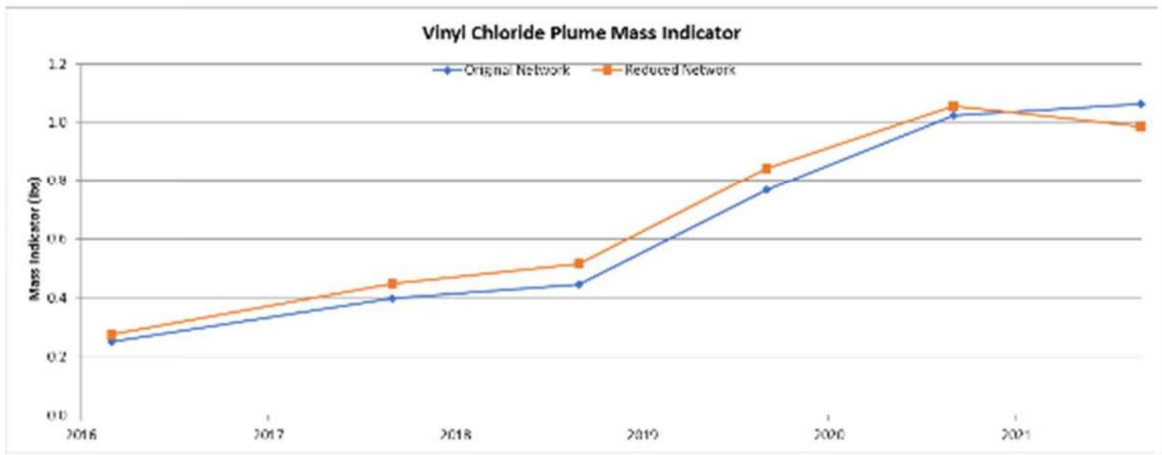
18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: Increasing Trend 99% Confidence
R: Increasing Trend >99% Confidence

Reduced Network Trends
MK: Increasing Trend 99% Confidence
R: Increasing Trend 99% Confidence

Average RPD: 7.6%

Correlation: 0.97



18 of 40 Wells Removed
45% Reduction

Original Network Trends
MK: Increasing Trend >99% Confidence
R: Increasing Trend >99% Confidence

Reduced Network Trends
MK: Increasing Trend 99% Confidence
R: Increasing Trend >99% Confidence

Average RPD: 9.2%

Correlation: 0.99

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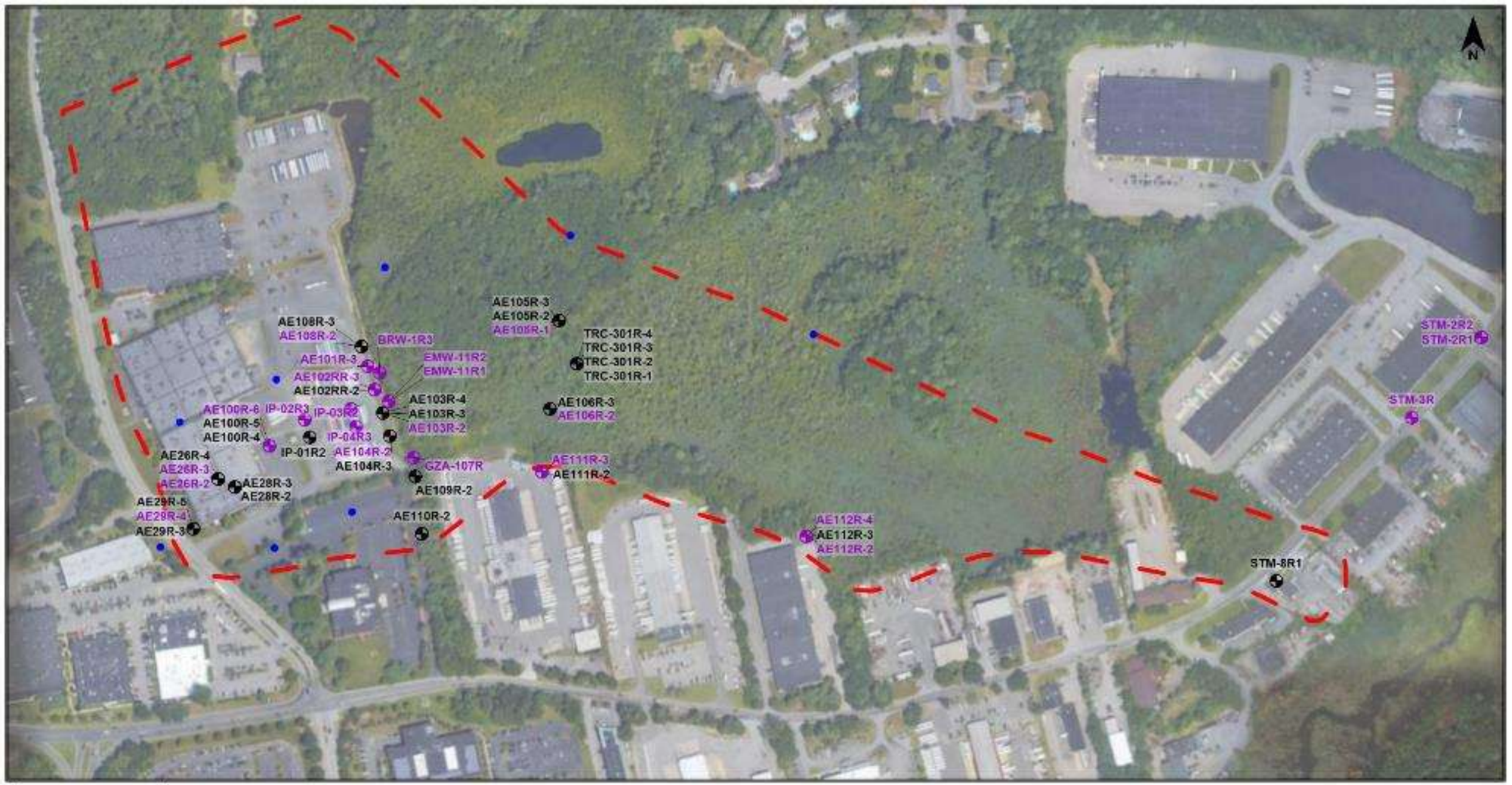
Lower Bedrock
Well Sufficiency Network



AE109R-1 Kept Monitor Well

STM-1R Removed Monitor Well

Control Point

MCP Site Boundary

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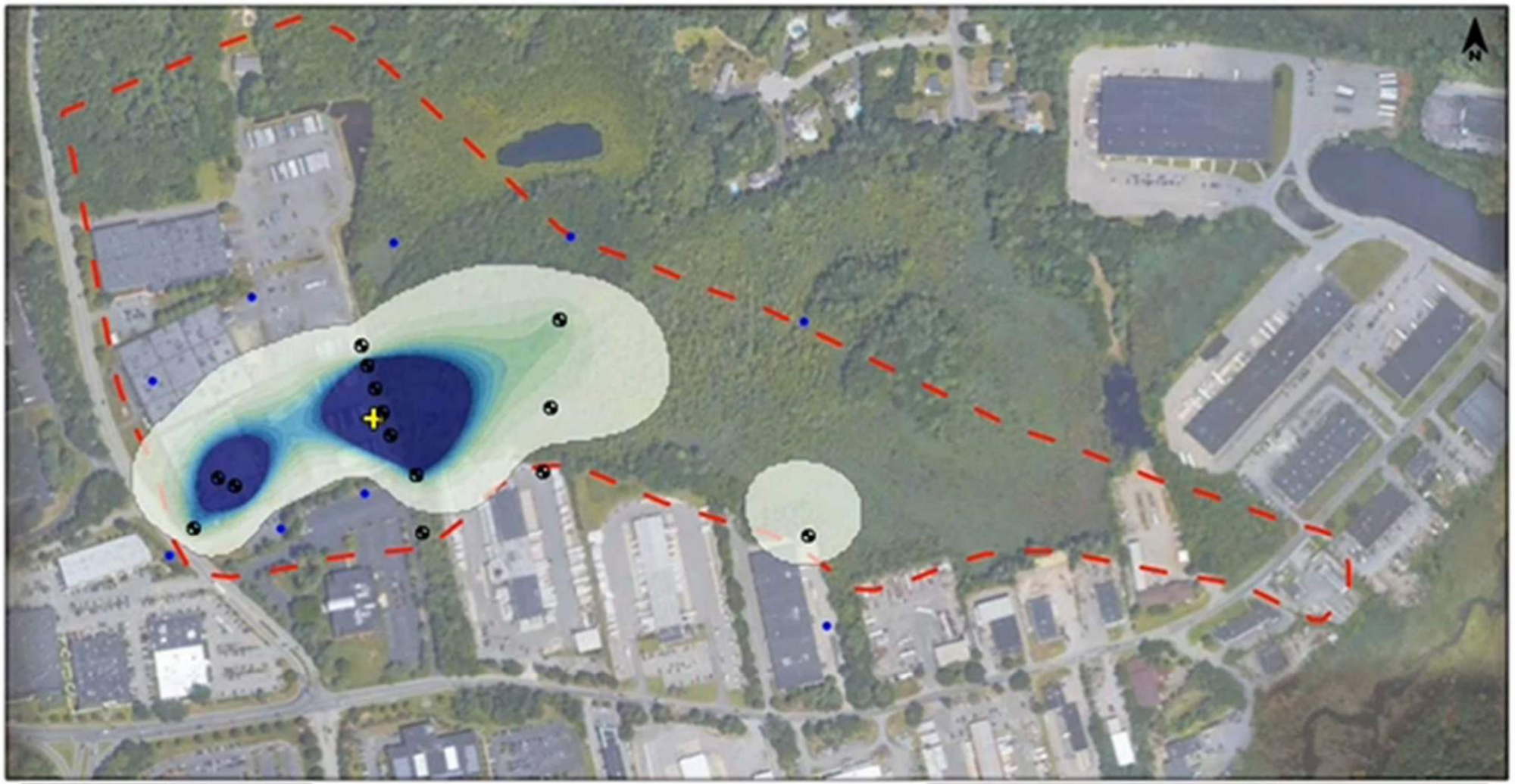

0 ft 450 ft 900 ft

Note: Reduced wells not shown

Chloroethenes
Lower Bedrock
Mar-2016

Concentration (nmol/L)

- 4,500
- 4,000
- 3,500
- 3,000
- 2,500
- 2,000
- 1,500
- 1,000
- 500
- 0

LEGEND

- MW-4 Monitor Well
- MW-5 Hanging Well
- Plume Center of Mass
- Control Point
- MCP Site Boundary

Plume Characteristics

Plume Area: **22.2 acres**
Plume Average Concentration: **4,622 nmol/L**
Plume Mass Indicator: **358 moles**

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Well Sufficiency Analysis US Pat. No. 10,304,223

Lower Bedrock Well Sufficiency Summary (18 Wells Removed)									
Constituent	RPD			Correlation			Trend Conclusion		
	Area	Conc	Mass	Area	Conc	Mass	Area	Conc	Mass
PCE	3.5%	8.6%	12.0%	1	0.95	0.99	Same	Same	Same
TCE	1.6%	4.5%	6.1%	0.91	0.99	1	Same	Same	Same
cis-1,2-DCE	2.5%	6.2%	8.7%	0.98	0.98	0.99	Same	Same	Same
Vinyl Chloride	2.9%	7.6%	9.2%	1	0.97	0.99	Same	Same	Same

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Lower Bedrock Well Sufficiency Analysis Summary					
AE101R-4	--	AE106R-4	Remove	AE110R-7	--
AE101R-5	Remove	AE106R-5	--	AE111R-4	Remove
AE101R-6	--	AE108R-4	Remove	AE111R-5	Remove
AE102RR-4	--	AE108R-5	--	AE111R-6	--
AE102RR-5	--	AE109R-3	Remove	AE111R-7	Remove
AE102RR-6	--	AE109R-4	--	AE112R-5	--
AE103R-5	--	AE109R-5	Remove	AE112R-6	Remove
AE103R-6	Remove	AE109R-6	--	AE112R-7	Remove
AE103R-7	--	AE109R-7	Remove	AE26R-5	--
AE104R-4	Remove	AE109R-8	--	AE28R-4	--
AE104R-5	--	AE110R-3	Remove	AE29R-6	--
AE104R-6	Remove	AE110R-4	Remove	BRW-1R4	Remove
AE105R-4	--	AE110R-5	--	EMW-11R3	Remove
AE105R-5	--	AE110R-6	Remove		

-- Kept in analysis

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Lower Bedrock Proposed Network		
AE101R-4	AE105R-4	AE110R-5
AE101R-6	AE105R-5	AE110R-7
AE102RR-4	AE106R-5	AE111R-6
AE102RR-5	AE108R-5	AE112R-5
AE102RR-6	AE109R-4	AE26R-5
AE103R-5	AE109R-6	AE28R-4
AE103R-7	AE109R-8	AE29R-6
AE104R-5		

Count 22

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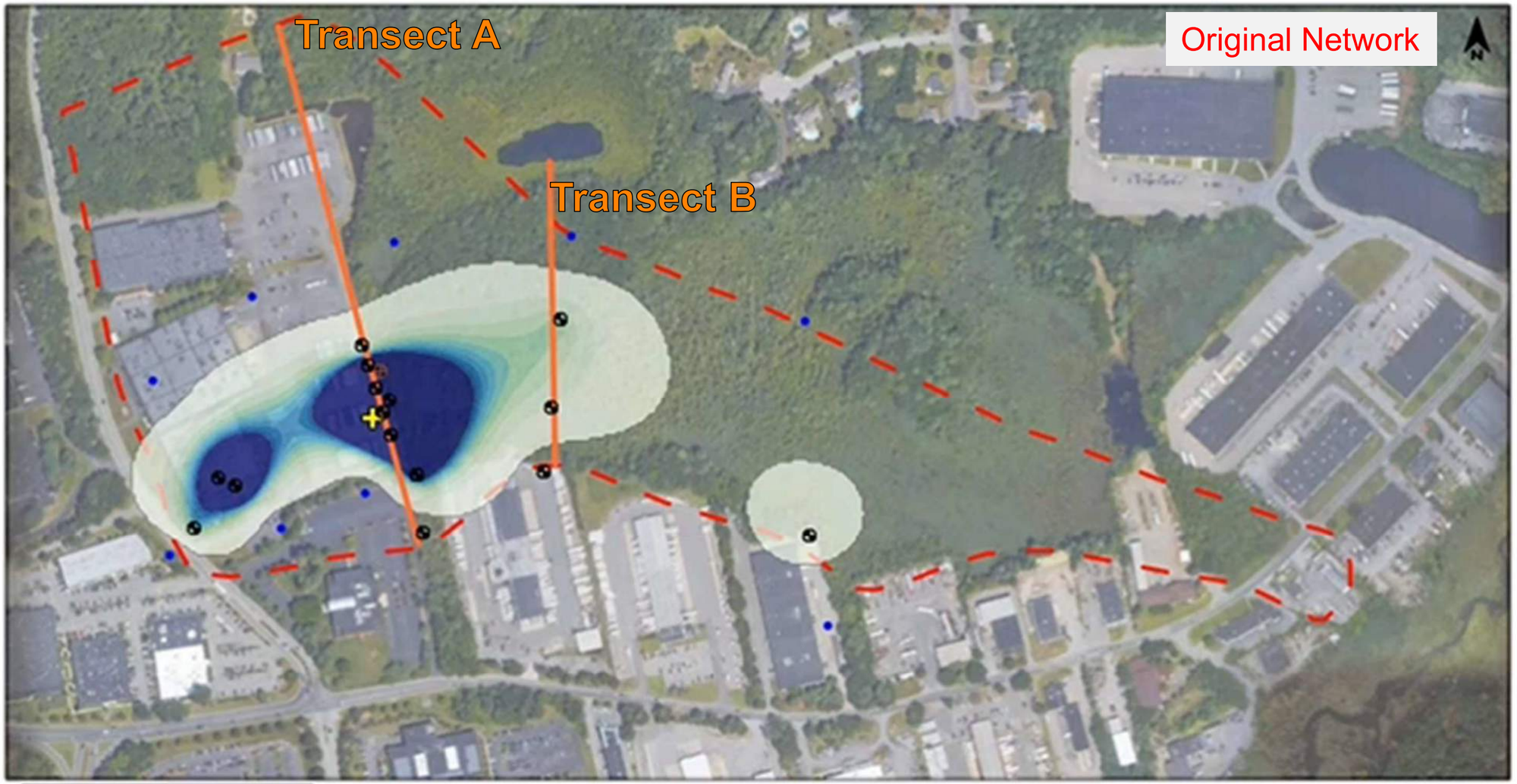

Chloroethenes
Lower Bedrock
Mar-2016

Concentration (nmol/L)

4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0

0 ft 450 ft 900 ft

LEGEND

MW-4 Monitoring Well

MW-5 Hanging Well

Plume Center of Mass

Control Point

MCP Site Boundary

Transect A

Average Concentration: **33,426 nmol/L**
Mass Flux: **13.3 mol/yr**

Transect B

Average Concentration: **782 nmol/L**
Mass Flux: **0.26 mol/yr**

This analysis requires fixed data points within a fixed area for the purposes of assessing relative changes of area, average concentration, and mass indicator over time. Therefore, any created isopleth maps are not intended to be a depiction or model of the actual plume but rather is meant to show conceptual behavior of the aforementioned metrics over time.

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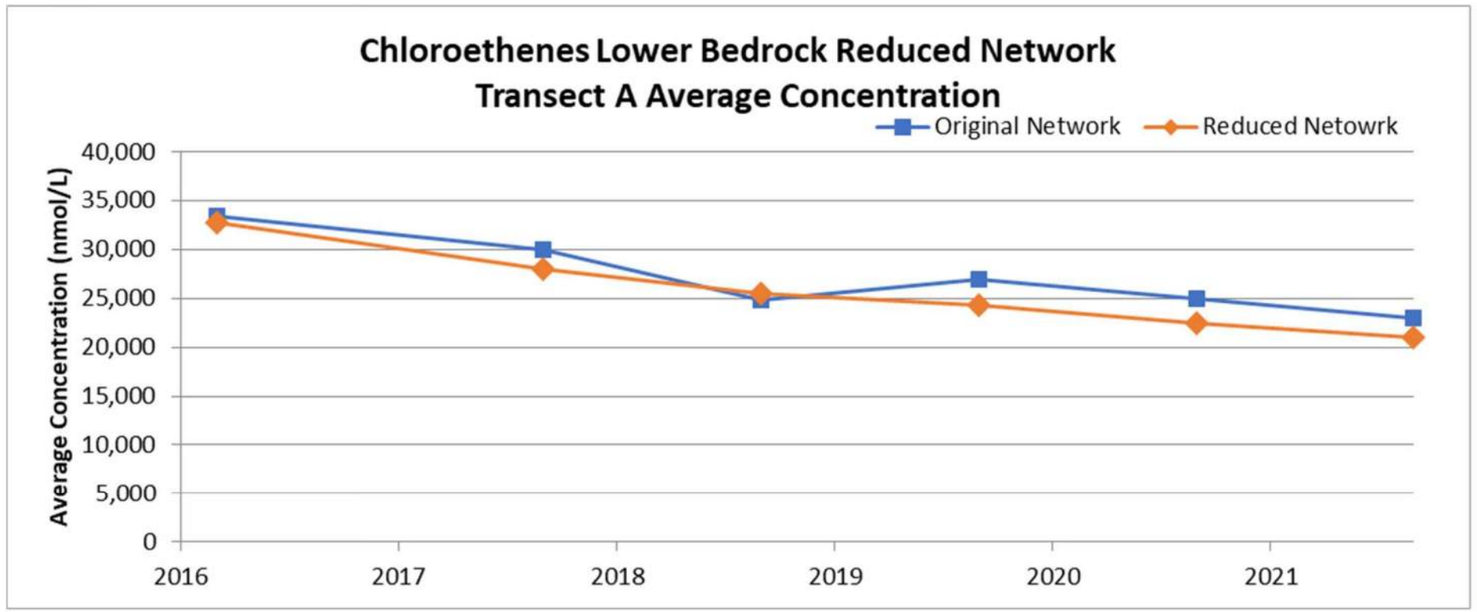
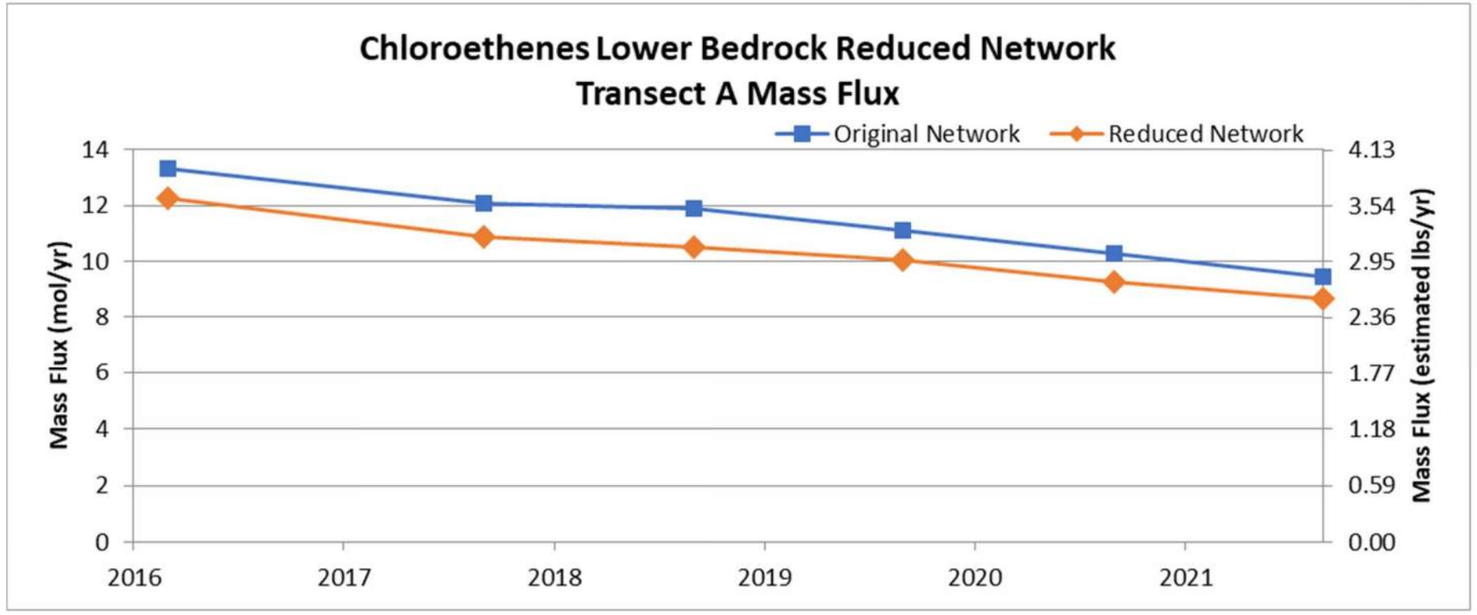


Average RPD: 6.8%

Correlation: 0.96



Average RPD: 10.0%

Correlation: 0.99

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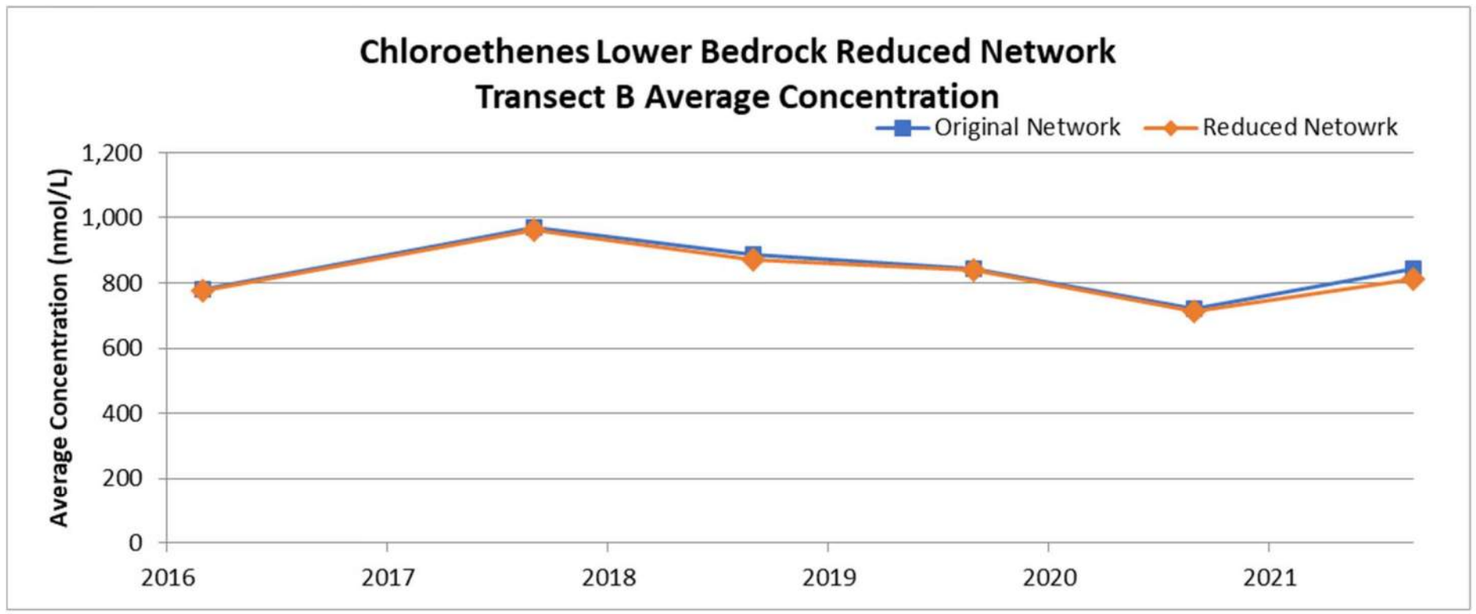
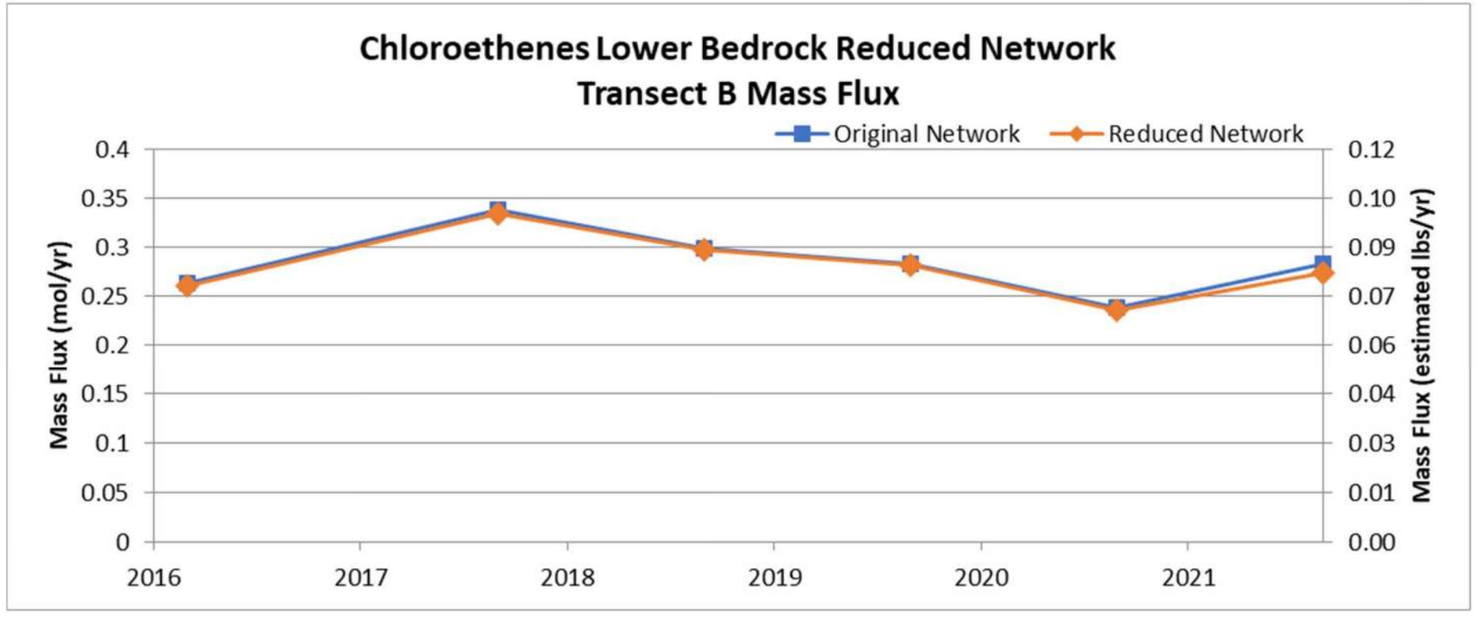


Average RPD: 1.4%

Correlation: 0.99



Average RPD: 1.1%

Correlation: 1.00

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APPENDIX I
MASS FLUX EVALUATION – 2021

Mass Flux Model Input and Assumptions

Introduction

The mass flux of tetrachloroethylene (PCE) and trichloroethylene (TCE) in overburden and bedrock was calculated across four transects with the Mass Flux Toolkit Version 2.0 (GSI Environmental Inc., 2011). These two compounds were chosen as they represent the majority of the contamination at the former GE facility. Transects consist of wells aligned relatively perpendicular to the apparent groundwater glow path identified by piezometric head observations. Evaluated transects and the wells included in each transect in overburden and bedrock are summarized in **Tables 1 and 2**.

Table 1: Transects and Locations Included in Transects Evaluated within Overburden

Transect	Well Designations
Building 1	AE-2I, AE-23S, AE-24, AE-25S/D, AE-26S/D
A	AE-101S/D, AE-102S/M/D, AE-103S/M/D, AE-104S/M/D, AE-109D
B	AE-105S/M/D,PS-1S/M/D, AE-106S/M/D
C	STM-8S/M/D

Table 2: Transects and Locations Included in Transects Evaluated within Bedrock

Transect	Well Designations
Building 1	TRC-201R, AE-2R, AE-23R, AE-25R, AE-26R, AE-27R, AE-28R, AE-29R
A	AE-101R, AE-102RR, AE-103R, AE-104R, AE-108R, AE-109R
B	AE-105R, AE-106R, TRC-301R
C	STM-8R

Equations and Inputs

The Mass Flux Toolkit calculates mass flux using the following equation:

$$w = C * A * q$$

where
w = mass flux
C = concentration of constituent
A = cross sectional area perpendicular to flow
q = specific discharge, calculated using:

$$q = K * i$$

where
K= hydraulic conductivity
i = hydraulic gradient

In applying the evaluation to overburden, the mass flux was calculated across a cross-sectional area with thickness defined from the water table to top of bedrock and width based on conservative limits of the 2021 PCE plume in lower bedrock for the transects except C. The limits of the 2021 PCE plume in lower bedrock were used as the basis for the widths of the Building 1 Transect, Transect A, and Transect B, as those limits are the widest compared with other 2021 plumes for PCE and TCE in bedrock. The width of Transect C was defined by the edges of the MCP site boundary. Additional inputs used for overburden were entered for each well screen as summarized in **Table 3**.

Table 3: Inputs Used To Calculate Mass Flux in Overburden

Variable	Input
C	- September 2021 sampling results for each well. - A value of half the detection limit was assigned to non detected concentrations. - The maximum value was used for duplicates. - A concentration value equal to zero was used when select wells were dropped from the routine groundwater monitoring program. The well was left as a placeholder in the Mass Flux Toolkit model for potential future evaluation if needed.
K	- Slug testing analysis results for each well screen.
i	- The following hydraulic gradients used for each transect based on August 2021 piezometric monitoring results . Building 1: 0.0016 feet (ft)/ft Transect A: 0.0004 ft/ft Transect B: 0.0004 ft/ft Transect C: 0.002 ft/ft

In applying the evaluation to bedrock, the mass flux was only calculated across cross-sectional areas that include port intervals. Since port intervals were installed in the most conductive zones of bedrock, it was assumed that most of the mass flux in bedrock would occur over the length of these intervals. For TRC-201R, which does not have port intervals, mass flux was calculated from the intervals of 109.5-115 ft below ground surface (bgs) and 40-44.5 ft bgs. These intervals represent fracture zones that yielded water during heat pulse flow meter (HPFM) testing. The deepest well ports used in each transect were from 140 to 146 ft bgs in the Building 1 Transect, from 245 to 250 ft bgs in Transect A, from 164 to 169 ft bgs in Transect B, and from 85 to 90 ft bgs in Transect C.

The width of the cross-sectional area used for bedrock was based on the limits of the 2021 PCE plume in lower bedrock for all transects except C. The limits of the 2021 PCE plume in lower bedrock were used as the basis for the widths of the Building 1 Transect, Transect A, and Transect B, as the limits are the widest compared with other areas for PCE and TCE in bedrock. The width of Transect C was defined by the edges of the MCP site boundary. Additional inputs used for bedrock were entered for each port interval as summarized in **Table 4**.

Table 4: Inputs Used To Calculate Mass Flux in Bedrock

Variable	Input
C	- September 2021 sampling results for each port interval. - A value of half the detection limit was assigned to non detected concentrations. - The maximum value was used for duplicates. - A concentration value equal to zero was used when select wells were dropped from the routine groundwater monitoring program. The well was left as a placeholder in the Mass Flux Toolkit model for potential future evaluation if needed.
K	- Average result calculated from transmissivity measured every foot by FLUTe across the depth interval for each port interval. For port intervals without FLUTe measurements, the following hydraulic conductivity was assigned: AE-101R-1: hydraulic conductivity from AE-101R-2 AE-101R-6: hydraulic conductivity from AE-101R-5 AE-102RR-1: hydraulic conductivity from AE-102RR-2 STM-8R: hydraulic conductivity from STM-8R-1 AE-25R: 0.5 ft/day AE-23R: 0.5 ft/day AE-2R: 0.5 ft/day TRC-201R: 0.5 ft/day
i	- Uniform hydraulic gradient of 0.001 ft/day used for all transects based on average gradients measured site-wide based on multiple rounds over a three year period.

Transect Gridding and Data Interpolation

Following data input, transect planes were divided into grids within the Mass Flux Toolkit by specifying the number of rows and columns of the grid. The number of rows was set to 10 and 100 for overburden and bedrock, respectively. The number of rows was chosen so that resulting grids would include depth intervals similar to the start and end depths of well screens or port intervals. The number of columns was set to the number of wells comprising a transect for both overburden and bedrock.

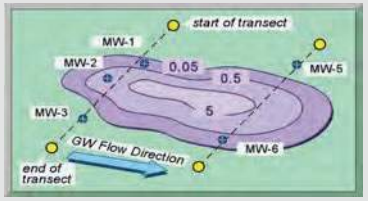
In order to calculate mass flux for each grid in overburden, concentrations and hydraulic conductivities from screened intervals were used for grids overlapping the start and end depths of screens. For grids above, between, or below screen intervals in overburden, logarithmic interpolation was used to assign concentrations and hydraulic conductivities.

For the calculations of mass flux in bedrock, concentrations and hydraulic conductivities were not interpolated for grids above, between, or below port intervals. A “user specified value” equal to zero was used. Mass flux in bedrock was only calculated across cross-sectional areas that include port intervals.

Input Data and Grid

Data Input Instructions
Enter value directly.
Value calculated by model
(Don't enter any data)

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Overburden Aquifer



4. CHOOSE TRANSECT Transect 1 (Building 1)

5. CHOOSE TIME PERIOD 1

6. ENTER TRANSECT DATA

6.1 Distance of Transect 1 from Source → 0 *(ft)*

6.2 ○ Darcy Velocity ◉ Hydraulic Conductivity

6.6 ◉ Sampling Interval ○ Mid Point of Sampling Interval

6.3 Hydraulic Conductivity Units: ft/d

6.4 Uniform Hydraulic Conductivity?: No

6.5 Uniform Hydraulic Gradient?: Yes →

Hydraulic Gradient: 1.60E-03 *(ft/ft)*

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs) Top	Sampling Interval (ft bgs) Bottom	Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L) Constituent A PCE	Concentration (ug/L) Constituent B TCE
3	AE-26S/D	213	25	30	8	45	13	22	7.5
4	AE-26S/D	213	35	40	8	45	10.1	0	0
5	AE-25S/D	218	20	30	8	39.5	12	0	0
6	AE-25S/D	218	34.5	39.5	8	39.5	12	0	0
7	AE-23S	288	10	20	8	33.8	12	260	17
8	AE-24	353	7.25	18	8	30.1	12	350	1
9	AE-2I	388	8	18	8	18	12	0	0
10									
11									
12									
13									
14									
15									
16									
17									

7. CHOOSE GRID (OPTIONAL)

	Current Grid		Refine Grid By	Refined Grid
Number of rows	10	→	1	10
Number of columns	7		1	7

8. SELECT CONSTITUENT FOR CALCULATIONS

◉ PCE ○ TCE

Next Step: Continue Data Input

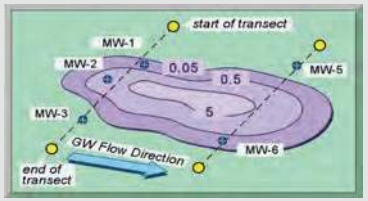
Back to Transect Calculator Screen | *Import MW Data* | *Export MW Data* | *See Conc/Flux Grids*

Clear Screen | *Paste Example* | *Restore Table Formatting* | Print | *HELP*

Input Data and Grid

Data Input Instructions
Enter value directly.
Value calculated by model
(Don't enter any data)

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Overburden Aquifer



4. CHOOSE TRANSECT Transect 2 (Transect A)

5. CHOOSE TIME PERIOD 1

6. ENTER TRANSECT DATA

6.1 Distance of Transect 2 from Source → 600 *(ft)*

6.2 ○ Darcy Velocity ◉ Hydraulic Conductivity

6.6 ◉ Sampling Interval ○ Mid Point of Sampling Interval

6.3 Hydraulic Conductivity Units: ft/d

6.4 Uniform Hydraulic Conductivity?: No

6.5 Uniform Hydraulic Gradient?: Yes →

Hydraulic Gradient: 4.00E-04 *(ft/ft)*

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs) Top	Sampling Interval (ft bgs) Bottom	Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L) Constituent A PCE	Concentration (ug/L) Constituent B TCE
3	AE-101S/D	124	10	15	3	26.5	20.2	0	0
4	AE-101S/D	124	20	25	3	26.5	16.9	1.25	25
5	AE-102SMD	199	13	18	3	40.6	40.4	0	0
6	AE-102SMD	199	23	28	3	40.6	6.1	10	23
7	AE-102SMD	199	33	38	3	40.6	1.5	0	0
8	AE-103SMD	274	15	20	3	40.6	1.3	0	0
9	AE-103SMD	274	25	30	3	40.6	2.9	0	0
10	AE-103SMD	274	35	40	3	40.6	3.3	47	77
11	AE-104SMD	349	15	20	3	40.6	54.7	0	0
12	AE-104SMD	349	25	30	3	40.6	153	0	0
13	AE-104SMD	349	35	40	3	40.6	151	0.85	0.9
14	AE-109D	499	18	23	5	50	18.7	0	0
15									
16									
17									

7. CHOOSE GRID (OPTIONAL)

	Current Grid		Refine Grid By	Refined Grid
Number of rows	10	→	1	10
Number of columns	7		1	7

8. SELECT CONSTITUENT FOR CALCULATIONS

◉ PCE ○ TCE

Next Step: Continue Data Input

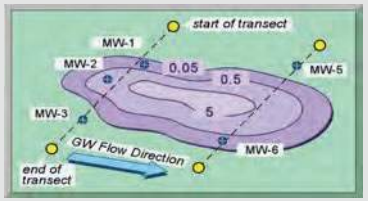
Back to Transect Calculator Screen | *Import MW Data* | *Export MW Data* | *See Conc/Flux Grids*

Clear Screen | *Paste Example* | *Restore Table Formatting* | Print | *HELP*

Input Data and Grid

Data Input Instructions
Enter value directly.
Value calculated by model
(Don't enter any data)

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Overburden Aquifer



4. CHOOSE TRANSECT Transect 3 (Transect B)

5. CHOOSE TIME PERIOD 1

6. ENTER TRANSECT DATA

6.1 Distance of Transect 3 from Source → 1100 *(ft)*

6.2 ○ Darcy Velocity ◉ Hydraulic Conductivity

6.6 ◉ Sampling Interval ○ Mid Point of Sampling Interval

6.3 Hydraulic Conductivity Units: ft/d

6.4 Uniform Hydraulic Conductivity?: No

6.5 Uniform Hydraulic Gradient?: Yes →

Hydraulic Gradient: 4.00E-04 *(ft/ft)*

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs) Top	Sampling Interval (ft bgs) Bottom	Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L) Constituent A PCE	Concentration (ug/L) Constituent B TCE
3	AE-105SMD	128	35	40	1	80	14.2	0	0
4	AE-105SMD	128	52	57	1	80	112	0	0
5	AE-105SMD	128	73	78	1	80	213	0.5	0.5
6	PS-1SMD	165.5	12	17	1	56	15	0	0
7	PS-1SMD	165.5	34.25	39.25	1	56	120	3.6	4.9
8	PS-1SMD	165.5	49.25	54.25	1	56	220	0.5	6.3
9	AE-106SMD	435.5	12	17	1	40	3.8	0	0
10	AE-106SMD	435.5	22.5	27.5	1	40	15.5	26	35
11	AE-106SMD	435.5	34	39	1	40	14.6	0	0
12									
13									
14									
15									
16									
17									

7. CHOOSE GRID (OPTIONAL)

	Current Grid	Refine Grid By	Refined Grid
Number of rows	10	1	10
Number of columns	7	1	7

8. SELECT CONSTITUENT FOR CALCULATIONS

◉ PCE ○ TCE

Next Step: Continue Data Input

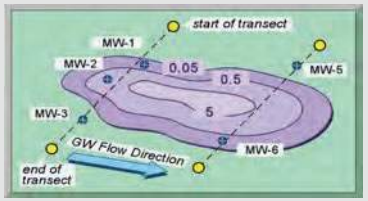
Back to Transect Calculator Screen | *Import MW Data* | *Export MW Data* | *See Conc/Flux Grids*

Clear Screen | *Paste Example* | *Restore Table Formatting* | Print | *HELP*

Input Data and Grid

Data Input Instructions
Enter value directly.
Value calculated by model
(Don't enter any data)

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Overburden Aquifer



4. CHOOSE TRANSECT Transect 4 (Transect C)

5. CHOOSE TIME PERIOD 1

6. ENTER TRANSECT DATA

6.1 Distance of Transect 4 from Source → 3500 *(ft)*

6.2 ○ Darcy Velocity ◉ Hydraulic Conductivity

6.6 ◉ Sampling Interval ○ Mid Point of Sampling Interval

6.3 Hydraulic Conductivity Units: ft/d

6.4 Uniform Hydraulic Conductivity?: No

6.5 Uniform Hydraulic Gradient?: Yes →

Hydraulic Gradient: 2.00E-03 *(ft/ft)*

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs) Top	Sampling Interval (ft bgs) Bottom	Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L) Constituent A PCE	Concentration (ug/L) Constituent B TCE
3	STM-8SMD	80	1	11	1	40	0.142	0	0
4	STM-8SMD	80	19.5	24.5	1	40	151	0	0
5	STM-8SMD	80	34.7	39.7	1	40	66.3	0.5	0.5
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									

7. CHOOSE GRID (OPTIONAL)

	Current Grid		Refine Grid By	Refined Grid
Number of rows	10	→	1	10
Number of columns	5		1	5

8. SELECT CONSTITUENT FOR CALCULATIONS

◉ PCE ○ TCE

Next Step: Continue Data Input

Back to Transect Calculator Screen | *Import MW Data* | *Export MW Data* | *See Conc/Flux Grids*

Clear Screen | *Paste Example* | *Restore Table Formatting* | Print | *HELP*

Grid Completion: Concentration

Building 1 Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: None Required

Step 10: Interpolate Conc Horizontally		Export Conc Grid	Import Conc Grid		Next Step: Interpolate Hydraulic Conductivity Grid
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect	AE-26S/D	AE-25S/D	AE-23S	AE-24	AE-2I	End of Transect
	0.0	213.0	218.0	288.0	353.0	388.0	450.0
8.0	0	2.20E+01	0.00E+00	2.60E+02	3.50E+02	0.00E+00	0
11.7	0	2.20E+01	0.00E+00	2.60E+02	3.50E+02	0.00E+00	0
15.4	0	2.20E+01	0.00E+00	2.60E+02	3.50E+02	0.00E+00	0
19.1	0	2.20E+01	0.00E+00	2.60E+02	3.50E+02		
22.8	0	2.20E+01	0.00E+00	2.60E+02	3.50E+02		
26.5	0	2.20E+01	0.00E+00	2.60E+02	3.50E+02		
30.2	0	4.69E-03	0.00E+00	2.60E+02			
33.9	0	0.00E+00	0.00E+00				
37.6	0	0.00E+00	0.00E+00				
41.3	0	0.00E+00					
45.0							

Grid Completion: Concentration

Transect A Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | Next Step: Interpolate Hydraulic Conductivity Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-101S/D 124.0	AE-102SMD 199.0	AE-103SMD 274.0	AE-104SMD 349.0	AE-109D 499.0	End of Transect 610.0
3.0	0	*0.00E+00*	*0.00E+00*	*0.00E+00*	*0.00E+00*		
7.7	0	**0.00E+00**	*0.00E+00*	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
12.4	0	**0.00E+00**	**0.00E+00**	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
17.1	0	*1.12E-03*	*3.16E-03*	**0.00E+00**	**0.00E+00**	**0.00E+00**	0
21.8	0	**1.25E+00**	**1.00E+01**	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
26.5			*3.16E-03*	**0.00E+00**	**0.00E+00**	*0.00E+00*	0
31.2			**0.00E+00**	*6.86E-03*	*9.22E-04*	*0.00E+00*	0
35.9			*0.00E+00*	**4.70E+01**	**8.50E-01**	*0.00E+00*	0
40.6						*0.00E+00*	0
45.3						*0.00E+00*	0
50.0							

Grid Completion: Concentration

Transect B Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate Conc Horizontally		Export Conc Grid	Import Conc Grid		Next Step: Interpolate Hydraulic Conductivity Grid
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-105SMD 128.0	PS-1SMD 165.5	AE-106SMD 435.5	End of Transect 595.0
1.0	0	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
8.9	0	*0.00E+00*	**0.00E+00**	**0.00E+00**	0
16.8	0	*0.00E+00*	*1.53E-04*	*5.10E-03*	0
24.7	0	*0.00E+00*	*2.35E-02*	**2.60E+01**	0
32.6	0	**0.00E+00**	**3.60E+00**	**0.00E+00**	0
40.5	0	*0.00E+00*	*1.34E+00*		
48.4	0	**0.00E+00**	**5.00E-01**		
56.3	0	*7.94E-05*			
64.2	0	*6.30E-03*			
72.1	0	**5.00E-01**			
80.0					

Grid Completion: Concentration

Transect C Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | Next Step: Interpolate Hydraulic Conductivity Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8SMD 80.0	End of Transect 160.0
1.0	0	0.00E+00	0
4.9	0	0.00E+00	0
8.8	0	0.00E+00	0
12.7	0	*0.00E+00*	0
16.6	0	*0.00E+00*	0
20.5	0	0.00E+00	0
24.4	0	*2.66E-05*	0
28.3	0	*7.07E-04*	0
32.2	0	*1.88E-02*	0
36.1	0	5.00E-01	0
40.0			

Grid Completion: Hydraulic Conductivity

Building 1 Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate K Horizontally		Export K Grid	Import K Grid		Next Step: View Hydraulic Gradient Grid
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-26S/D 213.0	AE-25S/D 218.0	AE-23S 288.0	AE-24 353.0	AE-2I 388.0	End of Transect 450.0
8.0	1.30E+01	*1.30E+01*	*1.20E+01*	*1.20E+01*	1.20E+01	1.20E+01	1.20E+01
11.7	1.30E+01	*1.30E+01*	*1.20E+01*	1.20E+01	1.20E+01	1.20E+01	1.20E+01
15.4	1.30E+01	*1.30E+01*	*1.20E+01*	1.20E+01	1.20E+01	1.20E+01	1.20E+01
19.1	1.30E+01	*1.30E+01*	1.20E+01	*1.20E+01*	*1.20E+01*		
22.8	1.30E+01	*1.30E+01*	1.20E+01	*1.20E+01*	*1.20E+01*		
26.5	1.30E+01	1.30E+01	1.20E+01	*1.20E+01*	*1.20E+01*		
30.2	1.30E+01	*1.15E+01*	*1.20E+01*	*1.20E+01*			
33.9	1.30E+01	1.01E+01	1.20E+01				
37.6	1.30E+01	1.01E+01	1.20E+01				
41.3	1.30E+01	*1.01E+01*					
45.0							

Grid Completion: Hydraulic Conductivity

Transect A Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | Next Step: View Hydraulic Gradient Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80

Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-101S/D 124.0	AE-102SMD 199.0	AE-103SMD 274.0	AE-104SMD 349.0	AE-109D 499.0	End of Transect 610.0
3.0	**2.02E+01**	*2.02E+01*	*4.04E+01*	*1.30E+00*	*5.47E+01*		
7.7	**2.02E+01**	**2.02E+01**	*4.04E+01*	*1.30E+00*	*5.47E+01*	*1.87E+01*	**1.87E+01**
12.4	**2.02E+01**	**2.02E+01**	**4.04E+01**	*1.30E+00*	*5.47E+01*	*1.87E+01*	**1.87E+01**
17.1	**2.02E+01**	*1.85E+01*	*1.57E+01*	**1.30E+00**	**5.47E+01**	**1.87E+01**	**1.87E+01**
21.8	**2.02E+01**	**1.69E+01**	**6.10E+00**	*1.94E+00*	*9.15E+01*	*1.87E+01*	**1.87E+01**
26.5			*3.02E+00*	**2.90E+00**	**1.53E+02**	*1.87E+01*	**1.87E+01**
31.2			**1.50E+00**	*3.09E+00*	*1.52E+02*	*1.87E+01*	**1.87E+01**
35.9			*1.50E+00*	**3.30E+00**	**1.51E+02**	*1.87E+01*	**1.87E+01**
40.6						*1.87E+01*	**1.87E+01**
45.3						*1.87E+01*	**1.87E+01**
50.0							

Grid Completion: Hydraulic Conductivity

Transect B Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | Next Step: View Hydraulic Gradient Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80

Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-105SMD 128.0	PS-1SMD 165.5	AE-106SMD 435.5	End of Transect 595.0
1.0	1.42E+01	*1.42E+01*	*1.50E+01*	*3.80E+00*	1.46E+01
8.9	1.42E+01	*1.42E+01*	1.50E+01	3.80E+00	1.46E+01
16.8	1.42E+01	*1.42E+01*	*3.00E+01*	*7.67E+00*	1.46E+01
24.7	1.42E+01	*1.42E+01*	*6.00E+01*	1.55E+01	1.46E+01
32.6	1.42E+01	1.42E+01	1.20E+02	1.46E+01	1.46E+01
40.5	1.42E+01	*3.99E+01*	*1.62E+02*		
48.4	1.42E+01	1.12E+02	2.20E+02		
56.3	1.42E+01	*1.39E+02*			
64.2	1.42E+01	*1.72E+02*			
72.1	1.42E+01	2.13E+02			
80.0					

Grid Completion: Hydraulic Conductivity

Transect C Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | Next Step: View Hydraulic Gradient Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80

Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs

	Start of Transect 0.0	STM-8SMD 80.0	End of Transect 160.0
1.0	1.42E-01	1.42E-01	6.63E+01
4.9	1.42E-01	1.42E-01	6.63E+01
8.8	1.42E-01	1.42E-01	6.63E+01
12.7	1.42E-01	*1.45E+00*	6.63E+01
16.6	1.42E-01	*1.48E+01*	6.63E+01
20.5	1.42E-01	1.51E+02	6.63E+01
24.4	1.42E-01	*1.23E+02*	6.63E+01
28.3	1.42E-01	*1.00E+02*	6.63E+01
32.2	1.42E-01	*8.14E+01*	6.63E+01
36.1	1.42E-01	6.63E+01	6.63E+01
40.0			

Grid Completion: Hydraulic Gradient

Building 1 Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid | Next Step: Calculate Mass Flux

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs

Start of Transect	AE-26S/D	AE-25S/D	AE-23S	AE-24	AE-2I	End of Transect
0.0	*213.0*	*218.0*	*288.0*	*353.0*	*388.0*	*450.0*
8.0	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03
11.7	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03
15.4	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03
19.1	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03		
22.8	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03		
26.5	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03		
30.2	1.60E-03	1.60E-03	1.60E-03	1.60E-03			
33.9	1.60E-03	1.60E-03	1.60E-03				
37.6	1.60E-03	1.60E-03	1.60E-03				
41.3	1.60E-03	1.60E-03					
45.0							

Grid Completion: Hydraulic Gradient

Transect A Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid | Next Step: Calculate Mass Flux

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-101S/D 124.0	AE-102SMD 199.0	AE-103SMD 274.0	AE-104SMD 349.0	AE-109D 499.0	End of Transect 610.0
3.0	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04		
7.7	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
12.4	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
17.1	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
21.8	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
26.5			4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
31.2			4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
35.9			4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
40.6						4.00E-04	4.00E-04
45.3						4.00E-04	4.00E-04
50.0							

Grid Completion: Hydraulic Gradient

Transect B Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Next Step: Calculate Mass Flux

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

[ ] — Top/Bottom of plume. (Don't enter any data).

Transect B Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-105SMD 128.0	PS-1SMD 165.5	AE-106SMD 435.5	End of Transect 595.0
1.0	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
8.9	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
16.8	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
24.7	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
32.6	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
40.5	4.00E-04	4.00E-04	4.00E-04		
48.4	4.00E-04	4.00E-04	4.00E-04		
56.3	4.00E-04	4.00E-04			
64.2	4.00E-04	4.00E-04			
72.1	4.00E-04	4.00E-04			
80.0					

Grid Completion: Hydraulic Gradient

Transect C Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally		Export i Grid	Import i Grid		Next Step: Calculate Mass Flux
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80

Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8SMD 80.0	End of Transect 160.0
1.0	2.00E-03	2.00E-03	2.00E-03
4.9	2.00E-03	2.00E-03	2.00E-03
8.8	2.00E-03	2.00E-03	2.00E-03
12.7	2.00E-03	2.00E-03	2.00E-03
16.6	2.00E-03	2.00E-03	2.00E-03
20.5	2.00E-03	2.00E-03	2.00E-03
24.4	2.00E-03	2.00E-03	2.00E-03
28.3	2.00E-03	2.00E-03	2.00E-03
32.2	2.00E-03	2.00E-03	2.00E-03
36.1	2.00E-03	2.00E-03	2.00E-03
40.0			

Mass Flux Result

TOTAL MASS FLUX 4.90E-01 (g/day) 1.79E-01 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 1

SELECT TIME PERIOD TO VIEW: 1

Building 1 PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-26S/D 213.0	AE-25S/D 218.0	AE-23S 288.0	AE-24 353.0	AE-2I 388.0	End of Transect 450.0
8.0	**0**	*5.23E-03*	*0.00E+00*	*3.53E-02*	**3.52E-02**	**0.00E+00**	**0**
11.7	**0**	*5.23E-03*	*0.00E+00*	**3.53E-02**	**3.52E-02**	**0.00E+00**	**0**
15.4	**0**	*5.23E-03*	*0.00E+00*	**3.53E-02**	**3.52E-02**	**0.00E+00**	**0**
19.1	**0**	*5.23E-03*	**0.00E+00**	*3.53E-02*	*3.52E-02*		
22.8	**0**	*5.23E-03*	**0.00E+00**	*3.53E-02*	*3.52E-02*		
26.5	**0**	**5.23E-03**	**0.00E+00**	*3.53E-02*	*3.52E-02*		
30.2	**0**	*9.83E-07*	*0.00E+00*	*3.53E-02*			
33.9	**0**	**0.00E+00**	**0.00E+00**				
37.6	**0**	**0.00E+00**	**0.00E+00**				
41.3	**0**	*0.00E+00*					
45.0							

Mass Flux Result

TOTAL MASS FLUX 1.75E-03 (g/day) 6.37E-04 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 2

SELECT TIME PERIOD TO VIEW: 1

Transect A PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-101S/D 124.0	AE-102SMD 199.0	AE-103SMD 274.0	AE-104SMD 349.0	AE-109D 499.0	End of Transect 610.0
3.0	0	*0.00E+00*	*0.00E+00*	*0.00E+00*	*0.00E+00*		
7.7	0	**0.00E+00**	*0.00E+00*	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
12.4	0	**0.00E+00**	**0.00E+00**	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
17.1	0	*1.09E-07*	*1.98E-07*	**0.00E+00**	**0.00E+00**	**0.00E+00**	0
21.8	0	**1.12E-04**	**2.44E-04**	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
26.5			*3.82E-08*	**0.00E+00**	**0.00E+00**	*0.00E+00*	0
31.2			**0.00E+00**	*8.47E-08*	*8.40E-07*	*0.00E+00*	0
35.9			*0.00E+00*	**6.20E-04**	**7.69E-04**	*0.00E+00*	0
40.6						*0.00E+00*	0
45.3						*0.00E+00*	0
50.0							

Mass Flux Result

TOTAL MASS FLUX 1.90E-02 (g/day) 6.94E-03 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 3

SELECT TIME PERIOD TO VIEW: 1

Transect B PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-105SMD 128.0	PS-1SMD 165.5	AE-106SMD 435.5	End of Transect 595.0
1.0	0	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
8.9	0	*0.00E+00*	**0.00E+00**	**0.00E+00**	0
16.8	0	*0.00E+00*	*6.33E-08*	*7.52E-07*	0
24.7	0	*0.00E+00*	*1.94E-05*	**7.75E-03**	0
32.6	0	**0.00E+00**	**5.95E-03**	**0.00E+00**	0
40.5	0	*0.00E+00*	*3.00E-03*		
48.4	0	**0.00E+00**	**1.51E-03**		
56.3	0	*8.16E-08*			
64.2	0	*8.02E-06*			
72.1	0	**7.89E-04**			
80.0					

Mass Flux Result

TOTAL MASS FLUX 6.14E-04 (g/day) 2.24E-04 (kg/yr)

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

SELECT TRANSECT TO VIEW: Transect 4

SELECT TIME PERIOD TO VIEW: 1

Transect C PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8SMD 80.0	End of Transect 160.0
1.0	0	0.00E+00	0
4.9	0	0.00E+00	0
8.8	0	0.00E+00	0
12.7	0	*0.00E+00*	0
16.6	0	*0.00E+00*	0
20.5	0	0.00E+00	0
24.4	0	*5.78E-08*	0
28.3	0	*1.25E-06*	0
32.2	0	*2.71E-05*	0
36.1	0	5.86E-04	0
40.0			

Transect Calculator: Mass Flux Summary

Version 2.01

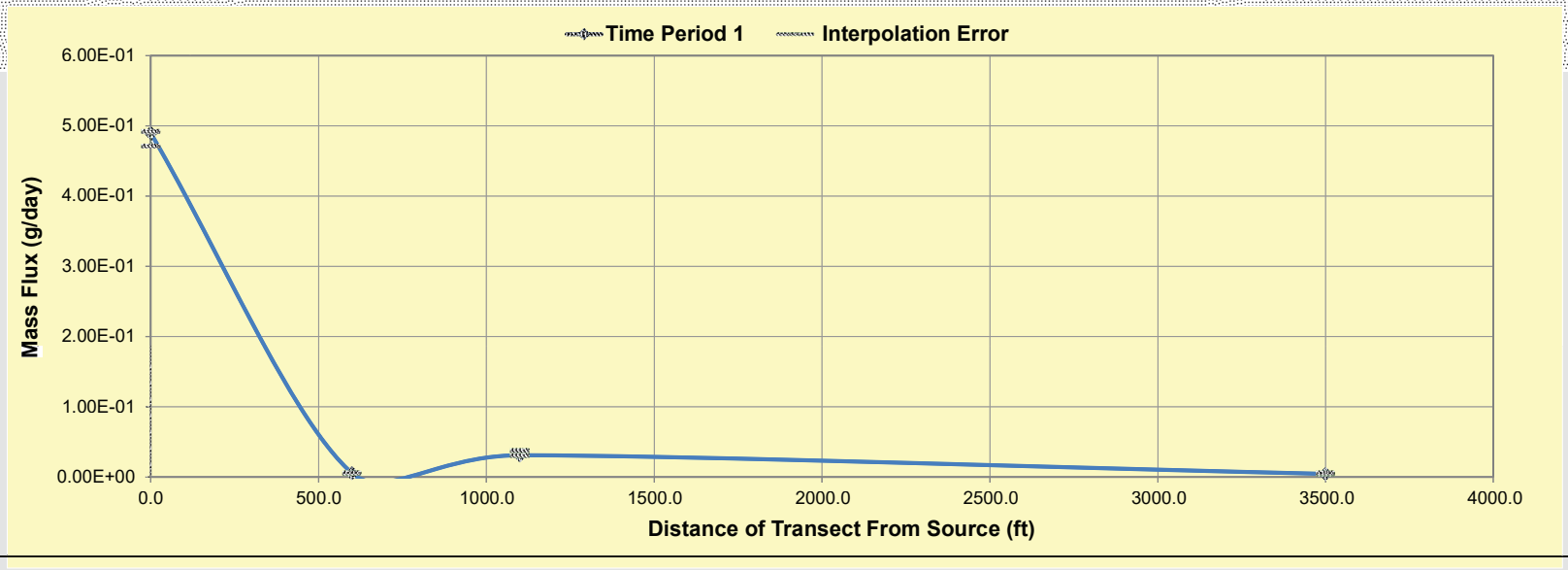
Transect 1: Building 1
Transect 2: Transect A
Transect 3: Transect B
Transect 4: Transect C

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Overburden Aquifer

Mass Flux Summary for PCE

	Distance from Source (ft)	Mass Flux (g/day)				
		Time Period 1	Time Period 2	Time Period 3	Time Period 4	Time Period 5
Transect 1	0	4.90E-01				
Transect 2	600	5.47E-03				
Transect 3	1100	3.11E-02				
Transect 4	3500	4.76E-03				
Transect 5						

85th percentile from Advanced Uncertainty Analysis
Maximum of the three Toolkit interpolation schemes
Value using selected interpolation schemes
Minimum of the three Toolkit interpolation schemes
15th percentile from Advanced Uncertainty Analysis



Grid Completion: Concentration

Building 1 Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | Next Step: Interpolate Hydraulic Conductivity Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-26S/D 213.0	AE-25S/D 218.0	AE-23S 288.0	AE-24 353.0	AE-2I 388.0	End of Transect 450.0
8.0	0	*7.50E+00*	*0.00E+00*	*1.70E+01*	**1.00E+00**	**0.00E+00**	0
11.7	0	*7.50E+00*	*0.00E+00*	**1.70E+01**	**1.00E+00**	**0.00E+00**	0
15.4	0	*7.50E+00*	*0.00E+00*	**1.70E+01**	**1.00E+00**	**0.00E+00**	0
19.1	0	*7.50E+00*	**0.00E+00**	*1.70E+01*	*1.00E+00*		
22.8	0	*7.50E+00*	**0.00E+00**	*1.70E+01*	*1.00E+00*		
26.5	0	**7.50E+00**	**0.00E+00**	*1.70E+01*	*1.00E+00*		
30.2	0	*2.74E-03*	*0.00E+00*	*1.70E+01*			
33.9	0	**0.00E+00**	**0.00E+00**				
37.6	0	**0.00E+00**	**0.00E+00**				
41.3	0	*0.00E+00*					
45.0							

Grid Completion: Concentration

Transect A Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | Next Step: Interpolate Hydraulic Conductivity Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-101S/D 124.0	AE-102SMD 199.0	AE-103SMD 274.0	AE-104SMD 349.0	AE-109D 499.0	End of Transect 610.0
3.0	0	*0.00E+00*	*0.00E+00*	*0.00E+00*	*0.00E+00*		
7.7	0	**0.00E+00**	*0.00E+00*	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
12.4	0	**0.00E+00**	**0.00E+00**	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
17.1	0	*5.00E-03*	*4.80E-03*	**0.00E+00**	**0.00E+00**	**0.00E+00**	0
21.8	0	**2.50E+01**	**2.30E+01**	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
26.5			*4.80E-03*	**0.00E+00**	**0.00E+00**	*0.00E+00*	0
31.2			**0.00E+00**	*8.77E-03*	*9.49E-04*	*0.00E+00*	0
35.9			*0.00E+00*	**7.70E+01**	**9.00E-01**	*0.00E+00*	0
40.6						*0.00E+00*	0
45.3						*0.00E+00*	0
50.0							

Grid Completion: Concentration

Transect B Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate Conc Horizontally		Export Conc Grid	Import Conc Grid		Next Step: Interpolate Hydraulic Conductivity Grid
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0		AE-105SMD 128.0	PS-1SMD 165.5	AE-106SMD 435.5	End of Transect 595.0
1.0	0		0.00E+00	0.00E+00	0.00E+00	0
8.9	0		0.00E+00	0.00E+00	0.00E+00	0
16.8	0		0.00E+00	1.70E-04	5.92E-03	0
24.7	0		0.00E+00	2.88E-02	3.50E+01	0
32.6	0		0.00E+00	4.90E+00	0.00E+00	0
40.5	0		0.00E+00	5.56E+00		
48.4	0		0.00E+00	6.30E+00		
56.3	0		7.94E-05			
64.2	0		6.30E-03			
72.1	0		5.00E-01			
80.0						

Grid Completion: Concentration

Transect C Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate Conc Horizontally		Export Conc Grid	Import Conc Grid	Next Step: Interpolate Hydraulic Conductivity Grid
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP

Data Input Instructions

10.80

Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8SMD 80.0	End of Transect 160.0
1.0	0	0.00E+00	0
4.9	0	0.00E+00	0
8.8	0	0.00E+00	0
12.7	0	*0.00E+00*	0
16.6	0	*0.00E+00*	0
20.5	0	0.00E+00	0
24.4	0	*2.66E-05*	0
28.3	0	*7.07E-04*	0
32.2	0	*1.88E-02*	0
36.1	0	5.00E-01	0
40.0			

Grid Completion: Hydraulic Conductivity

Building 1 Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate K Horizontally	Export K Grid	Import K Grid		Next Step: View Hydraulic Gradient Grid
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	*HELP*

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-26S/D 213.0	AE-25S/D 218.0	AE-23S 288.0	AE-24 353.0	AE-2I 388.0	End of Transect 450.0
8.0	1.30E+01	*1.30E+01*	*1.20E+01*	*1.20E+01*	1.20E+01	1.20E+01	1.20E+01
11.7	1.30E+01	*1.30E+01*	*1.20E+01*	1.20E+01	1.20E+01	1.20E+01	1.20E+01
15.4	1.30E+01	*1.30E+01*	*1.20E+01*	1.20E+01	1.20E+01	1.20E+01	1.20E+01
19.1	1.30E+01	*1.30E+01*	1.20E+01	*1.20E+01*	*1.20E+01*		
22.8	1.30E+01	*1.30E+01*	1.20E+01	*1.20E+01*	*1.20E+01*		
26.5	1.30E+01	1.30E+01	1.20E+01	*1.20E+01*	*1.20E+01*		
30.2	1.30E+01	*1.15E+01*	*1.20E+01*	*1.20E+01*			
33.9	1.30E+01	1.01E+01	1.20E+01				
37.6	1.30E+01	1.01E+01	1.20E+01				
41.3	1.30E+01	*1.01E+01*					
45.0							

Grid Completion: Hydraulic Conductivity

Transect A Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | Next Step: View Hydraulic Gradient Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-101S/D 124.0	AE-102SMD 199.0	AE-103SMD 274.0	AE-104SMD 349.0	AE-109D 499.0	End of Transect 610.0
3.0	2.02E+01	*2.02E+01*	*4.04E+01*	*1.30E+00*	*5.47E+01*		
7.7	2.02E+01	2.02E+01	*4.04E+01*	*1.30E+00*	*5.47E+01*	*1.87E+01*	1.87E+01
12.4	2.02E+01	2.02E+01	4.04E+01	*1.30E+00*	*5.47E+01*	*1.87E+01*	1.87E+01
17.1	2.02E+01	*1.85E+01*	*1.57E+01*	1.30E+00	5.47E+01	1.87E+01	1.87E+01
21.8	2.02E+01	1.69E+01	6.10E+00	*1.94E+00*	*9.15E+01*	*1.87E+01*	1.87E+01
26.5			*3.02E+00*	2.90E+00	1.53E+02	*1.87E+01*	1.87E+01
31.2			1.50E+00	*3.09E+00*	*1.52E+02*	*1.87E+01*	1.87E+01
35.9			*1.50E+00*	3.30E+00	1.51E+02	*1.87E+01*	1.87E+01
40.6						*1.87E+01*	1.87E+01
45.3						*1.87E+01*	1.87E+01
50.0							

Grid Completion: Hydraulic Conductivity

Transect B Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | Next Step: View Hydraulic Gradient Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80

Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-105SMD 128.0	PS-1SMD 165.5	AE-106SMD 435.5	End of Transect 595.0
1.0	1.42E+01	*1.42E+01*	*1.50E+01*	*3.80E+00*	1.46E+01
8.9	1.42E+01	*1.42E+01*	1.50E+01	3.80E+00	1.46E+01
16.8	1.42E+01	*1.42E+01*	*3.00E+01*	*7.67E+00*	1.46E+01
24.7	1.42E+01	*1.42E+01*	*6.00E+01*	1.55E+01	1.46E+01
32.6	1.42E+01	1.42E+01	1.20E+02	1.46E+01	1.46E+01
40.5	1.42E+01	*3.99E+01*	*1.62E+02*		
48.4	1.42E+01	1.12E+02	2.20E+02		
56.3	1.42E+01	*1.39E+02*			
64.2	1.42E+01	*1.72E+02*			
72.1	1.42E+01	2.13E+02			
80.0					

Grid Completion: Hydraulic Conductivity

Transect C Time Period 1. Vertical Interpolation: Log Horizontal Interpolation: Log

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | Next Step: View Hydraulic Gradient Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80

Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs

	Start of Transect 0.0	STM-8SMD 80.0	End of Transect 160.0
1.0	1.42E-01	1.42E-01	6.63E+01
4.9	1.42E-01	1.42E-01	6.63E+01
8.8	1.42E-01	1.42E-01	6.63E+01
12.7	1.42E-01	*1.45E+00*	6.63E+01
16.6	1.42E-01	*1.48E+01*	6.63E+01
20.5	1.42E-01	1.51E+02	6.63E+01
24.4	1.42E-01	*1.23E+02*	6.63E+01
28.3	1.42E-01	*1.00E+02*	6.63E+01
32.2	1.42E-01	*8.14E+01*	6.63E+01
36.1	1.42E-01	6.63E+01	6.63E+01
40.0			

Grid Completion: Hydraulic Gradient

Building 1 Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | *HELP*

Next Step: Calculate Mass Flux

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-26S/D 213.0	AE-25S/D 218.0	AE-23S 288.0	AE-24 353.0	AE-2I 388.0	End of Transect 450.0
8.0	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03
11.7	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03
15.4	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03
19.1	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03		
22.8	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03		
26.5	1.60E-03	1.60E-03	1.60E-03	1.60E-03	1.60E-03		
30.2	1.60E-03	1.60E-03	1.60E-03	1.60E-03			
33.9	1.60E-03	1.60E-03	1.60E-03				
37.6	1.60E-03	1.60E-03	1.60E-03				
41.3	1.60E-03	1.60E-03					
45.0							

Grid Completion: Hydraulic Gradient

Transect A Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid | Next Step: Calculate Mass Flux

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-101S/D 124.0	AE-102SMD 199.0	AE-103SMD 274.0	AE-104SMD 349.0	AE-109D 499.0	End of Transect 610.0
3.0	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04		
7.7	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
12.4	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
17.1	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
21.8	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
26.5			4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
31.2			4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
35.9			4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
40.6						4.00E-04	4.00E-04
45.3						4.00E-04	4.00E-04
50.0							

Grid Completion: Hydraulic Gradient

Transect B Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally		Export i Grid	Import i Grid		Next Step: Calculate Mass Flux
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-105SMD 128.0	PS-1SMD 165.5	AE-106SMD 435.5	End of Transect 595.0
1.0	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
8.9	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
16.8	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
24.7	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
32.6	4.00E-04	4.00E-04	4.00E-04	4.00E-04	4.00E-04
40.5	4.00E-04	4.00E-04	4.00E-04		
48.4	4.00E-04	4.00E-04	4.00E-04		
56.3	4.00E-04	4.00E-04			
64.2	4.00E-04	4.00E-04			
72.1	4.00E-04	4.00E-04			
80.0					

Grid Completion: Hydraulic Gradient

Transect C Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid | **Next Step: Calculate Mass Flux**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

[ ] — Top/Bottom of plume. (Don't enter any data).

Transect C Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8SMD 80.0	End of Transect 160.0
1.0	2.00E-03	2.00E-03	2.00E-03
4.9	2.00E-03	2.00E-03	2.00E-03
8.8	2.00E-03	2.00E-03	2.00E-03
12.7	2.00E-03	2.00E-03	2.00E-03
16.6	2.00E-03	2.00E-03	2.00E-03
20.5	2.00E-03	2.00E-03	2.00E-03
24.4	2.00E-03	2.00E-03	2.00E-03
28.3	2.00E-03	2.00E-03	2.00E-03
32.2	2.00E-03	2.00E-03	2.00E-03
36.1	2.00E-03	2.00E-03	2.00E-03
40.0			

Mass Flux Result

TOTAL MASS FLUX 2.75E-02 (g/day) 1.00E-02 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 1

SELECT TIME PERIOD TO VIEW: 1

Building 1 TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect	AE-26S/D	AE-25S/D	AE-23S	AE-24	AE-2I	End of Transect
	0.0	*213.0*	*218.0*	*288.0*	*353.0*	*388.0*	*450.0*
8.0	**0**	*1.78E-03*	*0.00E+00*	*2.31E-03*	**1.01E-04**	**0.00E+00**	**0**
11.7	**0**	*1.78E-03*	*0.00E+00*	**2.31E-03**	**1.01E-04**	**0.00E+00**	**0**
15.4	**0**	*1.78E-03*	*0.00E+00*	**2.31E-03**	**1.01E-04**	**0.00E+00**	**0**
19.1	**0**	*1.78E-03*	**0.00E+00**	*2.31E-03*	*1.01E-04*		
22.8	**0**	*1.78E-03*	**0.00E+00**	*2.31E-03*	*1.01E-04*		
26.5	**0**	**1.78E-03**	**0.00E+00**	*2.31E-03*	*1.01E-04*		
30.2	**0**	*5.74E-07*	*0.00E+00*	*2.31E-03*			
33.9	**0**	**0.00E+00**	**0.00E+00**				
37.6	**0**	**0.00E+00**	**0.00E+00**				
41.3	**0**	*0.00E+00*					
45.0							

Mass Flux Result

TOTAL MASS FLUX 4.63E-03 (g/day) 1.69E-03 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 2

SELECT TIME PERIOD TO VIEW: 1

Transect A TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-101S/D 124.0	AE-102SMD 199.0	AE-103SMD 274.0	AE-104SMD 349.0	AE-109D 499.0	End of Transect 610.0
3.0	0	*0.00E+00*	*0.00E+00*	*0.00E+00*	*0.00E+00*		
7.7	0	**0.00E+00**	*0.00E+00*	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
12.4	0	**0.00E+00**	**0.00E+00**	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
17.1	0	*4.90E-07*	*3.01E-07*	**0.00E+00**	**0.00E+00**	**0.00E+00**	0
21.8	0	**2.24E-03**	**5.60E-04**	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
26.5			*5.79E-08*	**0.00E+00**	**0.00E+00**	*0.00E+00*	0
31.2			**0.00E+00**	*1.08E-07*	*8.64E-07*	*0.00E+00*	0
35.9			*0.00E+00*	**1.02E-03**	**8.14E-04**	*0.00E+00*	0
40.6						*0.00E+00*	0
45.3						*0.00E+00*	0
50.0							

Mass Flux Result

TOTAL MASS FLUX 5.08E-02 (g/day) 1.86E-02 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 3

SELECT TIME PERIOD TO VIEW: 1

Transect B TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE-105SMD 128.0	PS-1SMD 165.5	AE-106SMD 435.5	End of Transect 595.0
1.0	0	*0.00E+00*	*0.00E+00*	*0.00E+00*	0
8.9	0	*0.00E+00*	**0.00E+00**	**0.00E+00**	0
16.8	0	*0.00E+00*	*7.01E-08*	*8.73E-07*	0
24.7	0	*0.00E+00*	*2.38E-05*	**1.04E-02**	0
32.6	0	**0.00E+00**	**8.09E-03**	**0.00E+00**	0
40.5	0	*0.00E+00*	*1.24E-02*		
48.4	0	**0.00E+00**	**1.91E-02**		
56.3	0	*8.16E-08*			
64.2	0	*8.02E-06*			
72.1	0	**7.89E-04**			
80.0					

Mass Flux Result

TOTAL MASS FLUX 6.14E-04 (g/day) 2.24E-04 (kg/yr)

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

SELECT TRANSECT TO VIEW: Transect 4

SELECT TIME PERIOD TO VIEW: 1

Transect C TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8SMD 80.0	End of Transect 160.0
1.0	0	0.00E+00	0
4.9	0	0.00E+00	0
8.8	0	0.00E+00	0
12.7	0	*0.00E+00*	0
16.6	0	*0.00E+00*	0
20.5	0	0.00E+00	0
24.4	0	*5.78E-08*	0
28.3	0	*1.25E-06*	0
32.2	0	*2.71E-05*	0
36.1	0	5.86E-04	0
40.0			

Transect Calculator: Mass Flux Summary

Version 2.01

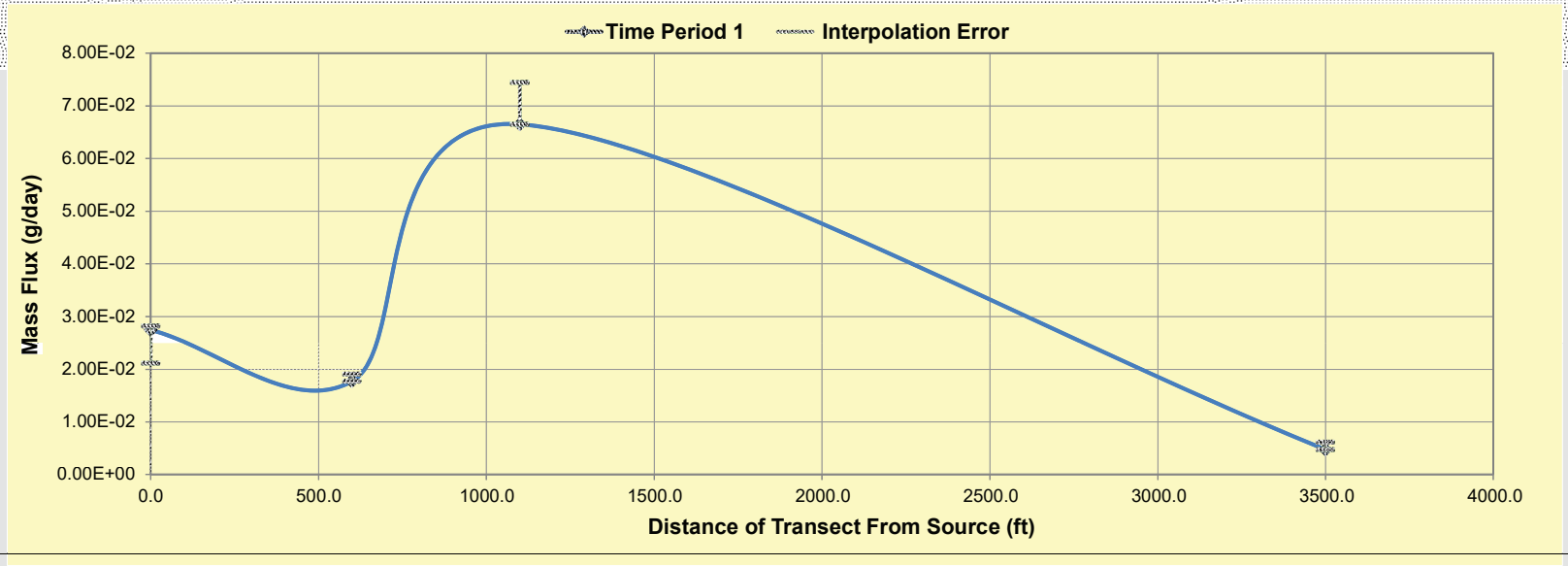
Transect 1: Building 1
Transect 2: Transect A
Transect 3: Transect B
Transect 4: Transect C

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Overburden Aquifer

Mass Flux Summary for TCE

	Distance from Source (ft)	Mass Flux (g/day) Time Period 1	Time Period 2	Time Period 3	Time Period 4	Time Period 5
Transect 1	0	2.75E-02				
Transect 2	600	1.77E-02				
Transect 3	1100	6.65E-02				
Transect 4	3500	4.76E-03				
Transect 5						

85th percentile from Advanced Uncertainty Analysis
Maximum of the three Toolkit interpolation schemes
Value using selected interpolation schemes
Minimum of the three Toolkit interpolation schemes
15th percentile from Advanced Uncertainty Analysis

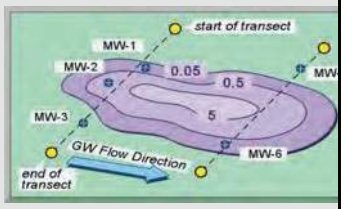


Next Step: | View Flux Result | View Conc Grid | Print | HELP

Input Data and Grid

Data Input Instructions
Enter value directly.
Value calculated by model
(Don't enter any data)

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Bedrock Aquifer



4. CHOOSE TRANSECT Transect 1 (Building 1)

5. CHOOSE TIME PERIOD 1

6. ENTER TRANSECT DATA

6.1 Distance of Transect 1 from Source → 1 → 0 (ft)

6.2 ○ Darcy Velocity ◉ Hydraulic Conductivity

6.6 ◉ Sampling Interval ○ Mid Point of Sampling Interval

6.3 Hydraulic Conductivity Units: ft/d

6.4 Uniform Hydraulic Conductivity?: No

6.5 Uniform Hydraulic Gradient?: Yes → Hydraulic Gradient 1.00E-03 (ft/ft)

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs) Top	Sampling Interval (ft bgs) Bottom	Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L) Constituent A PCE	Concentration (ug/L) Constituent B TCE
1	Start of Transect	0						0	0
2	End of Transect	450						0	0
3	AE26R	213	50	56	42.5	200	4.19E+00	340	600
4	AE26R	213	72	78	42.5	200	2.83E-05	0	0
5	AE26R	213	81	88	42.5	200	0.72	0	0
6	AE26R	213	104	114	42.5	200	0.31	440	530
7	AE26R	213	123	132	42.5	200	1.81	1300	1600
8	AE25R	218	45	62	39	200	5.00E-01	0	0
9	AE28R	228	45	51	35	200	5.90E-01	3400	6600
10	AE28R	228	75	85	35	200	3.00E-01	20000	19000
11	AE28R	228	98	108	35	200	0.75	4100	3800
12	AE28R	228	132	142	35	200	2.20E-01	6200	6700
13	AE23R	288	44.75	54.75	31.5	200	5.00E-01	56000	150000
14	AE27R	353	50.5	60.5	31.5	200	6.80E-01	1	2.8
15	AE29R	378	37	44	20.5	200	1.11E+00	0.5	1.4

7. CHOOSE GRID (OPTIONAL)

	Current Grid	Refine Grid By	Refined Grid
Number of rows	10	10	100
Number of columns	10	1	10

8. SELECT CONSTITUENT FOR CALCULATIONS

◉ PCE ○ TCE

Next Step: Continue Data Input

Back to Transect Calculator Screen | Import MW Data | Export MW Data | See Conc/Flux Grids

Clear Screen | Paste Example | Restore Table Formatting | Print | HELP

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs)		Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L)	
			Top	Bottom				*Constituent A*	*Constituent B*
								PCE	*TCE*
1	Start of Transect	0						0	0
2	End of Transect	450						0	0
3	AE26R	213	50	56	42.5	200	4.19E+00	340	600
4	AE26R	213	72	78	42.5	200	2.83E-05	0	0
5	AE26R	213	81	88	42.5	200	0.72	0	0
6	AE26R	213	104	114	42.5	200	0.31	440	530
7	AE26R	213	123	132	42.5	200	1.81	1300	1600
8	AE25R	218	45	62	39	200	5.00E-01	0	0
9	AE28R	228	45	51	35	200	5.90E-01	3400	6600
10	AE28R	228	75	85	35	200	3.00E-01	20000	19000
11	AE28R	228	98	108	35	200	0.75	4100	3800
12	AE28R	228	132	142	35	200	2.20E-01	6200	6700
13	AE23R	288	44.75	54.75	31.5	200	5.00E-01	56000	150000
14	AE27R	353	50.5	60.5	31.5	200	6.80E-01	1	2.8
15	AE29R	378	37	44	20.5	200	1.11E+00	0.5	1.4
16	AE29R	378	47	54	20.5	200	2.83E-05	0	0
17	AE29R	378	70	76	20.5	200	0.35	0.5	3.4
18	AE29R	378	90	96	20.5	200	0.16	0	0
19	AE29R	378	113	119	20.5	200	0.65	1.	70.
20	AE29R	378	140	146	20.5	200	1.09E+00	0.5	52.
21	AE2R	388	22	36	17	200	0.5	4.4	1.
22	TRC201R	418	38	161	35.3	200	0.5	0.5	44.
23									
24									
25									
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29									
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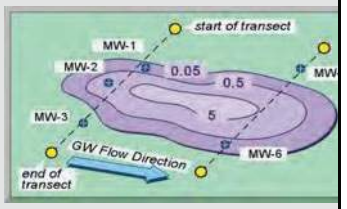
43									

Input Data and Grid

Data Input Instructions
Enter value directly.
Value calculated by model
(Don't enter any data)

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Bedrock Aquifer



4. CHOOSE TRANSECT Transect 2 (Transect A)

5. CHOOSE TIME PERIOD 1

6. ENTER TRANSECT DATA

6.1 Distance of Transect 2 from Source → 1 → 600 *(ft)*

6.2 ○ Darcy Velocity ◉ Hydraulic Conductivity

6.6 ◉ Sampling Interval ○ Mid Point of Sampling Interval

6.3 Hydraulic Conductivity Units: ft/d

6.4 Uniform Hydraulic Conductivity?: No

6.5 Uniform Hydraulic Gradient?: Yes → Hydraulic Gradient 1.00E-03 *(ft/ft)*

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs) Top	Sampling Interval (ft bgs) Bottom	Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L) Constituent A PCE	Concentration (ug/L) Constituent B TCE
1	Start of Transect	0						0	0
2	End of Transect	610						0	0
3	AE108R	49	36.5	43.5	30	180	2.83E-05	0.5	0.5
4	AE108R	49	68	73	30	180	2.83E-05	0	0
5	AE108R	49	84	89	30	180	16.3	41	24
6	AE108R	49	145	150	30	180	0.267	0	0
7	AE108R	49	163	168	30	180	8.4	21	51
8	AE101R	124	30.5	35.5	27	232	4.60E+00	0	0
9	AE101R	124	55	60	27	232	4.60E+00	33	91
10	AE101R	124	80	85	27	232	2.83E-05	0	0
11	AE101R	124	153	158	27	232	66.1	31	160
12	AE101R	124	175	180	27	232	2.83E-05	0	0
13	AE101R	124	227	232	27	232	2.83E-05	170	1800
14	AE102RR	199	43	48	40	180	2.83E-05	4.4	200
15	AE102RR	199	75	80	40	180	2.83E-05	120	420

7. CHOOSE GRID (OPTIONAL)

	Current Grid	Refine Grid By	Refined Grid
Number of rows	10	10	100
Number of columns	8	1	8

8. SELECT CONSTITUENT FOR CALCULATIONS

○ PCE ◉ TCE

Next Step: Continue Data Input

Back to Transect Calculator Screen | Import MW Data | Export MW Data | See Conc/Flux Grids

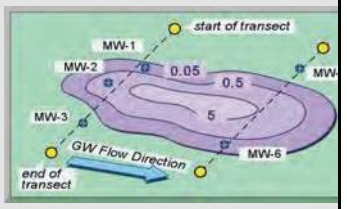
Clear Screen | Paste Example | Restore Table Formatting | Print | HELP

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs)		Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L)	
			Top	Bottom				*Constituent A*	*Constituent B*
								PCE	*TCE*
1	Start of Transect	0						0	0
2	End of Transect	610						0	0
3	AE108R	49	36.5	43.5	30	180	2.83E-05	0.5	0.5
4	AE108R	49	68	73	30	180	2.83E-05	0	0
5	AE108R	49	84	89	30	180	16.3	41	24
6	AE108R	49	145	150	30	180	0.267	0	0
7	AE108R	49	163	168	30	180	8.4	21	51
8	AE101R	124	30.5	35.5	27	232	4.60E+00	0	0
9	AE101R	124	55	60	27	232	4.60E+00	33	91
10	AE101R	124	80	85	27	232	2.83E-05	0	0
11	AE101R	124	153	158	27	232	66.1	31	160
12	AE101R	124	175	180	27	232	2.83E-05	0	0
13	AE101R	124	227	232	27	232	2.83E-05	170	1800
14	AE102RR	199	43	48	40	180	2.83E-05	4.4	200
15	AE102RR	199	75	80	40	180	2.83E-05	120	420
16	AE102RR	199	111	116	40	180	2.83E-05	0	0
17	AE102RR	199	125	130	40	180	76.1	650	1100
18	AE102RR	199	141	146	40	180	61.9	1800	2700
19	AE102RR	199	153	158	40	180	2.63	4000.	4700.
20	AE103R	274	48	53	42	178	2.83E-05	0.	0.
21	AE103R	274	62	67	42	178	0.19	2600.	4300.
22	AE103R	274	70	76	42	178	1.4	3400.	6000.
23	AE103R	274	98	105	42	178	2.3	4900.	8000.
24	AE103R	274	122	128	42	178	0.24	5000.	6900.
25	AE103R	274	138	144	42	178	0.16	0.	0.
26	AE103R	274	162.5	168	42	178	0.72	3700.	5200.
27	AE104R	349	48	54	42	178	2.83E-05	410.	1200.
28	AE104R	349	62	68	42	178	2.83E-05	0.	0.
29	AE104R	349	97	102	42	178	0.12	1600.	2800.
30	AE104R	349	128	133	42	178	0.09	0.	0.
31	AE104R	349	156	162	42	178	0.08	1300.	2700.
32	AE104R	349	168	174	42	178	0.04	0.	0.
33	AE109R	499	38	43	23	250	0.23	0.	0.
34	AE109R	499	66	76	23	250	2.83E-05	0.	0.
35	AE109R	499	126	136	23	250	2.83E-05	0.	0.
36	AE109R	499	174	180.5	23	250	2.94	0.5	10.
37	AE109R	499	183	189	23	250	2.29	0.	0.
38	AE109R	499	196	201	23	250	0.39	6.1	110.
39	AE109R	499	204	214	23	250	0.38	0.5	3.6
40	AE109R	499	245	250	23	250	0.38	0.5	1.9
41									
42									
43									

Input Data and Grid

Data Input Instructions
Enter value directly.
Value calculated by model
(Don't enter any data)

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Bedrock Aquifer



4. CHOOSE TRANSECT Transect 3 (Transect B)

5. CHOOSE TIME PERIOD 1

6. ENTER TRANSECT DATA

6.1 Distance of Transect 3 from Source → 1 → 1100 *(ft)*

6.2 ○ Darcy Velocity ◉ Hydraulic Conductivity

6.6 ◉ Sampling Interval ○ Mid Point of Sampling Interval

6.3 Hydraulic Conductivity Units: ft/d

6.4 Uniform Hydraulic Conductivity?: No

6.5 Uniform Hydraulic Gradient?: Yes → Hydraulic Gradient 1.00E-03 *(ft/ft)*

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs) Top	Sampling Interval (ft bgs) Bottom	Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L) Constituent A PCE	Concentration (ug/L) Constituent B TCE
1	Start of Transect	0						0	0
2	End of Transect	595						0	0
3	AE105R	128	90.5	95.5	80	240	2.83E-05	0	0
4	AE105R	128	98	103	80	240	6.00E-02	45	140
5	AE105R	128	107.5	112.5	80	240	0.17	53	150
6	AE105R	128	125	130	80	240	0.04	51	170
7	AE105R	128	143	148	80	240	1.16	46	150
8	TRC301R	165.5	65.5	69.5	60	240	2.83E-05	8.7	27
9	TRC301R	165.5	75.5	79.5	60	240	7.40E-01	40	100
10	TRC301R	165.5	81.5	85.5	60	240	1.30E-01	41	97
11	TRC301R	165.5	96.5	100.5	60	240	0.13	16	61
12	AE106R	435.5	47	52	40	240	9.50E-01	1.8	5.3
13	AE106R	435.5	69.5	74.5	40	240	1.30E-01	0	0
14	AE106R	435.5	84	88	40	240	1.20E-01	2.2	8.6
15	AE106R	435.5	144.5	150.5	40	240	1.10E-01	0	0

7. CHOOSE GRID (OPTIONAL)

	Current Grid	Refine Grid By	Refined Grid
Number of rows	10	10	100
Number of columns	10	1	10

8. SELECT CONSTITUENT FOR CALCULATIONS

◉ PCE ○ TCE

Next Step: Continue Data Input

Back to Transect Calculator Screen | Import MW Data | Export MW Data | See Conc/Flux Grids

Clear Screen | Paste Example | Restore Table Formatting | Print | HELP

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs)		Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L)	
			Top	Bottom				*Constituent A*	*Constituent B*
								PCE	*TCE*
1	Start of Transect	0						0	0
2	End of Transect	595						0	0
3	AE105R	128	90.5	95.5	80	240	2.83E-05	0	0
4	AE105R	128	98	103	80	240	6.00E-02	45	140
5	AE105R	128	107.5	112.5	80	240	0.17	53	150
6	AE105R	128	125	130	80	240	0.04	51	170
7	AE105R	128	143	148	80	240	1.16	46	150
8	TRC301R	165.5	65.5	69.5	60	240	2.83E-05	8.7	27
9	TRC301R	165.5	75.5	79.5	60	240	7.40E-01	40	100
10	TRC301R	165.5	81.5	85.5	60	240	1.30E-01	41	97
11	TRC301R	165.5	96.5	100.5	60	240	0.13	16	61
12	AE106R	435.5	47	52	40	240	9.50E-01	1.8	5.3
13	AE106R	435.5	69.5	74.5	40	240	1.30E-01	0	0
14	AE106R	435.5	84	88	40	240	1.20E-01	2.2	8.6
15	AE106R	435.5	144.5	150.5	40	240	1.10E-01	0	0
16	AE106R	435.5	164	169	40	240	9.00E-02	1.8	40
17									
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19									
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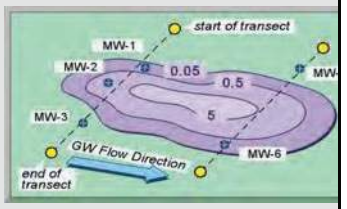
Input Data and Grid

Data Input Instructions
Enter value directly.
Value calculated by model
(Don't enter any data)

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Bedrock Aquifer



4. CHOOSE TRANSECT Transect 4 (Transect C)

5. CHOOSE TIME PERIOD 1

6. ENTER TRANSECT DATA

6.1 Distance of Transect 4 from Source → 1 → 3500 *(ft)*

6.2 ○ Darcy Velocity ◉ Hydraulic Conductivity

6.6 ◉ Sampling Interval ○ Mid Point of Sampling Interval

6.3 Hydraulic Conductivity Units: ft/d

6.4 Uniform Hydraulic Conductivity?: No

6.5 Uniform Hydraulic Gradient?: Yes → Hydraulic Gradient 1.00E-03 *(ft/ft)*

	Monitoring Point	Distance of Monitoring Point from Start of Transect (ft)	Sampling Interval (ft bgs) Top	Sampling Interval (ft bgs) Bottom	Plume Top (ft bgs)	Plume Bottom (ft bgs)	Hydraulic Conductivity (ft/d)	Concentration (ug/L) Constituent A PCE	Concentration (ug/L) Constituent B TCE
1	Start of Transect	0						0	0
2	End of Transect	160						0	0
3	STM-8R	80	46.5	51.5	39	120	2.83E-05	2	8.9
4	STM-8R	80	85	90	39	120	2.83E-05	0.5	1.8
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

7. CHOOSE GRID (OPTIONAL)

	Current Grid	Refine Grid By	Refined Grid
Number of rows	10	10	100
Number of columns	10	1	10

8. SELECT CONSTITUENT FOR CALCULATIONS

◉ PCE ○ TCE

Next Step: Continue Data Input

Back to Transect Calculator Screen | Import MW Data | Export MW Data | See Conc/Flux Grids

Clear Screen | Paste Example | Restore Table Formatting | Print | HELP

Grid Completion: Concentration

Building 1 Time Period 1. Manual Interpolation

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | **Next Step: Interpolate Hydraulic Conductivity Grid**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
17.0										
18.8										
20.7										
22.5								4.40E+00		
24.3								4.40E+00		
26.2								4.40E+00		
28.0								4.40E+00		
29.8								4.40E+00		
31.6								4.40E+00		
33.5								4.40E+00		
35.3										0
37.1							5.00E-01		5.00E-01	0
39.0							5.00E-01		5.00E-01	0
40.8							5.00E-01		5.00E-01	0
42.6	0						5.00E-01		5.00E-01	0
44.5	0		0.00E+00	3.40E+03	5.60E+04				5.00E-01	0
46.3	0		0.00E+00	3.40E+03	5.60E+04		0.00E+00		5.00E-01	0
48.1	0		0.00E+00	3.40E+03	5.60E+04		0.00E+00		5.00E-01	0
49.9	0	3.40E+02	0.00E+00	3.40E+03	5.60E+04	1.00E+00	0.00E+00		5.00E-01	0
51.8	0	3.40E+02	0.00E+00		5.60E+04	1.00E+00	0.00E+00		5.00E-01	0
53.6	0	3.40E+02	0.00E+00		5.60E+04	1.00E+00			5.00E-01	0
55.4	0		0.00E+00			1.00E+00			5.00E-01	0
57.3	0		0.00E+00			1.00E+00			5.00E-01	0
59.1	0		0.00E+00			1.00E+00			5.00E-01	0
60.9	0		0.00E+00						5.00E-01	0
62.8	0								5.00E-01	0
64.6	0								5.00E-01	0
66.4	0								5.00E-01	0
68.2	0								5.00E-01	0
70.1	0						5.00E-01		5.00E-01	0
71.9	0	0.00E+00					5.00E-01		5.00E-01	0
73.7	0	0.00E+00					5.00E-01		5.00E-01	0

B uilding 1 PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R	End of Transect
	0.0		213.0	218.0	228.0	288.0	353.0	378.0	388.0	418.0	450.0
75.6	0	0.00E+00		2.00E+04						5.00E-01	0
77.4	0			2.00E+04						5.00E-01	0
79.2	0			2.00E+04						5.00E-01	0
81.0	0	0.00E+00		2.00E+04						5.00E-01	0
82.9	0	0.00E+00		2.00E+04						5.00E-01	0
84.7	0	0.00E+00								5.00E-01	0
86.5	0	0.00E+00								5.00E-01	0
88.4	0									5.00E-01	0
90.2	0							0.00E+00		5.00E-01	0
92.0	0							0.00E+00		5.00E-01	0
93.9	0							0.00E+00		5.00E-01	0
95.7	0									5.00E-01	0
97.5	0				4.10E+03					5.00E-01	0
99.3	0				4.10E+03					5.00E-01	0
101.2	0				4.10E+03					5.00E-01	0
103.0	0				4.10E+03					5.00E-01	0
104.8	0	4.40E+02			4.10E+03					5.00E-01	0
106.7	0	4.40E+02			4.10E+03					5.00E-01	0
108.5	0	4.40E+02								5.00E-01	0
110.3	0	4.40E+02								5.00E-01	0
112.2	0	4.40E+02						1.00E+00		5.00E-01	0
114.0	0							1.00E+00		5.00E-01	0
115.8	0							1.00E+00		5.00E-01	0
117.7	0							1.00E+00		5.00E-01	0
119.5	0									5.00E-01	0
121.3	0									5.00E-01	0
123.1	0	1.30E+03								5.00E-01	0
125.0	0	1.30E+03								5.00E-01	0
126.8	0	1.30E+03								5.00E-01	0
128.6	0	1.30E+03								5.00E-01	0
130.5	0	1.30E+03								5.00E-01	0
132.3	0				6.20E+03					5.00E-01	0
134.1	0				6.20E+03					5.00E-01	0
136.0	0				6.20E+03					5.00E-01	0
137.8	0				6.20E+03					5.00E-01	0
139.6	0				6.20E+03			5.00E-01		5.00E-01	0
141.4	0							5.00E-01		5.00E-01	0
143.3	0							5.00E-01		5.00E-01	0
145.1	0									5.00E-01	0
146.9	0									5.00E-01	0

B uilding 1 PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R	End of Transect
	0.0		213.0	218.0	228.0	288.0	353.0	378.0	388.0	418.0	450.0
148.8		0								5.00E-01	0
150.6		0								5.00E-01	0
152.4		0								5.00E-01	0
154.3		0								5.00E-01	0
156.1		0								5.00E-01	0
157.9		0								5.00E-01	0
159.7		0								5.00E-01	0
161.6		0									0
163.4		0									0
165.2		0									0
167.1		0									0
168.9		0									0
170.7		0									0
172.6		0									0
174.4		0									0
176.2		0									0
178.0		0									0
179.9		0									0
181.7		0									0
183.5		0									0
185.4		0									0
187.2		0.00E+00									0.00E+00
189.0		0.00E+00									0.00E+00
190.9		0.00E+00									0.00E+00
192.7		0.00E+00									0.00E+00
194.5		0.00E+00									0.00E+00
196.3		0.00E+00									0.00E+00
198.2		0.00E+00									0.00E+00

Grid Completion: Concentration

Transect A Time Period 1. Manual Interpolation

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | **Next Step: Interpolate Hydraulic Conductivity Grid**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
23.0								0
25.3								0
27.5								0
29.8			0.00E+00					0
32.1	0		0.00E+00					0
34.4	0		0.00E+00					0
36.6	0	5.00E-01						0
38.9	0	5.00E-01					0.00E+00	0
41.2	0	5.00E-01					0.00E+00	0
43.4	0			4.40E+00				0
45.7	0			4.40E+00				0
48.0	0				0.00E+00	4.10E+02		0
50.2	0				0.00E+00	4.10E+02		0
52.5	0					4.10E+02		0
54.8	0		3.30E+01					0
57.1	0		3.30E+01					0
59.3	0							0
61.6	0				2.60E+03	0.00E+00		0
63.9	0				2.60E+03	0.00E+00		0
66.1	0					0.00E+00	0.00E+00	0
68.4	0	0.00E+00					0.00E+00	0
70.7	0	0.00E+00			3.40E+03		0.00E+00	0
72.9	0				3.40E+03		0.00E+00	0
75.2	0			1.20E+02				0
77.5	0			1.20E+02				0
79.8	0		0.00E+00					0
82.0	0		0.00E+00					0
84.3	0	4.10E+01						0
86.6	0	4.10E+01						0
88.8	0							0
91.1	0							0
93.4	0							0

Transect A PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
95.6	0							0
97.9	0				4.90E+03	1.60E+03		0
100.2	0				4.90E+03	1.60E+03		0
102.5	0				4.90E+03			0
104.7	0							0
107.0	0							0
109.3	0							0
111.5	0			0.00E+00				0
113.8	0			0.00E+00				0
116.1	0							0
118.3	0							0
120.6	0							0
122.9	0				5.00E+03			0
125.2	0			6.50E+02	5.00E+03		0.00E+00	0
127.4	0			6.50E+02		0.00E+00	0.00E+00	0
129.7	0					0.00E+00	0.00E+00	0
132.0	0						0.00E+00	0
134.2	0						0.00E+00	0
136.5	0							0
138.8	0				0.00E+00			0
141.0	0			1.80E+03	0.00E+00			0
143.3	0			1.80E+03				0
145.6	0	0.00E+00						0
147.9	0	0.00E+00						0
150.1	0							0
152.4	0		3.10E+01	4.00E+03				0
154.7	0		3.10E+01	4.00E+03				0
156.9	0					1.30E+03		0
159.2	0					1.30E+03		0
161.5	0				3.70E+03			0
163.7	0	2.10E+01			3.70E+03			0
166.0	0	2.10E+01			3.70E+03			0
168.3	0					0.00E+00		0
170.6	0					0.00E+00		0
172.8	0					0.00E+00		0
175.1	0		0.00E+00				5.00E-01	0
177.4	0		0.00E+00				5.00E-01	0
179.6								0
181.9							0.00E+00	0
184.2							0.00E+00	0

Transect A PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect	AE108R	AE101R	AE102RR	AE103R	AE104R	AE109R	End of Transect
	0.0	49.0	124.0	199.0	274.0	349.0	499.0	610.0
186.4							0.00E+00	0
188.7								0
191.0								0
193.3								0
195.5							6.10E+00	0
197.8							6.10E+00	0
200.1								0
202.3								0
204.6							5.00E-01	0
206.9							5.00E-01	0
209.1							5.00E-01	0
211.4							5.00E-01	0
213.7								0
216.0								0
218.2								0
220.5								0
222.8								0
225.0								0
227.3			1.70E+02					0
229.6			1.70E+02					0
231.8								0
234.1								0.00E+00
236.4								0.00E+00
238.7								0.00E+00
240.9								0.00E+00
243.2								0.00E+00
245.5							5.00E-01	0.00E+00
247.7							5.00E-01	0.00E+00

Grid Completion: Concentration

Transect B Time Period 1. Manual Interpolation

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | **Next Step: Interpolate Hydraulic Conductivity Grid**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
40.0					0
42.0					0
44.0					0
46.0				1.80E+00	0
48.0				1.80E+00	0
50.0				1.80E+00	0
52.0					0
54.0					0
56.0					0
58.0					0
60.0					0
62.0					0
64.0					0
66.0			8.70E+00		0
68.0			8.70E+00		0
70.0				0.00E+00	0
72.0				0.00E+00	0
74.0					0
76.0			4.00E+01		0
78.0			4.00E+01		0
80.0	0				0
82.0	0		4.10E+01		0
84.0	0		4.10E+01	2.20E+00	0
86.0	0			2.20E+00	0
88.0	0				0
90.0	0	0.00E+00			0
92.0	0	0.00E+00			0
94.0	0	0.00E+00			0
96.0	0		1.60E+01		0
98.0	0	4.50E+01	1.60E+01		0
100.0	0	4.50E+01			0
102.0	0	4.50E+01			0

Transect B PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
104.0	0				0
106.0	0				0
108.0	0	5.30E+01			0
110.0	0	5.30E+01			0
112.0	0				0
114.0	0				0
116.0	0				0
118.0	0				0
120.0	0				0
122.0	0				0
124.0	0	5.10E+01			0
126.0	0	5.10E+01			0
128.0	0	5.10E+01			0
130.0	0				0
132.0	0				0
134.0	0				0
136.0	0				0
138.0	0				0
140.0	0				0
142.0	0	4.60E+01			0
144.0	0	4.60E+01		0.00E+00	0
146.0	0	4.60E+01		0.00E+00	0
148.0	0			0.00E+00	0
150.0	0				0
152.0	0				0
154.0	0				0
156.0	0				0
158.0	0				0
160.0	0				0
162.0	0				0
164.0	0			1.80E+00	0
166.0	0			1.80E+00	0
168.0	0			1.80E+00	0
170.0	0				0
172.0	0				0
174.0	0				0
176.0	0				0
178.0	0				0
180.0	0				0
182.0	0				0

Transect B PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE105R	TRC301R	AE106R		End of Transect
	0.0		128.0	165.5	435.5	595.0	
184.0	0					0	
186.0	0					0	
188.0	0					0	
190.0	0					0	
192.0	0					0	
194.0	0					0	
196.0	0					0	
198.0	0					0	
200.0	0					0	
202.0	0					0	
204.0	0					0	
206.0	0					0	
208.0	0					0	
210.0	0					0	
212.0	0					0	
214.0	0					0	
216.0	0					0	
218.0	0					0	
220.0	0					0	
222.0	0					0	
224.0	0					0	
226.0	0.00E+00					0.00E+00	
228.0	0.00E+00					0.00E+00	
230.0	0.00E+00					0.00E+00	
232.0	0.00E+00					0.00E+00	
234.0	0.00E+00					0.00E+00	
236.0	0.00E+00					0.00E+00	
238.0	0.00E+00					0.00E+00	

Grid Completion: Concentration

Transect C Time Period 1. Manual Interpolation

Step 10: Interpolate Conc Horizontally		Export Conc Grid	Import Conc Grid		Next Step: Interpolate Hydraulic Conductivity Grid
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
39.0	0		0
39.8	0		0
40.6	0		0
41.4	0		0
42.2	0		0
43.1	0		0
43.9	0		0
44.7	0		0
45.5	0		0
46.3	0	2.00E+00	0
47.1	0	2.00E+00	0
47.9	0	2.00E+00	0
48.7	0	2.00E+00	0
49.5	0	2.00E+00	0
50.3	0	2.00E+00	0
51.2	0		0
52.0	0		0
52.8	0		0
53.6	0		0
54.4	0		0
55.2	0		0
56.0	0		0
56.8	0		0
57.6	0		0
58.4	0		0
59.3	0		0
60.1	0		0
60.9	0		0
61.7	0		0
62.5	0		0
63.3	0		0
64.1	0		0

Transect C PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0		STM-8R 80.0	End of Transect 160.0
64.9	0			0
65.7	0			0
66.5	0			0
67.4	0			0
68.2	0			0
69.0	0			0
69.8	0			0
70.6	0			0
71.4	0			0
72.2	0			0
73.0	0			0
73.8	0			0
74.6	0			0
75.5	0			0
76.3	0			0
77.1	0			0
77.9	0			0
78.7	0			0
79.5	0			0
80.3	0			0
81.1	0			0
81.9	0			0
82.7	0			0
83.6	0			0
84.4	0			0
85.2	0		5.00E-01	0
86.0	0		5.00E-01	0
86.8	0		5.00E-01	0
87.6	0		5.00E-01	0
88.4	0		5.00E-01	0
89.2	0		5.00E-01	0
90.0	0			0
90.8	0			0
91.7	0			0
92.5	0			0
93.3	0			0
94.1	0			0
94.9	0			0
95.7	0			0
96.5	0			0

Transect C PCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0		STM-8R 80.0	End of Transect 160.0
	97.3	0		0
	98.1	0		0
	98.9	0		0
	99.8	0		0
	100.6	0		0
	101.4	0		0
	102.2	0		0
	103.0	0		0
	103.8	0		0
	104.6	0		0
	105.4	0		0
	106.2	0		0
	107.0	0		0
	107.9	0		0
	108.7	0		0
	109.5	0		0
	110.3	0		0
	111.1	0		0
	111.9	0		0
	112.7	0		0
	113.5	0		0
	114.3	0.00E+00		0.00E+00
	115.1	0.00E+00		0.00E+00
	116.0	0.00E+00		0.00E+00
	116.8	0.00E+00		0.00E+00
	117.6	0.00E+00		0.00E+00
	118.4	0.00E+00		0.00E+00
	119.2	0.00E+00		0.00E+00

Grid Completion: Hydraulic Conductivity

Building 1 Time Period 1. Manual Interpolation

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | **Next Step: View Hydraulic Gradient Grid**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | *HELP*

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
17.0										
18.8										
20.7										
22.5								5.00E-01		
24.3								5.00E-01		
26.2								5.00E-01		
28.0								5.00E-01		
29.8								5.00E-01		
31.6								5.00E-01		
33.5								5.00E-01		
35.3										5.00E-01
37.1							1.11E+00		5.00E-01	5.00E-01
39.0							1.11E+00		5.00E-01	5.00E-01
40.8							1.11E+00		5.00E-01	5.00E-01
42.6	4.19E+00						1.11E+00		5.00E-01	5.00E-01
44.5	4.19E+00		5.00E-01	5.90E-01	5.00E-01				5.00E-01	5.00E-01
46.3	4.19E+00		5.00E-01	5.90E-01	5.00E-01		2.83E-05		5.00E-01	5.00E-01
48.1	4.19E+00		5.00E-01	5.90E-01	5.00E-01		2.83E-05		5.00E-01	5.00E-01
49.9	4.19E+00	4.19E+00	5.00E-01	5.90E-01	5.00E-01	6.80E-01	2.83E-05		5.00E-01	5.00E-01
51.8	4.19E+00	4.19E+00	5.00E-01		5.00E-01	6.80E-01	2.83E-05		5.00E-01	5.00E-01
53.6	4.19E+00	4.19E+00	5.00E-01		5.00E-01	6.80E-01			5.00E-01	5.00E-01
55.4	4.19E+00		5.00E-01			6.80E-01			5.00E-01	5.00E-01
57.3	4.19E+00		5.00E-01			6.80E-01			5.00E-01	5.00E-01
59.1	4.19E+00		5.00E-01			6.80E-01			5.00E-01	5.00E-01
60.9	4.19E+00		5.00E-01						5.00E-01	5.00E-01
62.8	4.19E+00								5.00E-01	5.00E-01
64.6	4.19E+00								5.00E-01	5.00E-01
66.4	4.19E+00								5.00E-01	5.00E-01
68.2	4.19E+00								5.00E-01	5.00E-01
70.1	4.19E+00						3.50E-01		5.00E-01	5.00E-01
71.9	4.19E+00	2.83E-05					3.50E-01		5.00E-01	5.00E-01
73.7	4.19E+00	2.83E-05					3.50E-01		5.00E-01	5.00E-01

B uilding 1 Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0		AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
	75.6	4.19E+00	2.83E-05		3.00E-01					5.00E-01	5.00E-01
	77.4	4.19E+00			3.00E-01					5.00E-01	5.00E-01
	79.2	4.19E+00			3.00E-01					5.00E-01	5.00E-01
	81.0	4.19E+00	7.20E-01		3.00E-01					5.00E-01	5.00E-01
	82.9	4.19E+00	7.20E-01		3.00E-01					5.00E-01	5.00E-01
	84.7	4.19E+00	7.20E-01							5.00E-01	5.00E-01
	86.5	4.19E+00	7.20E-01							5.00E-01	5.00E-01
	88.4	4.19E+00								5.00E-01	5.00E-01
	90.2	4.19E+00						1.60E-01		5.00E-01	5.00E-01
	92.0	4.19E+00						1.60E-01		5.00E-01	5.00E-01
	93.9	4.19E+00						1.60E-01		5.00E-01	5.00E-01
	95.7	4.19E+00								5.00E-01	5.00E-01
	97.5	4.19E+00			7.50E-01					5.00E-01	5.00E-01
	99.3	4.19E+00			7.50E-01					5.00E-01	5.00E-01
	101.2	4.19E+00			7.50E-01					5.00E-01	5.00E-01
	103.0	4.19E+00			7.50E-01					5.00E-01	5.00E-01
	104.8	4.19E+00	3.10E-01		7.50E-01					5.00E-01	5.00E-01
	106.7	4.19E+00	3.10E-01		7.50E-01					5.00E-01	5.00E-01
	108.5	4.19E+00	3.10E-01							5.00E-01	5.00E-01
	110.3	4.19E+00	3.10E-01							5.00E-01	5.00E-01
	112.2	4.19E+00	3.10E-01					6.50E-01		5.00E-01	5.00E-01
	114.0	4.19E+00						6.50E-01		5.00E-01	5.00E-01
	115.8	4.19E+00						6.50E-01		5.00E-01	5.00E-01
	117.7	4.19E+00						6.50E-01		5.00E-01	5.00E-01
	119.5	4.19E+00								5.00E-01	5.00E-01
	121.3	4.19E+00								5.00E-01	5.00E-01
	123.1	4.19E+00	1.81E+00							5.00E-01	5.00E-01
	125.0	4.19E+00	1.81E+00							5.00E-01	5.00E-01
	126.8	4.19E+00	1.81E+00							5.00E-01	5.00E-01
	128.6	4.19E+00	1.81E+00							5.00E-01	5.00E-01
	130.5	4.19E+00	1.81E+00							5.00E-01	5.00E-01
	132.3	4.19E+00			2.20E-01					5.00E-01	5.00E-01
	134.1	4.19E+00			2.20E-01					5.00E-01	5.00E-01
	136.0	4.19E+00			2.20E-01					5.00E-01	5.00E-01
	137.8	4.19E+00			2.20E-01					5.00E-01	5.00E-01
	139.6	4.19E+00			2.20E-01			1.09E+00		5.00E-01	5.00E-01
	141.4	4.19E+00						1.09E+00		5.00E-01	5.00E-01
	143.3	4.19E+00						1.09E+00		5.00E-01	5.00E-01
	145.1	4.19E+00								5.00E-01	5.00E-01
	146.9	4.19E+00								5.00E-01	5.00E-01

B uilding 1 Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R	End of Transect
	0.0		213.0	218.0	228.0	288.0	353.0	378.0	388.0	418.0	450.0
148.8		4.19E+00								5.00E-01	5.00E-01
150.6		4.19E+00								5.00E-01	5.00E-01
152.4		4.19E+00								5.00E-01	5.00E-01
154.3		4.19E+00								5.00E-01	5.00E-01
156.1		4.19E+00								5.00E-01	5.00E-01
157.9		4.19E+00								5.00E-01	5.00E-01
159.7		4.19E+00								5.00E-01	5.00E-01
161.6		4.19E+00									5.00E-01
163.4		4.19E+00									5.00E-01
165.2		4.19E+00									5.00E-01
167.1		4.19E+00									5.00E-01
168.9		4.19E+00									5.00E-01
170.7		4.19E+00									5.00E-01
172.6		4.19E+00									5.00E-01
174.4		4.19E+00									5.00E-01
176.2		4.19E+00									5.00E-01
178.0		4.19E+00									5.00E-01
179.9		4.19E+00									5.00E-01
181.7		4.19E+00									5.00E-01
183.5		4.19E+00									5.00E-01
185.4		4.19E+00									5.00E-01
187.2		4.19E+00									5.00E-01
189.0		4.19E+00									5.00E-01
		4.19E+00									5.00E-01
		4.19E+00									5.00E-01
		4.19E+00									5.00E-01
		4.19E+00									5.00E-01
		4.19E+00									5.00E-01
		4.19E+00									5.00E-01

Grid Completion: Hydraulic Conductivity

Transect A Time Period 1. Manual Interpolation

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | Next Step: View Hydraulic Gradient Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
23.0								3.80E-01
25.3								3.80E-01
27.5								3.80E-01
29.8			4.60E+00					3.80E-01
32.1	2.83E-05		4.60E+00					3.80E-01
34.4	2.83E-05		4.60E+00					3.80E-01
36.6	2.83E-05	2.83E-05						3.80E-01
38.9	2.83E-05	2.83E-05					2.30E-01	3.80E-01
41.2	2.83E-05	2.83E-05					2.30E-01	3.80E-01
43.4	2.83E-05			2.83E-05				3.80E-01
45.7	2.83E-05			2.83E-05				3.80E-01
48.0	2.83E-05				2.83E-05	2.83E-05		3.80E-01
50.2	2.83E-05				2.83E-05	2.83E-05		3.80E-01
52.5	2.83E-05					2.83E-05		3.80E-01
54.8	2.83E-05		4.60E+00					3.80E-01
57.1	2.83E-05		4.60E+00					3.80E-01
59.3	2.83E-05							3.80E-01
61.6	2.83E-05				1.90E-01	2.83E-05		3.80E-01
63.9	2.83E-05				1.90E-01	2.83E-05		3.80E-01
66.1	2.83E-05					2.83E-05	2.83E-05	3.80E-01
68.4	2.83E-05	2.83E-05					2.83E-05	3.80E-01
70.7	2.83E-05	2.83E-05			1.40E+00		2.83E-05	3.80E-01
72.9	2.83E-05				1.40E+00		2.83E-05	3.80E-01
75.2	2.83E-05			2.83E-05				3.80E-01
77.5	2.83E-05			2.83E-05				3.80E-01
79.8	2.83E-05		2.83E-05					3.80E-01
82.0	2.83E-05		2.83E-05					3.80E-01
84.3	2.83E-05	1.63E+01						3.80E-01
86.6	2.83E-05	1.63E+01						3.80E-01
88.8	2.83E-05							3.80E-01
91.1	2.83E-05							3.80E-01
93.4	2.83E-05							3.80E-01

Transect A Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
95.6	2.83E-05							3.80E-01
97.9	2.83E-05				2.30E+00	1.20E-01		3.80E-01
100.2	2.83E-05				2.30E+00	1.20E-01		3.80E-01
102.5	2.83E-05				2.30E+00			3.80E-01
104.7	2.83E-05							3.80E-01
107.0	2.83E-05							3.80E-01
109.3	2.83E-05							3.80E-01
111.5	2.83E-05			2.83E-05				3.80E-01
113.8	2.83E-05			2.83E-05				3.80E-01
116.1	2.83E-05							3.80E-01
118.3	2.83E-05							3.80E-01
120.6	2.83E-05							3.80E-01
122.9	2.83E-05				2.40E-01			3.80E-01
125.2	2.83E-05			7.61E+01	2.40E-01		2.83E-05	3.80E-01
127.4	2.83E-05			7.61E+01		9.00E-02	2.83E-05	3.80E-01
129.7	2.83E-05					9.00E-02	2.83E-05	3.80E-01
132.0	2.83E-05						2.83E-05	3.80E-01
134.2	2.83E-05						2.83E-05	3.80E-01
136.5	2.83E-05							3.80E-01
138.8	2.83E-05				1.60E-01			3.80E-01
141.0	2.83E-05			6.19E+01	1.60E-01			3.80E-01
143.3	2.83E-05			6.19E+01				3.80E-01
145.6	2.83E-05	2.67E-01						3.80E-01
147.9	2.83E-05	2.67E-01						3.80E-01
150.1	2.83E-05							3.80E-01
152.4	2.83E-05		6.61E+01	2.63E+00				3.80E-01
154.7	2.83E-05		6.61E+01	2.63E+00				3.80E-01
156.9	2.83E-05					8.00E-02		3.80E-01
159.2	2.83E-05					8.00E-02		3.80E-01
161.5	2.83E-05				7.20E-01			3.80E-01
163.7	2.83E-05	8.40E+00			7.20E-01			3.80E-01
166.0	2.83E-05	8.40E+00			7.20E-01			3.80E-01
168.3	2.83E-05					4.00E-02		3.80E-01
170.6	2.83E-05					4.00E-02		3.80E-01
172.8	2.83E-05					4.00E-02		3.80E-01
175.1	2.83E-05		2.83E-05				2.94E+00	3.80E-01
177.4	2.83E-05		2.83E-05				2.94E+00	3.80E-01
179.6								3.80E-01
181.9							2.29E+00	3.80E-01
184.2							2.29E+00	3.80E-01

Transect A Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect	AE108R	AE101R	AE102RR	AE103R	AE104R	AE109R	End of Transect
	0.0	49.0	124.0	199.0	274.0	349.0	499.0	610.0
186.4							2.29E+00	3.80E-01
188.7								3.80E-01
191.0								3.80E-01
193.3								3.80E-01
195.5							3.90E-01	3.80E-01
197.8							3.90E-01	3.80E-01
200.1								3.80E-01
202.3								3.80E-01
204.6							3.80E-01	3.80E-01
206.9							3.80E-01	3.80E-01
209.1							3.80E-01	3.80E-01
211.4							3.80E-01	3.80E-01
213.7								3.80E-01
216.0								3.80E-01
218.2								3.80E-01
220.5								3.80E-01
222.8								3.80E-01
225.0								3.80E-01
227.3			2.83E-05					3.80E-01
229.6			2.83E-05					3.80E-01
231.8								3.80E-01
234.1								3.80E-01
236.4								3.80E-01
								3.80E-01
								3.80E-01
								3.80E-01
							3.80E-01	3.80E-01
							3.80E-01	3.80E-01

Grid Completion: Hydraulic Conductivity

Transect B Time Period 1. Manual Interpolation

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | **Next Step: View Hydraulic Gradient Grid**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
40.0					9.00E-02
42.0					9.00E-02
44.0					9.00E-02
46.0				9.50E-01	9.00E-02
48.0				9.50E-01	9.00E-02
50.0				9.50E-01	9.00E-02
52.0					9.00E-02
54.0					9.00E-02
56.0					9.00E-02
58.0					9.00E-02
60.0					9.00E-02
62.0					9.00E-02
64.0					9.00E-02
66.0			2.83E-05		9.00E-02
68.0			2.83E-05		9.00E-02
70.0				1.30E-01	9.00E-02
72.0				1.30E-01	9.00E-02
74.0					9.00E-02
76.0			7.40E-01		9.00E-02
78.0			7.40E-01		9.00E-02
80.0	2.83E-05				9.00E-02
82.0	2.83E-05		1.30E-01		9.00E-02
84.0	2.83E-05		1.30E-01	1.20E-01	9.00E-02
86.0	2.83E-05			1.20E-01	9.00E-02
88.0	2.83E-05				9.00E-02
90.0	2.83E-05	2.83E-05			9.00E-02
92.0	2.83E-05	2.83E-05			9.00E-02
94.0	2.83E-05	2.83E-05			9.00E-02
96.0	2.83E-05		1.30E-01		9.00E-02
98.0	2.83E-05	6.00E-02	1.30E-01		9.00E-02
100.0	2.83E-05	6.00E-02			9.00E-02
102.0	2.83E-05	6.00E-02			9.00E-02

Transect B Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
104.0	2.83E-05				9.00E-02
106.0	2.83E-05				9.00E-02
108.0	2.83E-05	1.70E-01			9.00E-02
110.0	2.83E-05	1.70E-01			9.00E-02
112.0	2.83E-05				9.00E-02
114.0	2.83E-05				9.00E-02
116.0	2.83E-05				9.00E-02
118.0	2.83E-05				9.00E-02
120.0	2.83E-05				9.00E-02
122.0	2.83E-05				9.00E-02
124.0	2.83E-05	4.00E-02			9.00E-02
126.0	2.83E-05	4.00E-02			9.00E-02
128.0	2.83E-05	4.00E-02			9.00E-02
130.0	2.83E-05				9.00E-02
132.0	2.83E-05				9.00E-02
134.0	2.83E-05				9.00E-02
136.0	2.83E-05				9.00E-02
138.0	2.83E-05				9.00E-02
140.0	2.83E-05				9.00E-02
142.0	2.83E-05	1.16E+00			9.00E-02
144.0	2.83E-05	1.16E+00		1.10E-01	9.00E-02
146.0	2.83E-05	1.16E+00		1.10E-01	9.00E-02
148.0	2.83E-05			1.10E-01	9.00E-02
150.0	2.83E-05				9.00E-02
152.0	2.83E-05				9.00E-02
154.0	2.83E-05				9.00E-02
156.0	2.83E-05				9.00E-02
158.0	2.83E-05				9.00E-02
160.0	2.83E-05				9.00E-02
162.0	2.83E-05				9.00E-02
164.0	2.83E-05			9.00E-02	9.00E-02
166.0	2.83E-05			9.00E-02	9.00E-02
168.0	2.83E-05			9.00E-02	9.00E-02
170.0	2.83E-05				9.00E-02
172.0	2.83E-05				9.00E-02
174.0	2.83E-05				9.00E-02
176.0	2.83E-05				9.00E-02
178.0	2.83E-05				9.00E-02
180.0	2.83E-05				9.00E-02
182.0	2.83E-05				9.00E-02

Transect B Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
184.0	2.83E-05				9.00E-02
186.0	2.83E-05				9.00E-02
188.0	2.83E-05				9.00E-02
190.0	2.83E-05				9.00E-02
192.0	2.83E-05				9.00E-02
194.0	2.83E-05				9.00E-02
196.0	2.83E-05				9.00E-02
198.0	2.83E-05				9.00E-02
200.0	2.83E-05				9.00E-02
202.0	2.83E-05				9.00E-02
204.0	2.83E-05				9.00E-02
206.0	2.83E-05				9.00E-02
208.0	2.83E-05				9.00E-02
210.0	2.83E-05				9.00E-02
212.0	2.83E-05				9.00E-02
214.0	2.83E-05				9.00E-02
216.0	2.83E-05				9.00E-02
218.0	2.83E-05				9.00E-02
220.0	2.83E-05				9.00E-02
222.0	2.83E-05				9.00E-02
224.0	2.83E-05				9.00E-02
226.0	2.83E-05				9.00E-02
228.0	2.83E-05				9.00E-02
	2.83E-05				9.00E-02
	2.83E-05				9.00E-02
	2.83E-05				9.00E-02
	2.83E-05				9.00E-02
	2.83E-05				9.00E-02
	2.83E-05				9.00E-02

Grid Completion: Hydraulic Conductivity

Transect C Time Period 1. Manual Interpolation

Step 10: Interpolate K Horizontally		Export K Grid	Import K Grid		Next Step: View Hydraulic Gradient Grid
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
39.0	2.83E-05		2.83E-05
39.8	2.83E-05		2.83E-05
40.6	2.83E-05		2.83E-05
41.4	2.83E-05		2.83E-05
42.2	2.83E-05		2.83E-05
43.1	2.83E-05		2.83E-05
43.9	2.83E-05		2.83E-05
44.7	2.83E-05		2.83E-05
45.5	2.83E-05		2.83E-05
46.3	2.83E-05	2.83E-05	2.83E-05
47.1	2.83E-05	2.83E-05	2.83E-05
47.9	2.83E-05	2.83E-05	2.83E-05
48.7	2.83E-05	2.83E-05	2.83E-05
49.5	2.83E-05	2.83E-05	2.83E-05
50.3	2.83E-05	2.83E-05	2.83E-05
51.2	2.83E-05		2.83E-05
52.0	2.83E-05		2.83E-05
52.8	2.83E-05		2.83E-05
53.6	2.83E-05		2.83E-05
54.4	2.83E-05		2.83E-05
55.2	2.83E-05		2.83E-05
56.0	2.83E-05		2.83E-05
56.8	2.83E-05		2.83E-05
57.6	2.83E-05		2.83E-05
58.4	2.83E-05		2.83E-05
59.3	2.83E-05		2.83E-05
60.1	2.83E-05		2.83E-05
60.9	2.83E-05		2.83E-05
61.7	2.83E-05		2.83E-05
62.5	2.83E-05		2.83E-05
63.3	2.83E-05		2.83E-05
64.1	2.83E-05		2.83E-05

Transect C Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
64.9	2.83E-05		2.83E-05
65.7	2.83E-05		2.83E-05
66.5	2.83E-05		2.83E-05
67.4	2.83E-05		2.83E-05
68.2	2.83E-05		2.83E-05
69.0	2.83E-05		2.83E-05
69.8	2.83E-05		2.83E-05
70.6	2.83E-05		2.83E-05
71.4	2.83E-05		2.83E-05
72.2	2.83E-05		2.83E-05
73.0	2.83E-05		2.83E-05
73.8	2.83E-05		2.83E-05
74.6	2.83E-05		2.83E-05
75.5	2.83E-05		2.83E-05
76.3	2.83E-05		2.83E-05
77.1	2.83E-05		2.83E-05
77.9	2.83E-05		2.83E-05
78.7	2.83E-05		2.83E-05
79.5	2.83E-05		2.83E-05
80.3	2.83E-05		2.83E-05
81.1	2.83E-05		2.83E-05
81.9	2.83E-05		2.83E-05
82.7	2.83E-05		2.83E-05
83.6	2.83E-05		2.83E-05
84.4	2.83E-05		2.83E-05
85.2	2.83E-05	2.83E-05	2.83E-05
86.0	2.83E-05	2.83E-05	2.83E-05
86.8	2.83E-05	2.83E-05	2.83E-05
87.6	2.83E-05	2.83E-05	2.83E-05
88.4	2.83E-05	2.83E-05	2.83E-05
89.2	2.83E-05	2.83E-05	2.83E-05
90.0	2.83E-05		2.83E-05
90.8	2.83E-05		2.83E-05
91.7	2.83E-05		2.83E-05
92.5	2.83E-05		2.83E-05
93.3	2.83E-05		2.83E-05
94.1	2.83E-05		2.83E-05
94.9	2.83E-05		2.83E-05
95.7	2.83E-05		2.83E-05
96.5	2.83E-05		2.83E-05

Transect C Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
97.3	2.83E-05		2.83E-05
98.1	2.83E-05		2.83E-05
98.9	2.83E-05		2.83E-05
99.8	2.83E-05		2.83E-05
100.6	2.83E-05		2.83E-05
101.4	2.83E-05		2.83E-05
102.2	2.83E-05		2.83E-05
103.0	2.83E-05		2.83E-05
103.8	2.83E-05		2.83E-05
104.6	2.83E-05		2.83E-05
105.4	2.83E-05		2.83E-05
106.2	2.83E-05		2.83E-05
107.0	2.83E-05		2.83E-05
107.9	2.83E-05		2.83E-05
108.7	2.83E-05		2.83E-05
109.5	2.83E-05		2.83E-05
110.3	2.83E-05		2.83E-05
111.1	2.83E-05		2.83E-05
111.9	2.83E-05		2.83E-05
112.7	2.83E-05		2.83E-05
113.5	2.83E-05		2.83E-05
114.3	2.83E-05		2.83E-05
115.1	2.83E-05		2.83E-05
	2.83E-05		2.83E-05
	2.83E-05		2.83E-05
	2.83E-05		2.83E-05
	2.83E-05		2.83E-05
	2.83E-05		2.83E-05
	2.83E-05		2.83E-05

Grid Completion: Hydraulic Gradient

Building 1 Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid | **Next Step: Calculate Mass Flux**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
17.0								1.00E-03		
18.8								1.00E-03		
20.7							1.00E-03	1.00E-03		
22.5							1.00E-03	1.00E-03		
24.3							1.00E-03	1.00E-03		
26.2							1.00E-03	1.00E-03		
28.0							1.00E-03	1.00E-03		
29.8							1.00E-03	1.00E-03		
31.6					1.00E-03	1.00E-03	1.00E-03	1.00E-03		
33.5					1.00E-03	1.00E-03	1.00E-03	1.00E-03		
35.3				1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
37.1				1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
39.0				1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
40.8			1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
42.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
44.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
46.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
48.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
49.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
51.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
53.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
55.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
57.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
59.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
60.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
62.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
64.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
66.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
68.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
70.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
71.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
73.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

B uilding 1 Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
75.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
77.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
79.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
81.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
82.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
84.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
86.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
88.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
90.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
92.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
93.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
95.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
97.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
99.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
101.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
103.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
104.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
106.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
108.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
110.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
112.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
114.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
115.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
117.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
119.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
121.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
123.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
125.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
126.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
128.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
130.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
132.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
134.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
136.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
137.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
139.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
141.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
143.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
145.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
146.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Building 1 Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R		End of Transect
0.0		*213.0*	*218.0*	*228.0*	*288.0*	*353.0*	*378.0*	*388.0*	*418.0*	*450.0*	
148.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
150.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
152.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
154.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
156.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
157.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
159.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
161.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
163.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
165.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
167.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
168.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
170.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
172.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
174.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
176.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
178.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
179.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
181.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
183.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
185.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
187.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
189.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
	0.001	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	0.001	0.001	0.001	0.001	
	0.001	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	0.001	0.001	0.001	0.001	
	0.001	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	0.001	0.001	0.001	0.001	
	0.001	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	0.001	0.001	0.001	0.001	
	0.001	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	0.001	0.001	0.001	0.001	

Grid Completion: Hydraulic Gradient

Transect A Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid | **Next Step: Calculate Mass Flux**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
23.0							1.00E-03	1.00E-03
25.3							1.00E-03	1.00E-03
27.5			1.00E-03				1.00E-03	1.00E-03
29.8			1.00E-03				1.00E-03	1.00E-03
32.1	1.00E-03	1.00E-03	1.00E-03				1.00E-03	1.00E-03
34.4	1.00E-03	1.00E-03	1.00E-03				1.00E-03	1.00E-03
36.6	1.00E-03	1.00E-03	1.00E-03				1.00E-03	1.00E-03
38.9	1.00E-03	1.00E-03	1.00E-03				1.00E-03	1.00E-03
41.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03			1.00E-03	1.00E-03
43.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
45.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
48.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
50.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
52.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
54.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
57.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
59.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
61.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
63.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
66.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
68.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
70.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
72.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
75.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
77.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
79.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
82.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
84.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
86.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
88.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
91.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
93.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Transect A Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
95.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
97.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
100.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
102.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
104.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
107.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
109.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
111.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
113.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
116.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
118.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
120.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
122.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
125.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
127.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
129.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
132.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
134.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
136.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
138.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
141.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
143.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
145.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
147.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
150.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
152.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
154.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
156.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
159.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
161.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
163.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
166.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
168.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
170.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
172.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
175.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
177.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03			1.00E-03	1.00E-03
179.6			1.00E-03				1.00E-03	1.00E-03
181.9			1.00E-03				1.00E-03	1.00E-03
184.2			1.00E-03				1.00E-03	1.00E-03

Transect A Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Start of Transect	AE108R	AE101R	AE102RR	AE103R	AE104R	AE109R	End of Transect
0.0	49.0	124.0	199.0	274.0	349.0	499.0	610.0
186.4		1.00E-03				1.00E-03	1.00E-03
188.7		1.00E-03				1.00E-03	1.00E-03
191.0		1.00E-03				1.00E-03	1.00E-03
193.3		1.00E-03				1.00E-03	1.00E-03
195.5		1.00E-03				1.00E-03	1.00E-03
197.8		1.00E-03				1.00E-03	1.00E-03
200.1		1.00E-03				1.00E-03	1.00E-03
202.3		1.00E-03				1.00E-03	1.00E-03
204.6		1.00E-03				1.00E-03	1.00E-03
206.9		1.00E-03				1.00E-03	1.00E-03
209.1		1.00E-03				1.00E-03	1.00E-03
211.4		1.00E-03				1.00E-03	1.00E-03
213.7		1.00E-03				1.00E-03	1.00E-03
216.0		1.00E-03				1.00E-03	1.00E-03
218.2		1.00E-03				1.00E-03	1.00E-03
220.5		1.00E-03				1.00E-03	1.00E-03
222.8		1.00E-03				1.00E-03	1.00E-03
225.0		1.00E-03				1.00E-03	1.00E-03
227.3		1.00E-03				1.00E-03	1.00E-03
229.6		1.00E-03				1.00E-03	1.00E-03
231.8						1.00E-03	1.00E-03
234.1						1.00E-03	1.00E-03
236.4						1.00E-03	1.00E-03

0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001

Grid Completion: Hydraulic Gradient

Transect B Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally		Export i Grid	Import i Grid		Next Step: Calculate Mass Flux
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect	AE105R	TRC301R	AE106R	End of Transect
	0.0	*128.0*	*165.5*	*435.5*	*595.0*
40.0				1.00E-03	1.00E-03
42.0				1.00E-03	1.00E-03
44.0				1.00E-03	1.00E-03
46.0				1.00E-03	1.00E-03
48.0				1.00E-03	1.00E-03
50.0				1.00E-03	1.00E-03
52.0				1.00E-03	1.00E-03
54.0				1.00E-03	1.00E-03
56.0				1.00E-03	1.00E-03
58.0				1.00E-03	1.00E-03
60.0			1.00E-03	1.00E-03	1.00E-03
62.0			1.00E-03	1.00E-03	1.00E-03
64.0			1.00E-03	1.00E-03	1.00E-03
66.0			1.00E-03	1.00E-03	1.00E-03
68.0			1.00E-03	1.00E-03	1.00E-03
70.0			1.00E-03	1.00E-03	1.00E-03
72.0			1.00E-03	1.00E-03	1.00E-03
74.0			1.00E-03	1.00E-03	1.00E-03
76.0			1.00E-03	1.00E-03	1.00E-03
78.0			1.00E-03	1.00E-03	1.00E-03
80.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
82.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
84.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
86.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
88.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
90.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
92.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
94.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
96.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
98.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
100.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
102.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Transect B Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
104.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
106.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
108.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
110.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
112.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
114.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
116.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
118.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
120.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
122.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
124.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
126.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
128.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
130.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
132.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
134.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
136.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
138.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
140.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
142.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
144.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
146.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
148.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
150.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
152.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
154.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
156.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
158.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
160.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
162.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
164.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
166.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
168.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
170.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
172.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
174.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
176.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
178.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
180.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
182.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Transect B Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Start of Transect		AE105R	TRC301R	AE106R		End of Transect				
0.0		128.0	165.5	435.5	595.0					
184.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
186.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
188.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
190.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
192.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
194.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
196.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
198.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
200.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
202.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
204.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
206.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
208.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
210.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
212.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
214.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
216.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
218.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
220.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
222.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
224.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
226.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
228.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001

Grid Completion: Hydraulic Gradient

Transect C Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally			Export i Grid	Import i Grid	Next Step: Calculate Mass Flux
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
39.0	1.00E-03	1.00E-03	1.00E-03
39.8	1.00E-03	1.00E-03	1.00E-03
40.6	1.00E-03	1.00E-03	1.00E-03
41.4	1.00E-03	1.00E-03	1.00E-03
42.2	1.00E-03	1.00E-03	1.00E-03
43.1	1.00E-03	1.00E-03	1.00E-03
43.9	1.00E-03	1.00E-03	1.00E-03
44.7	1.00E-03	1.00E-03	1.00E-03
45.5	1.00E-03	1.00E-03	1.00E-03
46.3	1.00E-03	1.00E-03	1.00E-03
47.1	1.00E-03	1.00E-03	1.00E-03
47.9	1.00E-03	1.00E-03	1.00E-03
48.7	1.00E-03	1.00E-03	1.00E-03
49.5	1.00E-03	1.00E-03	1.00E-03
50.3	1.00E-03	1.00E-03	1.00E-03
51.2	1.00E-03	1.00E-03	1.00E-03
52.0	1.00E-03	1.00E-03	1.00E-03
52.8	1.00E-03	1.00E-03	1.00E-03
53.6	1.00E-03	1.00E-03	1.00E-03
54.4	1.00E-03	1.00E-03	1.00E-03
55.2	1.00E-03	1.00E-03	1.00E-03
56.0	1.00E-03	1.00E-03	1.00E-03
56.8	1.00E-03	1.00E-03	1.00E-03
57.6	1.00E-03	1.00E-03	1.00E-03
58.4	1.00E-03	1.00E-03	1.00E-03
59.3	1.00E-03	1.00E-03	1.00E-03
60.1	1.00E-03	1.00E-03	1.00E-03
60.9	1.00E-03	1.00E-03	1.00E-03
61.7	1.00E-03	1.00E-03	1.00E-03
62.5	1.00E-03	1.00E-03	1.00E-03
63.3	1.00E-03	1.00E-03	1.00E-03
64.1	1.00E-03	1.00E-03	1.00E-03

Transect C Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
64.9	1.00E-03	1.00E-03	1.00E-03
65.7	1.00E-03	1.00E-03	1.00E-03
66.5	1.00E-03	1.00E-03	1.00E-03
67.4	1.00E-03	1.00E-03	1.00E-03
68.2	1.00E-03	1.00E-03	1.00E-03
69.0	1.00E-03	1.00E-03	1.00E-03
69.8	1.00E-03	1.00E-03	1.00E-03
70.6	1.00E-03	1.00E-03	1.00E-03
71.4	1.00E-03	1.00E-03	1.00E-03
72.2	1.00E-03	1.00E-03	1.00E-03
73.0	1.00E-03	1.00E-03	1.00E-03
73.8	1.00E-03	1.00E-03	1.00E-03
74.6	1.00E-03	1.00E-03	1.00E-03
75.5	1.00E-03	1.00E-03	1.00E-03
76.3	1.00E-03	1.00E-03	1.00E-03
77.1	1.00E-03	1.00E-03	1.00E-03
77.9	1.00E-03	1.00E-03	1.00E-03
78.7	1.00E-03	1.00E-03	1.00E-03
79.5	1.00E-03	1.00E-03	1.00E-03
80.3	1.00E-03	1.00E-03	1.00E-03
81.1	1.00E-03	1.00E-03	1.00E-03
81.9	1.00E-03	1.00E-03	1.00E-03
82.7	1.00E-03	1.00E-03	1.00E-03
83.6	1.00E-03	1.00E-03	1.00E-03
84.4	1.00E-03	1.00E-03	1.00E-03
85.2	1.00E-03	1.00E-03	1.00E-03
86.0	1.00E-03	1.00E-03	1.00E-03
86.8	1.00E-03	1.00E-03	1.00E-03
87.6	1.00E-03	1.00E-03	1.00E-03
88.4	1.00E-03	1.00E-03	1.00E-03
89.2	1.00E-03	1.00E-03	1.00E-03
90.0	1.00E-03	1.00E-03	1.00E-03
90.8	1.00E-03	1.00E-03	1.00E-03
91.7	1.00E-03	1.00E-03	1.00E-03
92.5	1.00E-03	1.00E-03	1.00E-03
93.3	1.00E-03	1.00E-03	1.00E-03
94.1	1.00E-03	1.00E-03	1.00E-03
94.9	1.00E-03	1.00E-03	1.00E-03
95.7	1.00E-03	1.00E-03	1.00E-03
96.5	1.00E-03	1.00E-03	1.00E-03

Transect C Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Start of Transect		STM-8R	End of Transect
0.0		80.0	160.0
97.3	1.00E-03	1.00E-03	1.00E-03
98.1	1.00E-03	1.00E-03	1.00E-03
98.9	1.00E-03	1.00E-03	1.00E-03
99.8	1.00E-03	1.00E-03	1.00E-03
100.6	1.00E-03	1.00E-03	1.00E-03
101.4	1.00E-03	1.00E-03	1.00E-03
102.2	1.00E-03	1.00E-03	1.00E-03
103.0	1.00E-03	1.00E-03	1.00E-03
103.8	1.00E-03	1.00E-03	1.00E-03
104.6	1.00E-03	1.00E-03	1.00E-03
105.4	1.00E-03	1.00E-03	1.00E-03
106.2	1.00E-03	1.00E-03	1.00E-03
107.0	1.00E-03	1.00E-03	1.00E-03
107.9	1.00E-03	1.00E-03	1.00E-03
108.7	1.00E-03	1.00E-03	1.00E-03
109.5	1.00E-03	1.00E-03	1.00E-03
110.3	1.00E-03	1.00E-03	1.00E-03
111.1	1.00E-03	1.00E-03	1.00E-03
111.9	1.00E-03	1.00E-03	1.00E-03
112.7	1.00E-03	1.00E-03	1.00E-03
113.5	1.00E-03	1.00E-03	1.00E-03
114.3	1.00E-03	1.00E-03	1.00E-03
115.1	1.00E-03	1.00E-03	1.00E-03

0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001

Mass Flux Result

TOTAL MASS FLUX 7.54E-01 (g/day) 2.75E-01 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 1

SELECT TIME PERIOD TO VIEW: 1

Building 1 PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
17.0								0.00E+00		
18.8								0.00E+00		
20.7							0.00E+00	0.00E+00		
22.5							0.00E+00	2.28E-06		
24.3							0.00E+00	2.28E-06		
26.2							0.00E+00	2.28E-06		
28.0							0.00E+00	2.28E-06		
29.8							0.00E+00	2.28E-06		
31.6					0.00E+00	0.00E+00	0.00E+00	2.28E-06		
33.5					0.00E+00	0.00E+00	0.00E+00	2.28E-06		
35.3				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
37.1				0.00E+00	0.00E+00	0.00E+00	5.04E-07	0.00E+00	4.02E-07	0
39.0				0.00E+00	0.00E+00	0.00E+00	5.04E-07	0.00E+00	4.02E-07	0
40.8			0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E-07	0.00E+00	4.02E-07	0
42.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E-07	0.00E+00	4.02E-07	0
44.5	0	0.00E+00	0.00E+00	3.64E-03	9.07E-02	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
46.3	0	0.00E+00	0.00E+00	3.64E-03	9.07E-02	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
48.1	0	0.00E+00	0.00E+00	3.64E-03	9.07E-02	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
49.9	0	8.05E-03	0.00E+00	3.64E-03	9.07E-02	1.59E-06	0.00E+00	0.00E+00	4.02E-07	0
51.8	0	8.05E-03	0.00E+00	0.00E+00	9.07E-02	1.59E-06	0.00E+00	0.00E+00	4.02E-07	0
53.6	0	8.05E-03	0.00E+00	0.00E+00	9.07E-02	1.59E-06	0.00E+00	0.00E+00	4.02E-07	0
55.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-06	0.00E+00	0.00E+00	4.02E-07	0
57.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-06	0.00E+00	0.00E+00	4.02E-07	0
59.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-06	0.00E+00	0.00E+00	4.02E-07	0
60.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
62.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
64.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
66.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
68.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
70.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-07	0.00E+00	4.02E-07	0
71.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-07	0.00E+00	4.02E-07	0
73.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-07	0.00E+00	4.02E-07	0

B uilding 1 PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0		AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
75.6		0	0.00E+00	0.00E+00	1.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
77.4		0	0.00E+00	0.00E+00	1.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
79.2		0	0.00E+00	0.00E+00	1.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
81.0		0	0.00E+00	0.00E+00	1.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
82.9		0	0.00E+00	0.00E+00	1.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
84.7		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
86.5		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
88.4		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
90.2		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
92.0		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
93.9		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
95.7		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
97.5		0	0.00E+00	0.00E+00	5.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
99.3		0	0.00E+00	0.00E+00	5.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
101.2		0	0.00E+00	0.00E+00	5.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
103.0		0	0.00E+00	0.00E+00	5.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
104.8		0	7.71E-04	0.00E+00	5.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
106.7		0	7.71E-04	0.00E+00	5.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
108.5		0	7.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
110.3		0	7.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
112.2		0	7.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.90E-07	0.00E+00	4.02E-07	0
114.0		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.90E-07	0.00E+00	4.02E-07	0
115.8		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.90E-07	0.00E+00	4.02E-07	0
117.7		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.90E-07	0.00E+00	4.02E-07	0
119.5		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
121.3		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
123.1		0	1.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
125.0		0	1.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
126.8		0	1.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
128.6		0	1.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
130.5		0	1.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
132.3		0	0.00E+00	0.00E+00	2.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
134.1		0	0.00E+00	0.00E+00	2.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
136.0		0	0.00E+00	0.00E+00	2.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
137.8		0	0.00E+00	0.00E+00	2.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
139.6		0	0.00E+00	0.00E+00	2.48E-03	0.00E+00	0.00E+00	4.94E-07	0.00E+00	4.02E-07	0
141.4		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E-07	0.00E+00	4.02E-07	0
143.3		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E-07	0.00E+00	4.02E-07	0
145.1		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
146.9		0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0

B uilding 1 PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R	End of Transect
	0.0		213.0	218.0	228.0	288.0	353.0	378.0	388.0	418.0	450.0
148.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
150.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
152.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
154.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
156.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
157.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
159.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-07	0
161.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
163.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
165.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
167.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
168.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
170.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
172.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
174.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
176.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
178.0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
179.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
181.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
183.5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
185.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
187.2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
189.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Mass Flux Result

TOTAL MASS FLUX 1.95E+00 (g/day) 7.12E-01 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 2

SELECT TIME PERIOD TO VIEW: 1

Transect A PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
23.0							0.00E+00	0
25.3							0.00E+00	0
27.5			0.00E+00				0.00E+00	0
29.8			0.00E+00				0.00E+00	0
32.1	0	0.00E+00	0.00E+00				0.00E+00	0
34.4	0	0.00E+00	0.00E+00				0.00E+00	0
36.6	0	5.64E-11	0.00E+00				0.00E+00	0
38.9	0	5.64E-11	0.00E+00				0.00E+00	0
41.2	0	5.64E-11	0.00E+00	0.00E+00			0.00E+00	0
43.4	0	0.00E+00	0.00E+00	6.01E-10	0.00E+00	0.00E+00	0.00E+00	0
45.7	0	0.00E+00	0.00E+00	6.01E-10	0.00E+00	0.00E+00	0.00E+00	0
48.0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-08	0.00E+00	0
50.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-08	0.00E+00	0
52.5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-08	0.00E+00	0
54.8	0	0.00E+00	7.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
57.1	0	0.00E+00	7.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
59.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
61.6	0	0.00E+00	0.00E+00	0.00E+00	2.38E-03	0.00E+00	0.00E+00	0
63.9	0	0.00E+00	0.00E+00	0.00E+00	2.38E-03	0.00E+00	0.00E+00	0
66.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
68.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
70.7	0	0.00E+00	0.00E+00	0.00E+00	2.30E-02	0.00E+00	0.00E+00	0
72.9	0	0.00E+00	0.00E+00	0.00E+00	2.30E-02	0.00E+00	0.00E+00	0
75.2	0	0.00E+00	0.00E+00	1.64E-08	0.00E+00	0.00E+00	0.00E+00	0
77.5	0	0.00E+00	0.00E+00	1.64E-08	0.00E+00	0.00E+00	0.00E+00	0
79.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
82.0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
84.3	0	2.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
86.6	0	2.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
88.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
91.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
93.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0

Transect A PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0		AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
95.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
97.9	0	0.00E+00	0.00E+00	0.00E+00	5.44E-02	1.39E-03	0.00E+00	0	
100.2	0	0.00E+00	0.00E+00	0.00E+00	5.44E-02	1.39E-03	0.00E+00	0	
102.5	0	0.00E+00	0.00E+00	0.00E+00	5.44E-02	0.00E+00	0.00E+00	0	
104.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
107.0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
109.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
111.5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
113.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
116.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
118.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
120.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
122.9	0	0.00E+00	0.00E+00	0.00E+00	5.79E-03	0.00E+00	0.00E+00	0	
125.2	0	0.00E+00	0.00E+00	2.39E-01	5.79E-03	0.00E+00	0.00E+00	0	
127.4	0	0.00E+00	0.00E+00	2.39E-01	0.00E+00	0.00E+00	0.00E+00	0	
129.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
132.0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
134.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
136.5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
138.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
141.0	0	0.00E+00	0.00E+00	5.37E-01	0.00E+00	0.00E+00	0.00E+00	0	
143.3	0	0.00E+00	0.00E+00	5.37E-01	0.00E+00	0.00E+00	0.00E+00	0	
145.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
147.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
150.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
152.4	0	0.00E+00	9.88E-03	5.07E-02	0.00E+00	0.00E+00	0.00E+00	0	
154.7	0	0.00E+00	9.88E-03	5.07E-02	0.00E+00	0.00E+00	0.00E+00	0	
156.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.52E-04	0.00E+00	0	
159.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.52E-04	0.00E+00	0	
161.5	0	0.00E+00	0.00E+00	0.00E+00	1.28E-02	0.00E+00	0.00E+00	0	
163.7	0	7.03E-04	0.00E+00	0.00E+00	1.28E-02	0.00E+00	0.00E+00	0	
166.0	0	7.03E-04	0.00E+00	0.00E+00	1.28E-02	0.00E+00	0.00E+00	0	
168.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
170.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
172.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	
175.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-05	0	
177.4	0	0.00E+00	0.00E+00	0.00E+00			1.23E-05	0	
179.6			0.00E+00				0.00E+00	0	
181.9			0.00E+00				0.00E+00	0	
184.2			0.00E+00				0.00E+00	0	

Transect A PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect	AE108R	AE101R	AE102RR	AE103R	AE104R	AE109R	End of Transect
	0.0	49.0	124.0	199.0	274.0	349.0	499.0	610.0
186.4			0.00E+00				0.00E+00	0
188.7			0.00E+00				0.00E+00	0
191.0			0.00E+00				0.00E+00	0
193.3			0.00E+00				0.00E+00	0
195.5			0.00E+00				2.00E-05	0
197.8			0.00E+00				2.00E-05	0
200.1			0.00E+00				0.00E+00	0
202.3			0.00E+00				0.00E+00	0
204.6			0.00E+00				1.59E-06	0
206.9			0.00E+00				1.59E-06	0
209.1			0.00E+00				1.59E-06	0
211.4			0.00E+00				1.59E-06	0
213.7			0.00E+00				0.00E+00	0
216.0			0.00E+00				0.00E+00	0
218.2			0.00E+00				0.00E+00	0
220.5			0.00E+00				0.00E+00	0
222.8			0.00E+00				0.00E+00	0
225.0			0.00E+00				0.00E+00	0
227.3			2.32E-08				0.00E+00	0
229.6			2.32E-08				0.00E+00	0
231.8							0.00E+00	0
234.1							0.00E+00	0.00E+00
236.4							0.00E+00	0.00E+00

Mass Flux Result

TOTAL MASS FLUX 1.62E-03 (g/day) 5.92E-04 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 3

SELECT TIME PERIOD TO VIEW: 1

Transect B PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
40.0				0.00E+00	0
42.0				0.00E+00	0
44.0				0.00E+00	0
46.0				2.08E-05	0
48.0				2.08E-05	0
50.0				2.08E-05	0
52.0				0.00E+00	0
54.0				0.00E+00	0
56.0				0.00E+00	0
58.0				0.00E+00	0
60.0			0.00E+00	0.00E+00	0
62.0			0.00E+00	0.00E+00	0
64.0			0.00E+00	0.00E+00	0
66.0			0.00E+00	0.00E+00	0
68.0			0.00E+00	0.00E+00	0
70.0			0.00E+00	0.00E+00	0
72.0			0.00E+00	0.00E+00	0
74.0			0.00E+00	0.00E+00	0
76.0			2.58E-04	0.00E+00	0
78.0			2.58E-04	0.00E+00	0
80.0	0	0.00E+00	0.00E+00	0.00E+00	0
82.0	0	0.00E+00	4.64E-05	0.00E+00	0
84.0	0	0.00E+00	4.64E-05	3.21E-06	0
86.0	0	0.00E+00	0.00E+00	3.21E-06	0
88.0	0	0.00E+00	0.00E+00	0.00E+00	0
90.0	0	0.00E+00	0.00E+00	0.00E+00	0
92.0	0	0.00E+00	0.00E+00	0.00E+00	0
94.0	0	0.00E+00	0.00E+00	0.00E+00	0
96.0	0	0.00E+00	1.81E-05	0.00E+00	0
98.0	0	1.27E-05	1.81E-05	0.00E+00	0
100.0	0	1.27E-05	0.00E+00	0.00E+00	0
102.0	0	1.27E-05	0.00E+00	0.00E+00	0

Transect B PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE105R	TRC301R	AE106R	End of Transect
	0.0		128.0	165.5	435.5	595.0
104.0	0	0.00E+00	0.00E+00	0.00E+00	0	
106.0	0	0.00E+00	0.00E+00	0.00E+00	0	
108.0	0	4.22E-05	0.00E+00	0.00E+00	0	
110.0	0	4.22E-05	0.00E+00	0.00E+00	0	
112.0	0	0.00E+00	0.00E+00	0.00E+00	0	
114.0	0	0.00E+00	0.00E+00	0.00E+00	0	
116.0	0	0.00E+00	0.00E+00	0.00E+00	0	
118.0	0	0.00E+00	0.00E+00	0.00E+00	0	
120.0	0	0.00E+00	0.00E+00	0.00E+00	0	
122.0	0	0.00E+00	0.00E+00	0.00E+00	0	
124.0	0	9.56E-06	0.00E+00	0.00E+00	0	
126.0	0	9.56E-06	0.00E+00	0.00E+00	0	
128.0	0	9.56E-06	0.00E+00	0.00E+00	0	
130.0	0	0.00E+00	0.00E+00	0.00E+00	0	
132.0	0	0.00E+00	0.00E+00	0.00E+00	0	
134.0	0	0.00E+00	0.00E+00	0.00E+00	0	
136.0	0	0.00E+00	0.00E+00	0.00E+00	0	
138.0	0	0.00E+00	0.00E+00	0.00E+00	0	
140.0	0	0.00E+00	0.00E+00	0.00E+00	0	
142.0	0	2.50E-04	0.00E+00	0.00E+00	0	
144.0	0	2.50E-04	0.00E+00	0.00E+00	0	
146.0	0	2.50E-04	0.00E+00	0.00E+00	0	
148.0	0	0.00E+00	0.00E+00	0.00E+00	0	
150.0	0	0.00E+00	0.00E+00	0.00E+00	0	
152.0	0	0.00E+00	0.00E+00	0.00E+00	0	
154.0	0	0.00E+00	0.00E+00	0.00E+00	0	
156.0	0	0.00E+00	0.00E+00	0.00E+00	0	
158.0	0	0.00E+00	0.00E+00	0.00E+00	0	
160.0	0	0.00E+00	0.00E+00	0.00E+00	0	
162.0	0	0.00E+00	0.00E+00	0.00E+00	0	
164.0	0	0.00E+00	0.00E+00	1.97E-06	0	
166.0	0	0.00E+00	0.00E+00	1.97E-06	0	
168.0	0	0.00E+00	0.00E+00	1.97E-06	0	
170.0	0	0.00E+00	0.00E+00	0.00E+00	0	
172.0	0	0.00E+00	0.00E+00	0.00E+00	0	
174.0	0	0.00E+00	0.00E+00	0.00E+00	0	
176.0	0	0.00E+00	0.00E+00	0.00E+00	0	
178.0	0	0.00E+00	0.00E+00	0.00E+00	0	
180.0	0	0.00E+00	0.00E+00	0.00E+00	0	
182.0	0	0.00E+00	0.00E+00	0.00E+00	0	

Transect B PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
184.0	0	0.00E+00	0.00E+00	0.00E+00	0
186.0	0	0.00E+00	0.00E+00	0.00E+00	0
188.0	0	0.00E+00	0.00E+00	0.00E+00	0
190.0	0	0.00E+00	0.00E+00	0.00E+00	0
192.0	0	0.00E+00	0.00E+00	0.00E+00	0
194.0	0	0.00E+00	0.00E+00	0.00E+00	0
196.0	0	0.00E+00	0.00E+00	0.00E+00	0
198.0	0	0.00E+00	0.00E+00	0.00E+00	0
200.0	0	0.00E+00	0.00E+00	0.00E+00	0
202.0	0	0.00E+00	0.00E+00	0.00E+00	0
204.0	0	0.00E+00	0.00E+00	0.00E+00	0
206.0	0	0.00E+00	0.00E+00	0.00E+00	0
208.0	0	0.00E+00	0.00E+00	0.00E+00	0
210.0	0	0.00E+00	0.00E+00	0.00E+00	0
212.0	0	0.00E+00	0.00E+00	0.00E+00	0
214.0	0	0.00E+00	0.00E+00	0.00E+00	0
216.0	0	0.00E+00	0.00E+00	0.00E+00	0
218.0	0	0.00E+00	0.00E+00	0.00E+00	0
220.0	0	0.00E+00	0.00E+00	0.00E+00	0
222.0	0	0.00E+00	0.00E+00	0.00E+00	0
224.0	0	0.00E+00	0.00E+00	0.00E+00	0
226.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
228.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Mass Flux Result

TOTAL MASS FLUX 7.79E-10 (g/day) 2.84E-10 (kg/yr)

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

SELECT TRANSECT TO VIEW: Transect 4

SELECT TIME PERIOD TO VIEW: 1

Transect C PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
39.0	0	0.00E+00	0
39.8	0	0.00E+00	0
40.6	0	0.00E+00	0
41.4	0	0.00E+00	0
42.2	0	0.00E+00	0
43.1	0	0.00E+00	0
43.9	0	0.00E+00	0
44.7	0	0.00E+00	0
45.5	0	0.00E+00	0
46.3	0	1.04E-10	0
47.1	0	1.04E-10	0
47.9	0	1.04E-10	0
48.7	0	1.04E-10	0
49.5	0	1.04E-10	0
50.3	0	1.04E-10	0
51.2	0	0.00E+00	0
52.0	0	0.00E+00	0
52.8	0	0.00E+00	0
53.6	0	0.00E+00	0
54.4	0	0.00E+00	0
55.2	0	0.00E+00	0
56.0	0	0.00E+00	0
56.8	0	0.00E+00	0
57.6	0	0.00E+00	0
58.4	0	0.00E+00	0
59.3	0	0.00E+00	0
60.1	0	0.00E+00	0
60.9	0	0.00E+00	0
61.7	0	0.00E+00	0
62.5	0	0.00E+00	0
63.3	0	0.00E+00	0
64.1	0	0.00E+00	0

Transect C PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
64.9	0	0.00E+00	0
65.7	0	0.00E+00	0
66.5	0	0.00E+00	0
67.4	0	0.00E+00	0
68.2	0	0.00E+00	0
69.0	0	0.00E+00	0
69.8	0	0.00E+00	0
70.6	0	0.00E+00	0
71.4	0	0.00E+00	0
72.2	0	0.00E+00	0
73.0	0	0.00E+00	0
73.8	0	0.00E+00	0
74.6	0	0.00E+00	0
75.5	0	0.00E+00	0
76.3	0	0.00E+00	0
77.1	0	0.00E+00	0
77.9	0	0.00E+00	0
78.7	0	0.00E+00	0
79.5	0	0.00E+00	0
80.3	0	0.00E+00	0
81.1	0	0.00E+00	0
81.9	0	0.00E+00	0
82.7	0	0.00E+00	0
83.6	0	0.00E+00	0
84.4	0	0.00E+00	0
85.2	0	2.60E-11	0
86.0	0	2.60E-11	0
86.8	0	2.60E-11	0
87.6	0	2.60E-11	0
88.4	0	2.60E-11	0
89.2	0	2.60E-11	0
90.0	0	0.00E+00	0
90.8	0	0.00E+00	0
91.7	0	0.00E+00	0
92.5	0	0.00E+00	0
93.3	0	0.00E+00	0
94.1	0	0.00E+00	0
94.9	0	0.00E+00	0
95.7	0	0.00E+00	0
96.5	0	0.00E+00	0

Transect C PCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
97.3	0	0.00E+00	0
98.1	0	0.00E+00	0
98.9	0	0.00E+00	0
99.8	0	0.00E+00	0
100.6	0	0.00E+00	0
101.4	0	0.00E+00	0
102.2	0	0.00E+00	0
103.0	0	0.00E+00	0
103.8	0	0.00E+00	0
104.6	0	0.00E+00	0
105.4	0	0.00E+00	0
106.2	0	0.00E+00	0
107.0	0	0.00E+00	0
107.9	0	0.00E+00	0
108.7	0	0.00E+00	0
109.5	0	0.00E+00	0
110.3	0	0.00E+00	0
111.1	0	0.00E+00	0
111.9	0	0.00E+00	0
112.7	0	0.00E+00	0
113.5	0	0.00E+00	0
114.3	0.00E+00	0.00E+00	0.00E+00
115.1	0.00E+00	0.00E+00	0.00E+00

Transect Calculator: Mass Flux Summary

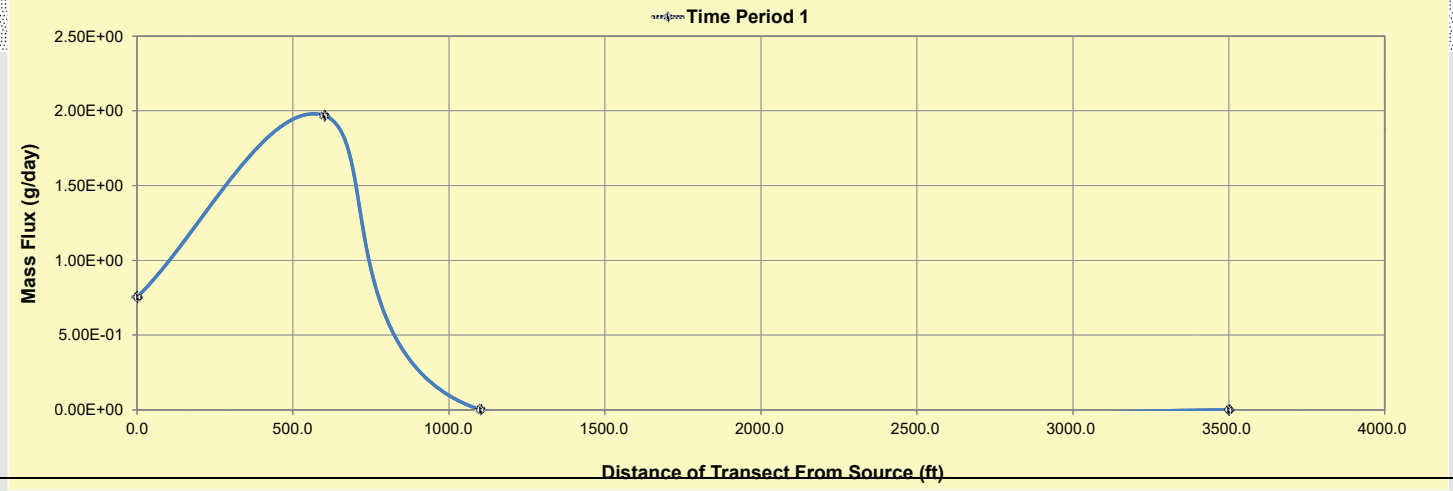
Version 2.01

Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Bedrock Aquifer

Mass Flux Summary for PCE

	Distance from Source (ft)	Mass Flux (g/day) Time Period 1	Time Period 2	Time Period 3	Time Period 4	Time Period 5
Transect 1	0	7.54E-01				
Transect 2	600	1.97E+00				
Transect 3	1100	1.62E-03				
Transect 4	3500	7.79E-10				
Transect 5						

85th percentile from Advanced Uncertainty Analysis
Maximum of the three Toolkit interpolation schemes
Value using selected interpolation schemes
Minimum of the three Toolkit interpolation schemes
15th percentile from Advanced Uncertainty Analysis



Transect 1: Building 1
Transect 2: Transect A
Transect 3: Transect B
Transect 4: Transect C

Next Step: | View Flux Result | View Conc Grid | Print | HELP

Grid Completion: Concentration

Building 1 Time Period 1. Manual Interpolation

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | Next Step: Interpolate Hydraulic Conductivity Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
17.0										
18.8										
20.7										
22.5								1.00E+00		
24.3								1.00E+00		
26.2								1.00E+00		
28.0								1.00E+00		
29.8								1.00E+00		
31.6								1.00E+00		
33.5								1.00E+00		
35.3										0
37.1							1.40E+00		4.40E+01	0
39.0							1.40E+00		4.40E+01	0
40.8							1.40E+00		4.40E+01	0
42.6	0						1.40E+00		4.40E+01	0
44.5	0		0.00E+00	6.60E+03	1.50E+05				4.40E+01	0
46.3	0		0.00E+00	6.60E+03	1.50E+05		0.00E+00		4.40E+01	0
48.1	0		0.00E+00	6.60E+03	1.50E+05		0.00E+00		4.40E+01	0
49.9	0	6.00E+02	0.00E+00	6.60E+03	1.50E+05	2.80E+00	0.00E+00		4.40E+01	0
51.8	0	6.00E+02	0.00E+00		1.50E+05	2.80E+00	0.00E+00		4.40E+01	0
53.6	0	6.00E+02	0.00E+00		1.50E+05	2.80E+00			4.40E+01	0
55.4	0		0.00E+00			2.80E+00			4.40E+01	0
57.3	0		0.00E+00			2.80E+00			4.40E+01	0
59.1	0		0.00E+00			2.80E+00			4.40E+01	0
60.9	0		0.00E+00						4.40E+01	0
62.8	0								4.40E+01	0
64.6	0								4.40E+01	0
66.4	0								4.40E+01	0
68.2	0								4.40E+01	0
70.1	0						3.40E+00		4.40E+01	0
71.9	0	0.00E+00					3.40E+00		4.40E+01	0
73.7	0	0.00E+00					3.40E+00		4.40E+01	0

B uilding 1 TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R	End of Transect
	0.0		213.0	218.0	228.0	288.0	353.0	378.0	388.0	418.0	450.0
75.6		0	0.00E+00		1.90E+04					4.40E+01	0
77.4		0			1.90E+04					4.40E+01	0
79.2		0			1.90E+04					4.40E+01	0
81.0		0	0.00E+00		1.90E+04					4.40E+01	0
82.9		0	0.00E+00		1.90E+04					4.40E+01	0
84.7		0	0.00E+00							4.40E+01	0
86.5		0	0.00E+00							4.40E+01	0
88.4		0								4.40E+01	0
90.2		0						0.00E+00		4.40E+01	0
92.0		0						0.00E+00		4.40E+01	0
93.9		0						0.00E+00		4.40E+01	0
95.7		0								4.40E+01	0
97.5		0			3.80E+03					4.40E+01	0
99.3		0			3.80E+03					4.40E+01	0
101.2		0			3.80E+03					4.40E+01	0
103.0		0			3.80E+03					4.40E+01	0
104.8		0	5.30E+02		3.80E+03					4.40E+01	0
106.7		0	5.30E+02		3.80E+03					4.40E+01	0
108.5		0	5.30E+02							4.40E+01	0
110.3		0	5.30E+02							4.40E+01	0
112.2		0	5.30E+02					7.00E+01		4.40E+01	0
114.0		0						7.00E+01		4.40E+01	0
115.8		0						7.00E+01		4.40E+01	0
117.7		0						7.00E+01		4.40E+01	0
119.5		0								4.40E+01	0
121.3		0								4.40E+01	0
123.1		0	1.60E+03							4.40E+01	0
125.0		0	1.60E+03							4.40E+01	0
126.8		0	1.60E+03							4.40E+01	0
128.6		0	1.60E+03							4.40E+01	0
130.5		0	1.60E+03							4.40E+01	0
132.3		0			6.70E+03					4.40E+01	0
134.1		0			6.70E+03					4.40E+01	0
136.0		0			6.70E+03					4.40E+01	0
137.8		0			6.70E+03					4.40E+01	0
139.6		0			6.70E+03			5.20E+01		4.40E+01	0
141.4		0						5.20E+01		4.40E+01	0
143.3		0						5.20E+01		4.40E+01	0
145.1		0								4.40E+01	0
146.9		0								4.40E+01	0

B uilding 1 TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R	End of Transect
	0.0		213.0	218.0	228.0	288.0	353.0	378.0	388.0	418.0	450.0
148.8	0									4.40E+01	0
150.6	0									4.40E+01	0
152.4	0									4.40E+01	0
154.3	0									4.40E+01	0
156.1	0									4.40E+01	0
157.9	0									4.40E+01	0
159.7	0									4.40E+01	0
161.6	0										0
163.4	0										0
165.2	0										0
167.1	0										0
168.9	0										0
170.7	0										0
172.6	0										0
174.4	0										0
176.2	0										0
178.0	0										0
179.9	0										0
181.7	0										0
183.5	0										0
185.4	0										0
187.2	0.00E+00										0.00E+00
189.0	0.00E+00										0.00E+00
190.9	0.00E+00										0.00E+00
192.7	0.00E+00										0.00E+00
194.5	0.00E+00										0.00E+00
196.3	0.00E+00										0.00E+00
198.2	0.00E+00										0.00E+00

Grid Completion: Concentration

Transect A Time Period 1. Manual Interpolation

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | **Next Step: Interpolate Hydraulic Conductivity Grid**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
23.0								0
25.3								0
27.5								0
29.8			0.00E+00					0
32.1	0		0.00E+00					0
34.4	0		0.00E+00					0
36.6	0	5.00E-01						0
38.9	0	5.00E-01					0.00E+00	0
41.2	0	5.00E-01					0.00E+00	0
43.4	0			2.00E+02				0
45.7	0			2.00E+02				0
48.0	0				0.00E+00	1.20E+03		0
50.2	0				0.00E+00	1.20E+03		0
52.5	0					1.20E+03		0
54.8	0		9.10E+01					0
57.1	0		9.10E+01					0
59.3	0							0
61.6	0				4.30E+03	0.00E+00		0
63.9	0				4.30E+03	0.00E+00		0
66.1	0					0.00E+00	0.00E+00	0
68.4	0	0.00E+00					0.00E+00	0
70.7	0	0.00E+00			6.00E+03		0.00E+00	0
72.9	0				6.00E+03		0.00E+00	0
75.2	0			4.20E+02				0
77.5	0			4.20E+02				0
79.8	0		0.00E+00					0
82.0	0		0.00E+00					0
84.3	0	2.40E+01						0
86.6	0	2.40E+01						0
88.8	0							0
91.1	0							0
93.4	0							0

Transect A TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
95.6	0							0
97.9	0				8.00E+03	2.80E+03		0
100.2	0				8.00E+03	2.80E+03		0
102.5	0				8.00E+03			0
104.7	0							0
107.0	0							0
109.3	0							0
111.5	0			0.00E+00				0
113.8	0			0.00E+00				0
116.1	0							0
118.3	0							0
120.6	0							0
122.9	0				6.90E+03			0
125.2	0			1.10E+03	6.90E+03		0.00E+00	0
127.4	0			1.10E+03		0.00E+00	0.00E+00	0
129.7	0					0.00E+00	0.00E+00	0
132.0	0						0.00E+00	0
134.2	0						0.00E+00	0
136.5	0							0
138.8	0				0.00E+00			0
141.0	0			2.70E+03	0.00E+00			0
143.3	0			2.70E+03				0
145.6	0	0.00E+00						0
147.9	0	0.00E+00						0
150.1	0							0
152.4	0		1.60E+02	4.70E+03				0
154.7	0		1.60E+02	4.70E+03				0
156.9	0					2.70E+03		0
159.2	0					2.70E+03		0
161.5	0				5.20E+03			0
163.7	0	5.10E+01			5.20E+03			0
166.0	0	5.10E+01			5.20E+03			0
168.3	0					0.00E+00		0
170.6	0					0.00E+00		0
172.8	0					0.00E+00		0
175.1	0		0.00E+00				1.00E+01	0
177.4	0		0.00E+00				1.00E+01	0
179.6								0
181.9							0.00E+00	0
184.2							0.00E+00	0

Transect A TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect	AE108R	AE101R	AE102RR	AE103R	AE104R	AE109R	End of Transect
	0.0	49.0	124.0	199.0	274.0	349.0	499.0	610.0
186.4							0.00E+00	0
188.7								0
191.0								0
193.3								0
195.5							1.10E+02	0
197.8							1.10E+02	0
200.1								0
202.3								0
204.6							3.60E+00	0
206.9							3.60E+00	0
209.1							3.60E+00	0
211.4							3.60E+00	0
213.7								0
216.0								0
218.2								0
220.5								0
222.8								0
225.0								0
227.3			1.80E+03					0
229.6			1.80E+03					0
231.8								0
234.1								0.00E+00
236.4								0.00E+00
238.7								0.00E+00
240.9								0.00E+00
243.2								0.00E+00
245.5							1.90E+00	0.00E+00
247.7							1.90E+00	0.00E+00

Grid Completion: Concentration

Transect B Time Period 1. Manual Interpolation

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | Next Step: Interpolate Hydraulic Conductivity Grid

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
40.0					0
42.0					0
44.0					0
46.0				5.30E+00	0
48.0				5.30E+00	0
50.0				5.30E+00	0
52.0					0
54.0					0
56.0					0
58.0					0
60.0					0
62.0					0
64.0					0
66.0			2.70E+01		0
68.0			2.70E+01		0
70.0				0.00E+00	0
72.0				0.00E+00	0
74.0					0
76.0			1.00E+02		0
78.0			1.00E+02		0
80.0	0				0
82.0	0		9.70E+01		0
84.0	0		9.70E+01	8.60E+00	0
86.0	0			8.60E+00	0
88.0	0				0
90.0	0	0.00E+00			0
92.0	0	0.00E+00			0
94.0	0	0.00E+00			0
96.0	0		6.10E+01		0
98.0	0	1.40E+02	6.10E+01		0
100.0	0	1.40E+02			0
102.0	0	1.40E+02			0

Transect B TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
104.0	0				0
106.0	0				0
108.0	0	1.50E+02			0
110.0	0	1.50E+02			0
112.0	0				0
114.0	0				0
116.0	0				0
118.0	0				0
120.0	0				0
122.0	0				0
124.0	0	1.70E+02			0
126.0	0	1.70E+02			0
128.0	0	1.70E+02			0
130.0	0				0
132.0	0				0
134.0	0				0
136.0	0				0
138.0	0				0
140.0	0				0
142.0	0	1.50E+02			0
144.0	0	1.50E+02		0.00E+00	0
146.0	0	1.50E+02		0.00E+00	0
148.0	0			0.00E+00	0
150.0	0				0
152.0	0				0
154.0	0				0
156.0	0				0
158.0	0				0
160.0	0				0
162.0	0				0
164.0	0			4.00E+01	0
166.0	0			4.00E+01	0
168.0	0			4.00E+01	0
170.0	0				0
172.0	0				0
174.0	0				0
176.0	0				0
178.0	0				0
180.0	0				0
182.0	0				0

Transect B TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect	AE105R	TRC301R	AE106R	End of Transect
	0.0	128.0	165.5	435.5	595.0
184.0	0				0
186.0	0				0
188.0	0				0
190.0	0				0
192.0	0				0
194.0	0				0
196.0	0				0
198.0	0				0
200.0	0				0
202.0	0				0
204.0	0				0
206.0	0				0
208.0	0				0
210.0	0				0
212.0	0				0
214.0	0				0
216.0	0				0
218.0	0				0
220.0	0				0
222.0	0				0
224.0	0				0
226.0	0.00E+00				0.00E+00
228.0	0.00E+00				0.00E+00
230.0	0.00E+00				0.00E+00
232.0	0.00E+00				0.00E+00
234.0	0.00E+00				0.00E+00
236.0	0.00E+00				0.00E+00
238.0	0.00E+00				0.00E+00

Grid Completion: Concentration

Transect C Time Period 1. Manual Interpolation

Step 10: Interpolate Conc Horizontally | Export Conc Grid | Import Conc Grid | **Next Step: Interpolate Hydraulic Conductivity Grid**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
39.0	0		0
39.8	0		0
40.6	0		0
41.4	0		0
42.2	0		0
43.1	0		0
43.9	0		0
44.7	0		0
45.5	0		0
46.3	0	8.90E+00	0
47.1	0	8.90E+00	0
47.9	0	8.90E+00	0
48.7	0	8.90E+00	0
49.5	0	8.90E+00	0
50.3	0	8.90E+00	0
51.2	0		0
52.0	0		0
52.8	0		0
53.6	0		0
54.4	0		0
55.2	0		0
56.0	0		0
56.8	0		0
57.6	0		0
58.4	0		0
59.3	0		0
60.1	0		0
60.9	0		0
61.7	0		0
62.5	0		0
63.3	0		0
64.1	0		0

Transect C TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0		STM-8R 80.0	End of Transect 160.0
64.9	0			0
65.7	0			0
66.5	0			0
67.4	0			0
68.2	0			0
69.0	0			0
69.8	0			0
70.6	0			0
71.4	0			0
72.2	0			0
73.0	0			0
73.8	0			0
74.6	0			0
75.5	0			0
76.3	0			0
77.1	0			0
77.9	0			0
78.7	0			0
79.5	0			0
80.3	0			0
81.1	0			0
81.9	0			0
82.7	0			0
83.6	0			0
84.4	0			0
85.2	0		1.80E+00	0
86.0	0		1.80E+00	0
86.8	0		1.80E+00	0
87.6	0		1.80E+00	0
88.4	0		1.80E+00	0
89.2	0		1.80E+00	0
90.0	0			0
90.8	0			0
91.7	0			0
92.5	0			0
93.3	0			0
94.1	0			0
94.9	0			0
95.7	0			0
96.5	0			0

Transect C TCE Concentrations (ug/L)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0		STM-8R 80.0	End of Transect 160.0
	97.3	0		0
	98.1	0		0
	98.9	0		0
	99.8	0		0
	100.6	0		0
	101.4	0		0
	102.2	0		0
	103.0	0		0
	103.8	0		0
	104.6	0		0
	105.4	0		0
	106.2	0		0
	107.0	0		0
	107.9	0		0
	108.7	0		0
	109.5	0		0
	110.3	0		0
	111.1	0		0
	111.9	0		0
	112.7	0		0
	113.5	0		0
	114.3	0.00E+00		0.00E+00
	115.1	0.00E+00		0.00E+00
	116.0	0.00E+00		0.00E+00
	116.8	0.00E+00		0.00E+00
	117.6	0.00E+00		0.00E+00
	118.4	0.00E+00		0.00E+00
	119.2	0.00E+00		0.00E+00

Grid Completion: Hydraulic Conductivity

Building 1 Time Period 1. Manual Interpolation

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | **Next Step: View Hydraulic Gradient Grid**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
17.0										
18.8										
20.7										
22.5								5.00E-01		
24.3								5.00E-01		
26.2								5.00E-01		
28.0								5.00E-01		
29.8								5.00E-01		
31.6								5.00E-01		
33.5								5.00E-01		
35.3										5.00E-01
37.1							1.11E+00		5.00E-01	5.00E-01
39.0							1.11E+00		5.00E-01	5.00E-01
40.8							1.11E+00		5.00E-01	5.00E-01
42.6	4.19E+00						1.11E+00		5.00E-01	5.00E-01
44.5	4.19E+00		5.00E-01	5.90E-01	5.00E-01				5.00E-01	5.00E-01
46.3	4.19E+00		5.00E-01	5.90E-01	5.00E-01		2.83E-05		5.00E-01	5.00E-01
48.1	4.19E+00		5.00E-01	5.90E-01	5.00E-01		2.83E-05		5.00E-01	5.00E-01
49.9	4.19E+00	4.19E+00	5.00E-01	5.90E-01	5.00E-01	6.80E-01	2.83E-05		5.00E-01	5.00E-01
51.8	4.19E+00	4.19E+00	5.00E-01		5.00E-01	6.80E-01	2.83E-05		5.00E-01	5.00E-01
53.6	4.19E+00	4.19E+00	5.00E-01		5.00E-01	6.80E-01			5.00E-01	5.00E-01
55.4	4.19E+00		5.00E-01			6.80E-01			5.00E-01	5.00E-01
57.3	4.19E+00		5.00E-01			6.80E-01			5.00E-01	5.00E-01
59.1	4.19E+00		5.00E-01			6.80E-01			5.00E-01	5.00E-01
60.9	4.19E+00		5.00E-01						5.00E-01	5.00E-01
62.8	4.19E+00								5.00E-01	5.00E-01
64.6	4.19E+00								5.00E-01	5.00E-01
66.4	4.19E+00								5.00E-01	5.00E-01
68.2	4.19E+00								5.00E-01	5.00E-01
70.1	4.19E+00						3.50E-01		5.00E-01	5.00E-01
71.9	4.19E+00	2.83E-05					3.50E-01		5.00E-01	5.00E-01
73.7	4.19E+00	2.83E-05					3.50E-01		5.00E-01	5.00E-01

B uilding 1 Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0		AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
	75.6	4.19E+00	2.83E-05		3.00E-01					5.00E-01	5.00E-01
	77.4	4.19E+00			3.00E-01					5.00E-01	5.00E-01
	79.2	4.19E+00			3.00E-01					5.00E-01	5.00E-01
	81.0	4.19E+00	7.20E-01		3.00E-01					5.00E-01	5.00E-01
	82.9	4.19E+00	7.20E-01		3.00E-01					5.00E-01	5.00E-01
	84.7	4.19E+00	7.20E-01							5.00E-01	5.00E-01
	86.5	4.19E+00	7.20E-01							5.00E-01	5.00E-01
	88.4	4.19E+00								5.00E-01	5.00E-01
	90.2	4.19E+00						1.60E-01		5.00E-01	5.00E-01
	92.0	4.19E+00						1.60E-01		5.00E-01	5.00E-01
	93.9	4.19E+00						1.60E-01		5.00E-01	5.00E-01
	95.7	4.19E+00								5.00E-01	5.00E-01
	97.5	4.19E+00			7.50E-01					5.00E-01	5.00E-01
	99.3	4.19E+00			7.50E-01					5.00E-01	5.00E-01
	101.2	4.19E+00			7.50E-01					5.00E-01	5.00E-01
	103.0	4.19E+00			7.50E-01					5.00E-01	5.00E-01
	104.8	4.19E+00	3.10E-01		7.50E-01					5.00E-01	5.00E-01
	106.7	4.19E+00	3.10E-01		7.50E-01					5.00E-01	5.00E-01
	108.5	4.19E+00	3.10E-01							5.00E-01	5.00E-01
	110.3	4.19E+00	3.10E-01							5.00E-01	5.00E-01
	112.2	4.19E+00	3.10E-01					6.50E-01		5.00E-01	5.00E-01
	114.0	4.19E+00						6.50E-01		5.00E-01	5.00E-01
	115.8	4.19E+00						6.50E-01		5.00E-01	5.00E-01
	117.7	4.19E+00						6.50E-01		5.00E-01	5.00E-01
	119.5	4.19E+00								5.00E-01	5.00E-01
	121.3	4.19E+00								5.00E-01	5.00E-01
	123.1	4.19E+00	1.81E+00							5.00E-01	5.00E-01
	125.0	4.19E+00	1.81E+00							5.00E-01	5.00E-01
	126.8	4.19E+00	1.81E+00							5.00E-01	5.00E-01
	128.6	4.19E+00	1.81E+00							5.00E-01	5.00E-01
	130.5	4.19E+00	1.81E+00							5.00E-01	5.00E-01
	132.3	4.19E+00			2.20E-01					5.00E-01	5.00E-01
	134.1	4.19E+00			2.20E-01					5.00E-01	5.00E-01
	136.0	4.19E+00			2.20E-01					5.00E-01	5.00E-01
	137.8	4.19E+00			2.20E-01					5.00E-01	5.00E-01
	139.6	4.19E+00			2.20E-01			1.09E+00		5.00E-01	5.00E-01
	141.4	4.19E+00						1.09E+00		5.00E-01	5.00E-01
	143.3	4.19E+00						1.09E+00		5.00E-01	5.00E-01
	145.1	4.19E+00								5.00E-01	5.00E-01
	146.9	4.19E+00								5.00E-01	5.00E-01

B uilding 1 Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R	End of Transect
	0.0		213.0	218.0	228.0	288.0	353.0	378.0	388.0	418.0	450.0
148.8		4.19E+00								5.00E-01	5.00E-01
150.6		4.19E+00								5.00E-01	5.00E-01
152.4		4.19E+00								5.00E-01	5.00E-01
154.3		4.19E+00								5.00E-01	5.00E-01
156.1		4.19E+00								5.00E-01	5.00E-01
157.9		4.19E+00								5.00E-01	5.00E-01
159.7		4.19E+00								5.00E-01	5.00E-01
161.6		4.19E+00									5.00E-01
163.4		4.19E+00									5.00E-01
165.2		4.19E+00									5.00E-01
167.1		4.19E+00									5.00E-01
168.9		4.19E+00									5.00E-01
170.7		4.19E+00									5.00E-01
172.6		4.19E+00									5.00E-01
174.4		4.19E+00									5.00E-01
176.2		4.19E+00									5.00E-01
178.0		4.19E+00									5.00E-01
179.9		4.19E+00									5.00E-01
181.7		4.19E+00									5.00E-01
183.5		4.19E+00									5.00E-01
185.4		4.19E+00									5.00E-01
187.2		4.19E+00									5.00E-01
189.0		4.19E+00									5.00E-01
		4.19E+00									5.00E-01
		4.19E+00									5.00E-01
		4.19E+00									5.00E-01
		4.19E+00									5.00E-01
		4.19E+00									5.00E-01
		4.19E+00									5.00E-01

Grid Completion: Hydraulic Conductivity

Transect A Time Period 1. Manual Interpolation

Step 10: Interpolate K Horizontally		Export K Grid	Import K Grid		Next Step: View Hydraulic Gradient Grid
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP	

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
23.0								3.80E-01
25.3								3.80E-01
27.5								3.80E-01
29.8			4.60E+00					3.80E-01
32.1	2.83E-05		4.60E+00					3.80E-01
34.4	2.83E-05		4.60E+00					3.80E-01
36.6	2.83E-05	2.83E-05						3.80E-01
38.9	2.83E-05	2.83E-05					2.30E-01	3.80E-01
41.2	2.83E-05	2.83E-05					2.30E-01	3.80E-01
43.4	2.83E-05			2.83E-05				3.80E-01
45.7	2.83E-05			2.83E-05				3.80E-01
48.0	2.83E-05				2.83E-05	2.83E-05		3.80E-01
50.2	2.83E-05				2.83E-05	2.83E-05		3.80E-01
52.5	2.83E-05					2.83E-05		3.80E-01
54.8	2.83E-05		4.60E+00					3.80E-01
57.1	2.83E-05		4.60E+00					3.80E-01
59.3	2.83E-05							3.80E-01
61.6	2.83E-05				1.90E-01	2.83E-05		3.80E-01
63.9	2.83E-05				1.90E-01	2.83E-05		3.80E-01
66.1	2.83E-05					2.83E-05	2.83E-05	3.80E-01
68.4	2.83E-05	2.83E-05					2.83E-05	3.80E-01
70.7	2.83E-05	2.83E-05			1.40E+00		2.83E-05	3.80E-01
72.9	2.83E-05				1.40E+00		2.83E-05	3.80E-01
75.2	2.83E-05			2.83E-05				3.80E-01
77.5	2.83E-05			2.83E-05				3.80E-01
79.8	2.83E-05		2.83E-05					3.80E-01
82.0	2.83E-05		2.83E-05					3.80E-01
84.3	2.83E-05	1.63E+01						3.80E-01
86.6	2.83E-05	1.63E+01						3.80E-01
88.8	2.83E-05							3.80E-01
91.1	2.83E-05							3.80E-01
93.4	2.83E-05							3.80E-01

Transect A Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
95.6	2.83E-05							3.80E-01
97.9	2.83E-05				2.30E+00	1.20E-01		3.80E-01
100.2	2.83E-05				2.30E+00	1.20E-01		3.80E-01
102.5	2.83E-05				2.30E+00			3.80E-01
104.7	2.83E-05							3.80E-01
107.0	2.83E-05							3.80E-01
109.3	2.83E-05							3.80E-01
111.5	2.83E-05			2.83E-05				3.80E-01
113.8	2.83E-05			2.83E-05				3.80E-01
116.1	2.83E-05							3.80E-01
118.3	2.83E-05							3.80E-01
120.6	2.83E-05							3.80E-01
122.9	2.83E-05				2.40E-01			3.80E-01
125.2	2.83E-05			7.61E+01	2.40E-01		2.83E-05	3.80E-01
127.4	2.83E-05			7.61E+01		9.00E-02	2.83E-05	3.80E-01
129.7	2.83E-05					9.00E-02	2.83E-05	3.80E-01
132.0	2.83E-05						2.83E-05	3.80E-01
134.2	2.83E-05						2.83E-05	3.80E-01
136.5	2.83E-05							3.80E-01
138.8	2.83E-05				1.60E-01			3.80E-01
141.0	2.83E-05			6.19E+01	1.60E-01			3.80E-01
143.3	2.83E-05			6.19E+01				3.80E-01
145.6	2.83E-05	2.67E-01						3.80E-01
147.9	2.83E-05	2.67E-01						3.80E-01
150.1	2.83E-05							3.80E-01
152.4	2.83E-05		6.61E+01	2.63E+00				3.80E-01
154.7	2.83E-05		6.61E+01	2.63E+00				3.80E-01
156.9	2.83E-05					8.00E-02		3.80E-01
159.2	2.83E-05					8.00E-02		3.80E-01
161.5	2.83E-05				7.20E-01			3.80E-01
163.7	2.83E-05	8.40E+00			7.20E-01			3.80E-01
166.0	2.83E-05	8.40E+00			7.20E-01			3.80E-01
168.3	2.83E-05					4.00E-02		3.80E-01
170.6	2.83E-05					4.00E-02		3.80E-01
172.8	2.83E-05					4.00E-02		3.80E-01
175.1	2.83E-05		2.83E-05				2.94E+00	3.80E-01
177.4	2.83E-05		2.83E-05				2.94E+00	3.80E-01
179.6								3.80E-01
181.9							2.29E+00	3.80E-01
184.2							2.29E+00	3.80E-01

Transect A Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect	AE108R	AE101R	AE102RR	AE103R	AE104R	AE109R	End of Transect
	0.0	49.0	124.0	199.0	274.0	349.0	499.0	610.0
186.4							2.29E+00	3.80E-01
188.7								3.80E-01
191.0								3.80E-01
193.3								3.80E-01
195.5							3.90E-01	3.80E-01
197.8							3.90E-01	3.80E-01
200.1								3.80E-01
202.3								3.80E-01
204.6							3.80E-01	3.80E-01
206.9							3.80E-01	3.80E-01
209.1							3.80E-01	3.80E-01
211.4							3.80E-01	3.80E-01
213.7								3.80E-01
216.0								3.80E-01
218.2								3.80E-01
220.5								3.80E-01
222.8								3.80E-01
225.0								3.80E-01
227.3			2.83E-05					3.80E-01
229.6			2.83E-05					3.80E-01
231.8								3.80E-01
234.1								3.80E-01
236.4								3.80E-01
								3.80E-01
								3.80E-01
								3.80E-01
							3.80E-01	3.80E-01
							3.80E-01	3.80E-01

Grid Completion: Hydraulic Conductivity

Transect B Time Period 1. Manual Interpolation

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | **Next Step: View Hydraulic Gradient Grid**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
40.0					9.00E-02
42.0					9.00E-02
44.0					9.00E-02
46.0				9.50E-01	9.00E-02
48.0				9.50E-01	9.00E-02
50.0				9.50E-01	9.00E-02
52.0					9.00E-02
54.0					9.00E-02
56.0					9.00E-02
58.0					9.00E-02
60.0					9.00E-02
62.0					9.00E-02
64.0					9.00E-02
66.0			2.83E-05		9.00E-02
68.0			2.83E-05		9.00E-02
70.0				1.30E-01	9.00E-02
72.0				1.30E-01	9.00E-02
74.0					9.00E-02
76.0			7.40E-01		9.00E-02
78.0			7.40E-01		9.00E-02
80.0	2.83E-05				9.00E-02
82.0	2.83E-05		1.30E-01		9.00E-02
84.0	2.83E-05		1.30E-01	1.20E-01	9.00E-02
86.0	2.83E-05			1.20E-01	9.00E-02
88.0	2.83E-05				9.00E-02
90.0	2.83E-05	2.83E-05			9.00E-02
92.0	2.83E-05	2.83E-05			9.00E-02
94.0	2.83E-05	2.83E-05			9.00E-02
96.0	2.83E-05		1.30E-01		9.00E-02
98.0	2.83E-05	6.00E-02	1.30E-01		9.00E-02
100.0	2.83E-05	6.00E-02			9.00E-02
102.0	2.83E-05	6.00E-02			9.00E-02

Transect B Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
104.0	2.83E-05				9.00E-02
106.0	2.83E-05				9.00E-02
108.0	2.83E-05	1.70E-01			9.00E-02
110.0	2.83E-05	1.70E-01			9.00E-02
112.0	2.83E-05				9.00E-02
114.0	2.83E-05				9.00E-02
116.0	2.83E-05				9.00E-02
118.0	2.83E-05				9.00E-02
120.0	2.83E-05				9.00E-02
122.0	2.83E-05				9.00E-02
124.0	2.83E-05	4.00E-02			9.00E-02
126.0	2.83E-05	4.00E-02			9.00E-02
128.0	2.83E-05	4.00E-02			9.00E-02
130.0	2.83E-05				9.00E-02
132.0	2.83E-05				9.00E-02
134.0	2.83E-05				9.00E-02
136.0	2.83E-05				9.00E-02
138.0	2.83E-05				9.00E-02
140.0	2.83E-05				9.00E-02
142.0	2.83E-05	1.16E+00			9.00E-02
144.0	2.83E-05	1.16E+00		1.10E-01	9.00E-02
146.0	2.83E-05	1.16E+00		1.10E-01	9.00E-02
148.0	2.83E-05			1.10E-01	9.00E-02
150.0	2.83E-05				9.00E-02
152.0	2.83E-05				9.00E-02
154.0	2.83E-05				9.00E-02
156.0	2.83E-05				9.00E-02
158.0	2.83E-05				9.00E-02
160.0	2.83E-05				9.00E-02
162.0	2.83E-05				9.00E-02
164.0	2.83E-05			9.00E-02	9.00E-02
166.0	2.83E-05			9.00E-02	9.00E-02
168.0	2.83E-05			9.00E-02	9.00E-02
170.0	2.83E-05				9.00E-02
172.0	2.83E-05				9.00E-02
174.0	2.83E-05				9.00E-02
176.0	2.83E-05				9.00E-02
178.0	2.83E-05				9.00E-02
180.0	2.83E-05				9.00E-02
182.0	2.83E-05				9.00E-02

Transect B Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
184.0	2.83E-05				9.00E-02
186.0	2.83E-05				9.00E-02
188.0	2.83E-05				9.00E-02
190.0	2.83E-05				9.00E-02
192.0	2.83E-05				9.00E-02
194.0	2.83E-05				9.00E-02
196.0	2.83E-05				9.00E-02
198.0	2.83E-05				9.00E-02
200.0	2.83E-05				9.00E-02
202.0	2.83E-05				9.00E-02
204.0	2.83E-05				9.00E-02
206.0	2.83E-05				9.00E-02
208.0	2.83E-05				9.00E-02
210.0	2.83E-05				9.00E-02
212.0	2.83E-05				9.00E-02
214.0	2.83E-05				9.00E-02
216.0	2.83E-05				9.00E-02
218.0	2.83E-05				9.00E-02
220.0	2.83E-05				9.00E-02
222.0	2.83E-05				9.00E-02
224.0	2.83E-05				9.00E-02
226.0	2.83E-05				9.00E-02
228.0	2.83E-05				9.00E-02
	2.83E-05				9.00E-02
	2.83E-05				9.00E-02
	2.83E-05				9.00E-02
	2.83E-05				9.00E-02
	2.83E-05				9.00E-02
	2.83E-05				9.00E-02

Grid Completion: Hydraulic Conductivity

Transect C Time Period 1. Manual Interpolation

Step 10: Interpolate K Horizontally | Export K Grid | Import K Grid | **Next Step: View Hydraulic Gradient Grid**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | *HELP*

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
39.0	2.83E-05		2.83E-05
39.8	2.83E-05		2.83E-05
40.6	2.83E-05		2.83E-05
41.4	2.83E-05		2.83E-05
42.2	2.83E-05		2.83E-05
43.1	2.83E-05		2.83E-05
43.9	2.83E-05		2.83E-05
44.7	2.83E-05		2.83E-05
45.5	2.83E-05		2.83E-05
46.3	2.83E-05	2.83E-05	2.83E-05
47.1	2.83E-05	2.83E-05	2.83E-05
47.9	2.83E-05	2.83E-05	2.83E-05
48.7	2.83E-05	2.83E-05	2.83E-05
49.5	2.83E-05	2.83E-05	2.83E-05
50.3	2.83E-05	2.83E-05	2.83E-05
51.2	2.83E-05		2.83E-05
52.0	2.83E-05		2.83E-05
52.8	2.83E-05		2.83E-05
53.6	2.83E-05		2.83E-05
54.4	2.83E-05		2.83E-05
55.2	2.83E-05		2.83E-05
56.0	2.83E-05		2.83E-05
56.8	2.83E-05		2.83E-05
57.6	2.83E-05		2.83E-05
58.4	2.83E-05		2.83E-05
59.3	2.83E-05		2.83E-05
60.1	2.83E-05		2.83E-05
60.9	2.83E-05		2.83E-05
61.7	2.83E-05		2.83E-05
62.5	2.83E-05		2.83E-05
63.3	2.83E-05		2.83E-05
64.1	2.83E-05		2.83E-05

Transect C Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
64.9	2.83E-05		2.83E-05
65.7	2.83E-05		2.83E-05
66.5	2.83E-05		2.83E-05
67.4	2.83E-05		2.83E-05
68.2	2.83E-05		2.83E-05
69.0	2.83E-05		2.83E-05
69.8	2.83E-05		2.83E-05
70.6	2.83E-05		2.83E-05
71.4	2.83E-05		2.83E-05
72.2	2.83E-05		2.83E-05
73.0	2.83E-05		2.83E-05
73.8	2.83E-05		2.83E-05
74.6	2.83E-05		2.83E-05
75.5	2.83E-05		2.83E-05
76.3	2.83E-05		2.83E-05
77.1	2.83E-05		2.83E-05
77.9	2.83E-05		2.83E-05
78.7	2.83E-05		2.83E-05
79.5	2.83E-05		2.83E-05
80.3	2.83E-05		2.83E-05
81.1	2.83E-05		2.83E-05
81.9	2.83E-05		2.83E-05
82.7	2.83E-05		2.83E-05
83.6	2.83E-05		2.83E-05
84.4	2.83E-05		2.83E-05
85.2	2.83E-05	2.83E-05	2.83E-05
86.0	2.83E-05	2.83E-05	2.83E-05
86.8	2.83E-05	2.83E-05	2.83E-05
87.6	2.83E-05	2.83E-05	2.83E-05
88.4	2.83E-05	2.83E-05	2.83E-05
89.2	2.83E-05	2.83E-05	2.83E-05
90.0	2.83E-05		2.83E-05
90.8	2.83E-05		2.83E-05
91.7	2.83E-05		2.83E-05
92.5	2.83E-05		2.83E-05
93.3	2.83E-05		2.83E-05
94.1	2.83E-05		2.83E-05
94.9	2.83E-05		2.83E-05
95.7	2.83E-05		2.83E-05
96.5	2.83E-05		2.83E-05

Transect C Hydraulic Conductivity (ft/d)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
97.3	2.83E-05		2.83E-05
98.1	2.83E-05		2.83E-05
98.9	2.83E-05		2.83E-05
99.8	2.83E-05		2.83E-05
100.6	2.83E-05		2.83E-05
101.4	2.83E-05		2.83E-05
102.2	2.83E-05		2.83E-05
103.0	2.83E-05		2.83E-05
103.8	2.83E-05		2.83E-05
104.6	2.83E-05		2.83E-05
105.4	2.83E-05		2.83E-05
106.2	2.83E-05		2.83E-05
107.0	2.83E-05		2.83E-05
107.9	2.83E-05		2.83E-05
108.7	2.83E-05		2.83E-05
109.5	2.83E-05		2.83E-05
110.3	2.83E-05		2.83E-05
111.1	2.83E-05		2.83E-05
111.9	2.83E-05		2.83E-05
112.7	2.83E-05		2.83E-05
113.5	2.83E-05		2.83E-05
114.3	2.83E-05		2.83E-05
115.1	2.83E-05		2.83E-05
	2.83E-05		2.83E-05
	2.83E-05		2.83E-05
	2.83E-05		2.83E-05
	2.83E-05		2.83E-05
	2.83E-05		2.83E-05
	2.83E-05		2.83E-05

Grid Completion: Hydraulic Gradient

Building 1 Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid | **Next Step: Calculate Mass Flux**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Building 1 Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
17.0								1.00E-03		
18.8								1.00E-03		
20.7							1.00E-03	1.00E-03		
22.5							1.00E-03	1.00E-03		
24.3							1.00E-03	1.00E-03		
26.2							1.00E-03	1.00E-03		
28.0							1.00E-03	1.00E-03		
29.8							1.00E-03	1.00E-03		
31.6					1.00E-03	1.00E-03	1.00E-03	1.00E-03		
33.5					1.00E-03	1.00E-03	1.00E-03	1.00E-03		
35.3				1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
37.1				1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
39.0				1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
40.8			1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
42.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
44.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
46.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
48.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
49.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
51.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
53.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
55.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
57.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
59.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
60.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
62.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
64.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
66.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
68.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
70.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
71.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
73.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

B uilding 1 Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
75.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
77.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
79.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
81.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
82.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
84.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
86.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
88.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
90.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
92.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
93.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
95.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
97.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
99.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
101.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
103.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
104.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
106.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
108.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
110.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
112.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
114.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
115.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
117.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
119.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
121.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
123.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
125.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
126.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
128.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
130.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
132.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
134.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
136.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
137.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
139.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
141.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
143.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
145.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
146.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Building 1 Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R		End of Transect
0.0		*213.0*	*218.0*	*228.0*	*288.0*	*353.0*	*378.0*	*388.0*	*418.0*	*450.0*	
148.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
150.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
152.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
154.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
156.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
157.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
159.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
161.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
163.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
165.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
167.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
168.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
170.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
172.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
174.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
176.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
178.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
179.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
181.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
183.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
185.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
187.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
189.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	
	0.001	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	0.001	0.001	0.001	0.001	
	0.001	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	0.001	0.001	0.001	0.001	
	0.001	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	0.001	0.001	0.001	0.001	
	0.001	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	0.001	0.001	0.001	0.001	
	0.001	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	0.001	0.001	0.001	0.001	

Grid Completion: Hydraulic Gradient

Transect A Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid | **Next Step: Calculate Mass Flux**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect A Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
23.0							1.00E-03	1.00E-03
25.3							1.00E-03	1.00E-03
27.5			1.00E-03				1.00E-03	1.00E-03
29.8			1.00E-03				1.00E-03	1.00E-03
32.1	1.00E-03	1.00E-03	1.00E-03				1.00E-03	1.00E-03
34.4	1.00E-03	1.00E-03	1.00E-03				1.00E-03	1.00E-03
36.6	1.00E-03	1.00E-03	1.00E-03				1.00E-03	1.00E-03
38.9	1.00E-03	1.00E-03	1.00E-03				1.00E-03	1.00E-03
41.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03			1.00E-03	1.00E-03
43.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
45.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
48.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
50.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
52.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
54.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
57.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
59.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
61.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
63.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
66.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
68.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
70.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
72.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
75.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
77.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
79.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
82.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
84.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
86.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
88.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
91.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
93.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Transect A Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
95.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
97.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
100.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
102.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
104.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
107.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
109.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
111.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
113.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
116.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
118.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
120.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
122.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
125.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
127.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
129.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
132.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
134.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
136.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
138.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
141.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
143.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
145.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
147.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
150.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
152.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
154.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
156.9	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
159.2	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
161.5	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
163.7	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
166.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
168.3	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
170.6	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
172.8	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
175.1	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
177.4	1.00E-03	1.00E-03	1.00E-03	1.00E-03			1.00E-03	1.00E-03
179.6			1.00E-03				1.00E-03	1.00E-03
181.9			1.00E-03				1.00E-03	1.00E-03
184.2			1.00E-03				1.00E-03	1.00E-03

Transect A Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Start of Transect	AE108R	AE101R	AE102RR	AE103R	AE104R	AE109R	End of Transect
0.0	49.0	124.0	199.0	274.0	349.0	499.0	610.0
186.4		1.00E-03				1.00E-03	1.00E-03
188.7		1.00E-03				1.00E-03	1.00E-03
191.0		1.00E-03				1.00E-03	1.00E-03
193.3		1.00E-03				1.00E-03	1.00E-03
195.5		1.00E-03				1.00E-03	1.00E-03
197.8		1.00E-03				1.00E-03	1.00E-03
200.1		1.00E-03				1.00E-03	1.00E-03
202.3		1.00E-03				1.00E-03	1.00E-03
204.6		1.00E-03				1.00E-03	1.00E-03
206.9		1.00E-03				1.00E-03	1.00E-03
209.1		1.00E-03				1.00E-03	1.00E-03
211.4		1.00E-03				1.00E-03	1.00E-03
213.7		1.00E-03				1.00E-03	1.00E-03
216.0		1.00E-03				1.00E-03	1.00E-03
218.2		1.00E-03				1.00E-03	1.00E-03
220.5		1.00E-03				1.00E-03	1.00E-03
222.8		1.00E-03				1.00E-03	1.00E-03
225.0		1.00E-03				1.00E-03	1.00E-03
227.3		1.00E-03				1.00E-03	1.00E-03
229.6		1.00E-03				1.00E-03	1.00E-03
231.8						1.00E-03	1.00E-03
234.1						1.00E-03	1.00E-03
236.4						1.00E-03	1.00E-03

0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001

Grid Completion: Hydraulic Gradient

Transect B Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally	Export i Grid	Import i Grid	Next Step: Calculate Mass Flux
Back to Data Input	Back to Conc Grid	Back to K Grid	Print	HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect B Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
40.0				1.00E-03	1.00E-03
42.0				1.00E-03	1.00E-03
44.0				1.00E-03	1.00E-03
46.0				1.00E-03	1.00E-03
48.0				1.00E-03	1.00E-03
50.0				1.00E-03	1.00E-03
52.0				1.00E-03	1.00E-03
54.0				1.00E-03	1.00E-03
56.0				1.00E-03	1.00E-03
58.0				1.00E-03	1.00E-03
60.0			1.00E-03	1.00E-03	1.00E-03
62.0			1.00E-03	1.00E-03	1.00E-03
64.0			1.00E-03	1.00E-03	1.00E-03
66.0			1.00E-03	1.00E-03	1.00E-03
68.0			1.00E-03	1.00E-03	1.00E-03
70.0			1.00E-03	1.00E-03	1.00E-03
72.0			1.00E-03	1.00E-03	1.00E-03
74.0			1.00E-03	1.00E-03	1.00E-03
76.0			1.00E-03	1.00E-03	1.00E-03
78.0			1.00E-03	1.00E-03	1.00E-03
80.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
82.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
84.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
86.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
88.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
90.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
92.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
94.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
96.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
98.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
100.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
102.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Transect B Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
104.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
106.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
108.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
110.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
112.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
114.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
116.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
118.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
120.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
122.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
124.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
126.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
128.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
130.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
132.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
134.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
136.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
138.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
140.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
142.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
144.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
146.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
148.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
150.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
152.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
154.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
156.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
158.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
160.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
162.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
164.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
166.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
168.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
170.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
172.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
174.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
176.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
178.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
180.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
182.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Transect B Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Start of Transect		AE105R	TRC301R	AE106R		End of Transect				
0.0		128.0	165.5	435.5	595.0					
184.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
186.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
188.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
190.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
192.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
194.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
196.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
198.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
200.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
202.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
204.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
206.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
208.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
210.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
212.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
214.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
216.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
218.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
220.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
222.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
224.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
226.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
228.0	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03					
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001

Grid Completion: Hydraulic Gradient

Transect C Time Period 1. Constant Gradient: No Interpolation Required

Step 10: Interpolate i Horizontally | Export i Grid | Import i Grid | **Next Step: Calculate Mass Flux**

Back to Data Input | Back to Conc Grid | Back to K Grid | Print | HELP

Data Input Instructions

10.80 — Enter value directly. (Values in italics represent interpolated values.)

Top/Bottom of plume. (Don't enter any data).

Transect C Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
39.0	1.00E-03	1.00E-03	1.00E-03
39.8	1.00E-03	1.00E-03	1.00E-03
40.6	1.00E-03	1.00E-03	1.00E-03
41.4	1.00E-03	1.00E-03	1.00E-03
42.2	1.00E-03	1.00E-03	1.00E-03
43.1	1.00E-03	1.00E-03	1.00E-03
43.9	1.00E-03	1.00E-03	1.00E-03
44.7	1.00E-03	1.00E-03	1.00E-03
45.5	1.00E-03	1.00E-03	1.00E-03
46.3	1.00E-03	1.00E-03	1.00E-03
47.1	1.00E-03	1.00E-03	1.00E-03
47.9	1.00E-03	1.00E-03	1.00E-03
48.7	1.00E-03	1.00E-03	1.00E-03
49.5	1.00E-03	1.00E-03	1.00E-03
50.3	1.00E-03	1.00E-03	1.00E-03
51.2	1.00E-03	1.00E-03	1.00E-03
52.0	1.00E-03	1.00E-03	1.00E-03
52.8	1.00E-03	1.00E-03	1.00E-03
53.6	1.00E-03	1.00E-03	1.00E-03
54.4	1.00E-03	1.00E-03	1.00E-03
55.2	1.00E-03	1.00E-03	1.00E-03
56.0	1.00E-03	1.00E-03	1.00E-03
56.8	1.00E-03	1.00E-03	1.00E-03
57.6	1.00E-03	1.00E-03	1.00E-03
58.4	1.00E-03	1.00E-03	1.00E-03
59.3	1.00E-03	1.00E-03	1.00E-03
60.1	1.00E-03	1.00E-03	1.00E-03
60.9	1.00E-03	1.00E-03	1.00E-03
61.7	1.00E-03	1.00E-03	1.00E-03
62.5	1.00E-03	1.00E-03	1.00E-03
63.3	1.00E-03	1.00E-03	1.00E-03
64.1	1.00E-03	1.00E-03	1.00E-03

Transect C Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
64.9	1.00E-03	1.00E-03	1.00E-03
65.7	1.00E-03	1.00E-03	1.00E-03
66.5	1.00E-03	1.00E-03	1.00E-03
67.4	1.00E-03	1.00E-03	1.00E-03
68.2	1.00E-03	1.00E-03	1.00E-03
69.0	1.00E-03	1.00E-03	1.00E-03
69.8	1.00E-03	1.00E-03	1.00E-03
70.6	1.00E-03	1.00E-03	1.00E-03
71.4	1.00E-03	1.00E-03	1.00E-03
72.2	1.00E-03	1.00E-03	1.00E-03
73.0	1.00E-03	1.00E-03	1.00E-03
73.8	1.00E-03	1.00E-03	1.00E-03
74.6	1.00E-03	1.00E-03	1.00E-03
75.5	1.00E-03	1.00E-03	1.00E-03
76.3	1.00E-03	1.00E-03	1.00E-03
77.1	1.00E-03	1.00E-03	1.00E-03
77.9	1.00E-03	1.00E-03	1.00E-03
78.7	1.00E-03	1.00E-03	1.00E-03
79.5	1.00E-03	1.00E-03	1.00E-03
80.3	1.00E-03	1.00E-03	1.00E-03
81.1	1.00E-03	1.00E-03	1.00E-03
81.9	1.00E-03	1.00E-03	1.00E-03
82.7	1.00E-03	1.00E-03	1.00E-03
83.6	1.00E-03	1.00E-03	1.00E-03
84.4	1.00E-03	1.00E-03	1.00E-03
85.2	1.00E-03	1.00E-03	1.00E-03
86.0	1.00E-03	1.00E-03	1.00E-03
86.8	1.00E-03	1.00E-03	1.00E-03
87.6	1.00E-03	1.00E-03	1.00E-03
88.4	1.00E-03	1.00E-03	1.00E-03
89.2	1.00E-03	1.00E-03	1.00E-03
90.0	1.00E-03	1.00E-03	1.00E-03
90.8	1.00E-03	1.00E-03	1.00E-03
91.7	1.00E-03	1.00E-03	1.00E-03
92.5	1.00E-03	1.00E-03	1.00E-03
93.3	1.00E-03	1.00E-03	1.00E-03
94.1	1.00E-03	1.00E-03	1.00E-03
94.9	1.00E-03	1.00E-03	1.00E-03
95.7	1.00E-03	1.00E-03	1.00E-03
96.5	1.00E-03	1.00E-03	1.00E-03

Transect C Hydraulic Gradient (ft/ft)

Distance from Edge of Transect (ft)

Start of Transect		STM-8R	End of Transect
0.0		80.0	160.0
97.3	1.00E-03	1.00E-03	1.00E-03
98.1	1.00E-03	1.00E-03	1.00E-03
98.9	1.00E-03	1.00E-03	1.00E-03
99.8	1.00E-03	1.00E-03	1.00E-03
100.6	1.00E-03	1.00E-03	1.00E-03
101.4	1.00E-03	1.00E-03	1.00E-03
102.2	1.00E-03	1.00E-03	1.00E-03
103.0	1.00E-03	1.00E-03	1.00E-03
103.8	1.00E-03	1.00E-03	1.00E-03
104.6	1.00E-03	1.00E-03	1.00E-03
105.4	1.00E-03	1.00E-03	1.00E-03
106.2	1.00E-03	1.00E-03	1.00E-03
107.0	1.00E-03	1.00E-03	1.00E-03
107.9	1.00E-03	1.00E-03	1.00E-03
108.7	1.00E-03	1.00E-03	1.00E-03
109.5	1.00E-03	1.00E-03	1.00E-03
110.3	1.00E-03	1.00E-03	1.00E-03
111.1	1.00E-03	1.00E-03	1.00E-03
111.9	1.00E-03	1.00E-03	1.00E-03
112.7	1.00E-03	1.00E-03	1.00E-03
113.5	1.00E-03	1.00E-03	1.00E-03
114.3	1.00E-03	1.00E-03	1.00E-03
115.1	1.00E-03	1.00E-03	1.00E-03

0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001

Mass Flux Result

TOTAL MASS FLUX 1.71E+00 (g/day) 6.26E-01 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 1

SELECT TIME PERIOD TO VIEW: 1

Building 1 TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE26R 213.0	AE25R 218.0	AE28R 228.0	AE23R 288.0	AE27R 353.0	AE29R 378.0	AE2R 388.0	TRC201R 418.0	End of Transect 450.0
17.0								0.00E+00		
18.8								0.00E+00		
20.7							0.00E+00	0.00E+00		
22.5							0.00E+00	5.18E-07		
24.3							0.00E+00	5.18E-07		
26.2							0.00E+00	5.18E-07		
28.0							0.00E+00	5.18E-07		
29.8							0.00E+00	5.18E-07		
31.6					0.00E+00	0.00E+00	0.00E+00	5.18E-07		
33.5					0.00E+00	0.00E+00	0.00E+00	5.18E-07		
35.3				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
37.1				0.00E+00	0.00E+00	0.00E+00	1.41E-06	0.00E+00	3.54E-05	0
39.0				0.00E+00	0.00E+00	0.00E+00	1.41E-06	0.00E+00	3.54E-05	0
40.8			0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-06	0.00E+00	3.54E-05	0
42.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-06	0.00E+00	3.54E-05	0
44.5	0	0.00E+00	0.00E+00	7.07E-03	2.43E-01	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
46.3	0	0.00E+00	0.00E+00	7.07E-03	2.43E-01	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
48.1	0	0.00E+00	0.00E+00	7.07E-03	2.43E-01	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
49.9	0	1.42E-02	0.00E+00	7.07E-03	2.43E-01	4.44E-06	0.00E+00	0.00E+00	3.54E-05	0
51.8	0	1.42E-02	0.00E+00	0.00E+00	2.43E-01	4.44E-06	0.00E+00	0.00E+00	3.54E-05	0
53.6	0	1.42E-02	0.00E+00	0.00E+00	2.43E-01	4.44E-06	0.00E+00	0.00E+00	3.54E-05	0
55.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E-06	0.00E+00	0.00E+00	3.54E-05	0
57.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E-06	0.00E+00	0.00E+00	3.54E-05	0
59.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E-06	0.00E+00	0.00E+00	3.54E-05	0
60.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
62.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
64.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
66.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
68.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
70.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-06	0.00E+00	3.54E-05	0
71.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-06	0.00E+00	3.54E-05	0
73.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-06	0.00E+00	3.54E-05	0

B uilding 1 TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R	End of Transect
	0.0		213.0	218.0	228.0	288.0	353.0	378.0	388.0	418.0	450.0
75.6	0	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
77.4	0	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
79.2	0	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
81.0	0	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
82.9	0	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
84.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
86.5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
88.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
90.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
92.0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
93.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
95.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
97.5	0	0.00E+00	0.00E+00	5.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
99.3	0	0.00E+00	0.00E+00	5.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
101.2	0	0.00E+00	0.00E+00	5.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
103.0	0	0.00E+00	0.00E+00	5.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
104.8	0	9.28E-04	0.00E+00	5.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
106.7	0	9.28E-04	0.00E+00	5.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
108.5	0	9.28E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
110.3	0	9.28E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
112.2	0	9.28E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-05	0.00E+00	3.54E-05	0
114.0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-05	0.00E+00	3.54E-05	0
115.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-05	0.00E+00	3.54E-05	0
117.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-05	0.00E+00	3.54E-05	0
119.5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
121.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
123.1	0	1.64E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
125.0	0	1.64E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
126.8	0	1.64E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
128.6	0	1.64E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
130.5	0	1.64E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
132.3	0	0.00E+00	0.00E+00	2.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
134.1	0	0.00E+00	0.00E+00	2.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
136.0	0	0.00E+00	0.00E+00	2.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
137.8	0	0.00E+00	0.00E+00	2.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
139.6	0	0.00E+00	0.00E+00	2.67E-03	0.00E+00	0.00E+00	5.14E-05	0.00E+00	3.54E-05	0
141.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-05	0.00E+00	3.54E-05	0
143.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-05	0.00E+00	3.54E-05	0
145.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
146.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0

B uilding 1 TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect		AE26R	AE25R	AE28R	AE23R	AE27R	AE29R	AE2R	TRC201R	End of Transect
	0.0		213.0	218.0	228.0	288.0	353.0	378.0	388.0	418.0	450.0
148.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
150.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
152.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
154.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
156.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
157.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
159.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0
161.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
163.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
165.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
167.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
168.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
170.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
172.6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
174.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
176.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
178.0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
179.9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
181.7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
183.5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
185.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
187.2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
189.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Mass Flux Result

TOTAL MASS FLUX 3.09E+00 (g/day) 1.13E+00 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 2

SELECT TIME PERIOD TO VIEW: 1

Transect A TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
23.0							0.00E+00	0
25.3							0.00E+00	0
27.5			0.00E+00				0.00E+00	0
29.8			0.00E+00				0.00E+00	0
32.1	0	0.00E+00	0.00E+00				0.00E+00	0
34.4	0	0.00E+00	0.00E+00				0.00E+00	0
36.6	0	5.64E-11	0.00E+00				0.00E+00	0
38.9	0	5.64E-11	0.00E+00				0.00E+00	0
41.2	0	5.64E-11	0.00E+00	0.00E+00			0.00E+00	0
43.4	0	0.00E+00	0.00E+00	2.73E-08	0.00E+00	0.00E+00	0.00E+00	0
45.7	0	0.00E+00	0.00E+00	2.73E-08	0.00E+00	0.00E+00	0.00E+00	0
48.0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-07	0.00E+00	0
50.2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-07	0.00E+00	0
52.5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-07	0.00E+00	0
54.8	0	0.00E+00	2.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
57.1	0	0.00E+00	2.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
59.3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
61.6	0	0.00E+00	0.00E+00	0.00E+00	3.94E-03	0.00E+00	0.00E+00	0
63.9	0	0.00E+00	0.00E+00	0.00E+00	3.94E-03	0.00E+00	0.00E+00	0
66.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
68.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
70.7	0	0.00E+00	0.00E+00	0.00E+00	4.05E-02	0.00E+00	0.00E+00	0
72.9	0	0.00E+00	0.00E+00	0.00E+00	4.05E-02	0.00E+00	0.00E+00	0
75.2	0	0.00E+00	0.00E+00	5.73E-08	0.00E+00	0.00E+00	0.00E+00	0
77.5	0	0.00E+00	0.00E+00	5.73E-08	0.00E+00	0.00E+00	0.00E+00	0
79.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
82.0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
84.3	0	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
86.6	0	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
88.8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
91.1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
93.4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0

Transect A TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0		AE108R 49.0	AE101R 124.0	AE102RR 199.0	AE103R 274.0	AE104R 349.0	AE109R 499.0	End of Transect 610.0
95.6	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
97.9	0	0	0.00E+00	0.00E+00	0.00E+00	8.87E-02	2.43E-03	0.00E+00	0
100.2	0	0	0.00E+00	0.00E+00	0.00E+00	8.87E-02	2.43E-03	0.00E+00	0
102.5	0	0	0.00E+00	0.00E+00	0.00E+00	8.87E-02	0.00E+00	0.00E+00	0
104.7	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
107.0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
109.3	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
111.5	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
113.8	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
116.1	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
118.3	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
120.6	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
122.9	0	0	0.00E+00	0.00E+00	0.00E+00	7.99E-03	0.00E+00	0.00E+00	0
125.2	0	0	0.00E+00	0.00E+00	4.04E-01	7.99E-03	0.00E+00	0.00E+00	0
127.4	0	0	0.00E+00	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0
129.7	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
132.0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
134.2	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
136.5	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
138.8	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
141.0	0	0	0.00E+00	0.00E+00	8.06E-01	0.00E+00	0.00E+00	0.00E+00	0
143.3	0	0	0.00E+00	0.00E+00	8.06E-01	0.00E+00	0.00E+00	0.00E+00	0
145.6	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
147.9	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
150.1	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
152.4	0	0	0.00E+00	5.10E-02	5.96E-02	0.00E+00	0.00E+00	0.00E+00	0
154.7	0	0	0.00E+00	5.10E-02	5.96E-02	0.00E+00	0.00E+00	0.00E+00	0
156.9	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-03	0.00E+00	0
159.2	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-03	0.00E+00	0
161.5	0	0	0.00E+00	0.00E+00	0.00E+00	1.81E-02	0.00E+00	0.00E+00	0
163.7	0	0	1.71E-03	0.00E+00	0.00E+00	1.81E-02	0.00E+00	0.00E+00	0
166.0	0	0	1.71E-03	0.00E+00	0.00E+00	1.81E-02	0.00E+00	0.00E+00	0
168.3	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
170.6	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
172.8	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
175.1	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-04	0
177.4	0	0	0.00E+00	0.00E+00	0.00E+00			2.47E-04	0
179.6				0.00E+00				0.00E+00	0
181.9				0.00E+00				0.00E+00	0
184.2				0.00E+00				0.00E+00	0

Transect A TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect	AE108R	AE101R	AE102RR	AE103R	AE104R	AE109R	End of Transect
	0.0	49.0	124.0	199.0	274.0	349.0	499.0	610.0
186.4			0.00E+00				0.00E+00	0
188.7			0.00E+00				0.00E+00	0
191.0			0.00E+00				0.00E+00	0
193.3			0.00E+00				0.00E+00	0
195.5			0.00E+00				3.60E-04	0
197.8			0.00E+00				3.60E-04	0
200.1			0.00E+00				0.00E+00	0
202.3			0.00E+00				0.00E+00	0
204.6			0.00E+00				1.15E-05	0
206.9			0.00E+00				1.15E-05	0
209.1			0.00E+00				1.15E-05	0
211.4			0.00E+00				1.15E-05	0
213.7			0.00E+00				0.00E+00	0
216.0			0.00E+00				0.00E+00	0
218.2			0.00E+00				0.00E+00	0
220.5			0.00E+00				0.00E+00	0
222.8			0.00E+00				0.00E+00	0
225.0			0.00E+00				0.00E+00	0
227.3			2.46E-07				0.00E+00	0
229.6			2.46E-07				0.00E+00	0
231.8							0.00E+00	0
234.1							0.00E+00	0.00E+00
236.4							0.00E+00	0.00E+00

Mass Flux Result

TOTAL MASS FLUX 4.96E-03 (g/day) 1.81E-03 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation.
3. Black shaded cells represent the top and bottom of the plume.

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 3

SELECT TIME PERIOD TO VIEW: 1

Transect B TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
40.0				0.00E+00	0
42.0				0.00E+00	0
44.0				0.00E+00	0
46.0				6.13E-05	0
48.0				6.13E-05	0
50.0				6.13E-05	0
52.0				0.00E+00	0
54.0				0.00E+00	0
56.0				0.00E+00	0
58.0				0.00E+00	0
60.0			0.00E+00	0.00E+00	0
62.0			0.00E+00	0.00E+00	0
64.0			0.00E+00	0.00E+00	0
66.0			6.66E-09	0.00E+00	0
68.0			6.66E-09	0.00E+00	0
70.0			0.00E+00	9.49E-06	0
72.0			0.00E+00	9.49E-06	0
74.0			0.00E+00	0.00E+00	0
76.0			6.45E-04	0.00E+00	0
78.0			6.45E-04	0.00E+00	0
80.0	0	0.00E+00	0.00E+00	0.00E+00	0
82.0	0	0.00E+00	1.10E-04	0.00E+00	0
84.0	0	0.00E+00	1.10E-04	1.26E-05	0
86.0	0	0.00E+00	0.00E+00	1.26E-05	0
88.0	0	0.00E+00	0.00E+00	0.00E+00	0
90.0	0	1.46E-08	0.00E+00	0.00E+00	0
92.0	0	1.46E-08	0.00E+00	0.00E+00	0
94.0	0	1.46E-08	0.00E+00	0.00E+00	0
96.0	0	0.00E+00	6.91E-05	0.00E+00	0
98.0	0	3.94E-05	6.91E-05	0.00E+00	0
100.0	0	3.94E-05	0.00E+00	0.00E+00	0
102.0	0	3.94E-05	0.00E+00	0.00E+00	0

Transect B TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
104.0	0	0.00E+00	0.00E+00	0.00E+00	0
106.0	0	0.00E+00	0.00E+00	0.00E+00	0
108.0	0	1.20E-04	0.00E+00	0.00E+00	0
110.0	0	1.20E-04	0.00E+00	0.00E+00	0
112.0	0	0.00E+00	0.00E+00	0.00E+00	0
114.0	0	0.00E+00	0.00E+00	0.00E+00	0
116.0	0	0.00E+00	0.00E+00	0.00E+00	0
118.0	0	0.00E+00	0.00E+00	0.00E+00	0
120.0	0	0.00E+00	0.00E+00	0.00E+00	0
122.0	0	0.00E+00	0.00E+00	0.00E+00	0
124.0	0	3.19E-05	0.00E+00	0.00E+00	0
126.0	0	3.19E-05	0.00E+00	0.00E+00	0
128.0	0	3.19E-05	0.00E+00	0.00E+00	0
130.0	0	0.00E+00	0.00E+00	0.00E+00	0
132.0	0	0.00E+00	0.00E+00	0.00E+00	0
134.0	0	0.00E+00	0.00E+00	0.00E+00	0
136.0	0	0.00E+00	0.00E+00	0.00E+00	0
138.0	0	0.00E+00	0.00E+00	0.00E+00	0
140.0	0	0.00E+00	0.00E+00	0.00E+00	0
142.0	0	8.16E-04	0.00E+00	0.00E+00	0
144.0	0	8.16E-04	0.00E+00	1.87E-05	0
146.0	0	8.16E-04	0.00E+00	1.87E-05	0
148.0	0	0.00E+00	0.00E+00	1.87E-05	0
150.0	0	0.00E+00	0.00E+00	0.00E+00	0
152.0	0	0.00E+00	0.00E+00	0.00E+00	0
154.0	0	0.00E+00	0.00E+00	0.00E+00	0
156.0	0	0.00E+00	0.00E+00	0.00E+00	0
158.0	0	0.00E+00	0.00E+00	0.00E+00	0
160.0	0	0.00E+00	0.00E+00	0.00E+00	0
162.0	0	0.00E+00	0.00E+00	0.00E+00	0
164.0	0	0.00E+00	0.00E+00	4.38E-05	0
166.0	0	0.00E+00	0.00E+00	4.38E-05	0
168.0	0	0.00E+00	0.00E+00	4.38E-05	0
170.0	0	0.00E+00	0.00E+00	0.00E+00	0
172.0	0	0.00E+00	0.00E+00	0.00E+00	0
174.0	0	0.00E+00	0.00E+00	0.00E+00	0
176.0	0	0.00E+00	0.00E+00	0.00E+00	0
178.0	0	0.00E+00	0.00E+00	0.00E+00	0
180.0	0	0.00E+00	0.00E+00	0.00E+00	0
182.0	0	0.00E+00	0.00E+00	0.00E+00	0

Transect B TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	AE105R 128.0	TRC301R 165.5	AE106R 435.5	End of Transect 595.0
184.0	0	0.00E+00	0.00E+00	0.00E+00	0
186.0	0	0.00E+00	0.00E+00	0.00E+00	0
188.0	0	0.00E+00	0.00E+00	0.00E+00	0
190.0	0	0.00E+00	0.00E+00	0.00E+00	0
192.0	0	0.00E+00	0.00E+00	0.00E+00	0
194.0	0	0.00E+00	0.00E+00	0.00E+00	0
196.0	0	0.00E+00	0.00E+00	0.00E+00	0
198.0	0	0.00E+00	0.00E+00	0.00E+00	0
200.0	0	0.00E+00	0.00E+00	0.00E+00	0
202.0	0	0.00E+00	0.00E+00	0.00E+00	0
204.0	0	0.00E+00	0.00E+00	0.00E+00	0
206.0	0	0.00E+00	0.00E+00	0.00E+00	0
208.0	0	0.00E+00	0.00E+00	0.00E+00	0
210.0	0	0.00E+00	0.00E+00	0.00E+00	0
212.0	0	0.00E+00	0.00E+00	0.00E+00	0
214.0	0	0.00E+00	0.00E+00	0.00E+00	0
216.0	0	0.00E+00	0.00E+00	0.00E+00	0
218.0	0	0.00E+00	0.00E+00	0.00E+00	0
220.0	0	0.00E+00	0.00E+00	0.00E+00	0
222.0	0	0.00E+00	0.00E+00	0.00E+00	0
224.0	0	0.00E+00	0.00E+00	0.00E+00	0
226.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
228.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Mass Flux Result

TOTAL MASS FLUX 3.34E-09 (g/day) 1.22E-09 (kg/yr)

Data Representation

1. Bold values represent calculations based on given values.
2. Values in italics represent calculations based on interpolation
3. Black shaded cells represent the top and bottom of the plume

Next Step: Mass Flux Summary | Run/View Uncertainty Analysis (Optional) | View Final Concentration Grid | Back to Data Grid | Print | HELP

SELECT TRANSECT TO VIEW: Transect 4

SELECT TIME PERIOD TO VIEW: 1

Transect C TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
39.0	0	0.00E+00	0
39.8	0	0.00E+00	0
40.6	0	0.00E+00	0
41.4	0	0.00E+00	0
42.2	0	0.00E+00	0
43.1	0	0.00E+00	0
43.9	0	0.00E+00	0
44.7	0	0.00E+00	0
45.5	0	0.00E+00	0
46.3	0	4.62E-10	0
47.1	0	4.62E-10	0
47.9	0	4.62E-10	0
48.7	0	4.62E-10	0
49.5	0	4.62E-10	0
50.3	0	4.62E-10	0
51.2	0	0.00E+00	0
52.0	0	0.00E+00	0
52.8	0	0.00E+00	0
53.6	0	0.00E+00	0
54.4	0	0.00E+00	0
55.2	0	0.00E+00	0
56.0	0	0.00E+00	0
56.8	0	0.00E+00	0
57.6	0	0.00E+00	0
58.4	0	0.00E+00	0
59.3	0	0.00E+00	0
60.1	0	0.00E+00	0
60.9	0	0.00E+00	0
61.7	0	0.00E+00	0
62.5	0	0.00E+00	0
63.3	0	0.00E+00	0
64.1	0	0.00E+00	0

Transect C TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
64.9	0	0.00E+00	0
65.7	0	0.00E+00	0
66.5	0	0.00E+00	0
67.4	0	0.00E+00	0
68.2	0	0.00E+00	0
69.0	0	0.00E+00	0
69.8	0	0.00E+00	0
70.6	0	0.00E+00	0
71.4	0	0.00E+00	0
72.2	0	0.00E+00	0
73.0	0	0.00E+00	0
73.8	0	0.00E+00	0
74.6	0	0.00E+00	0
75.5	0	0.00E+00	0
76.3	0	0.00E+00	0
77.1	0	0.00E+00	0
77.9	0	0.00E+00	0
78.7	0	0.00E+00	0
79.5	0	0.00E+00	0
80.3	0	0.00E+00	0
81.1	0	0.00E+00	0
81.9	0	0.00E+00	0
82.7	0	0.00E+00	0
83.6	0	0.00E+00	0
84.4	0	0.00E+00	0
85.2	0	9.35E-11	0
86.0	0	9.35E-11	0
86.8	0	9.35E-11	0
87.6	0	9.35E-11	0
88.4	0	9.35E-11	0
89.2	0	9.35E-11	0
90.0	0	0.00E+00	0
90.8	0	0.00E+00	0
91.7	0	0.00E+00	0
92.5	0	0.00E+00	0
93.3	0	0.00E+00	0
94.1	0	0.00E+00	0
94.9	0	0.00E+00	0
95.7	0	0.00E+00	0
96.5	0	0.00E+00	0

Transect C TCE Mass Flux (g/day)

Distance from Edge of Transect (ft)

Depth in ft-bgs	Start of Transect 0.0	STM-8R 80.0	End of Transect 160.0
97.3	0	0.00E+00	0
98.1	0	0.00E+00	0
98.9	0	0.00E+00	0
99.8	0	0.00E+00	0
100.6	0	0.00E+00	0
101.4	0	0.00E+00	0
102.2	0	0.00E+00	0
103.0	0	0.00E+00	0
103.8	0	0.00E+00	0
104.6	0	0.00E+00	0
105.4	0	0.00E+00	0
106.2	0	0.00E+00	0
107.0	0	0.00E+00	0
107.9	0	0.00E+00	0
108.7	0	0.00E+00	0
109.5	0	0.00E+00	0
110.3	0	0.00E+00	0
111.1	0	0.00E+00	0
111.9	0	0.00E+00	0
112.7	0	0.00E+00	0
113.5	0	0.00E+00	0
114.3	0.00E+00	0.00E+00	0.00E+00
115.1	0.00E+00	0.00E+00	0.00E+00

Transect Calculator: Mass Flux Summary

Version 2.01

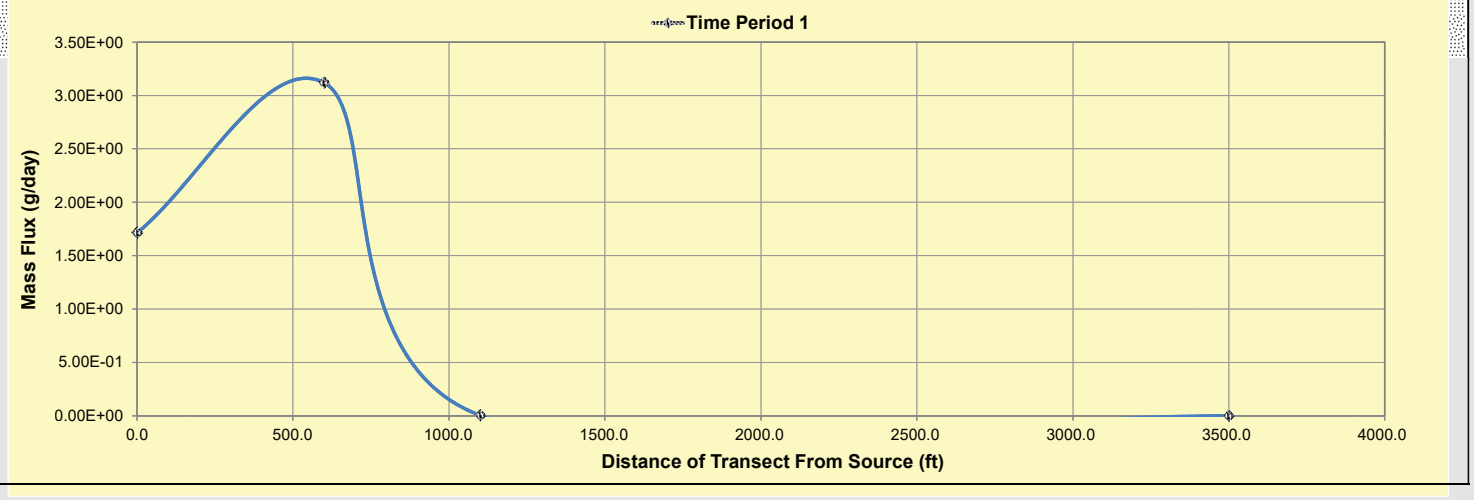
Site Location and I.D.: LMC Wilmington
Description: PCE and TCE in Bedrock Aquifer

Mass Flux Summary for TCE

	Distance from Source (ft)	Mass Flux (g/day) Time Period 1	Time Period 2	Time Period 3	Time Period 4	Time Period 5
Transect 1	0	1.71E+00				
Transect 2	600	3.12E+00				
Transect 3	1100	4.96E-03				
Transect 4	3500	3.34E-09				
Transect 5						

85th percentile from Advanced Uncertainty Analysis
Maximum of the three Toolkit interpolation schemes
Value using selected interpolation schemes
Minimum of the three Toolkit interpolation schemes
15th percentile from Advanced Uncertainty Analysis

Transect 1: Building 1
Transect 2: Transect A
Transect 3: Transect B
Transect 4: Transect C



Next Step: | View Flux Result | View Conc Grid | Print | HELP

APPENDIX J
CRAFLUSH MODEL SUMMARY MEMO – 2016

CRAFLUSH Modeling Results

Memorandum

To: *Paul Calligan, PG, Lockheed Martin*
Cc: *Art Taddeo, AECOM*

Primary Author: *Charles Schaefer, PhD, CDM Smith*

RTO Review Team: Ernest Ashley, PG, CDM Smith
John Dougherty, PG, CDM Smith
Matthew Gamache, PE, D.WRE, CDM Smith
Tamzen Macbeth, PhD, PE, CDM Smith
Maria Watt, PE, CDM Smith

Date: *January 24, 2017*

Subject: *CRAFLUSH Model Simulation of Matrix Diffusion Process Between Transects A and B, Wilmington, MA Site*

Introduction and Objective

Groundwater monitoring data along Transects A and B show that chlorinated ethene (primarily PCE and TCE) concentrations in the apparent core of the groundwater plume are 90 to 99% less in Transect B than in Transect A; Transect B is approximately 5oo feet downgradient of Transect A. Given the apparent lack of dechlorination and contaminant degradation observed, it is hypothesized that diffusion into the rock matrix is responsible for this large difference in contaminant concentration as groundwater migrates from Transect A to Transect B. To test this hypothesis, the CRAFLUSH model (Sudicky and Frind 1982; Davis and Johnston 1984; Sudicky and Frind 1984) was employed using site-specific input parameters. The overall objective for employing this screening model was to determine if the difference in concentration between Transects A and B could be explained by diffusive uptake into the rock matrix.

CRAFLUSH assumes 1-dimension flow through a single fracture plane, bounded above and below by the rock matrix. Contaminant advection through the fracture is coupled with contaminant diffusion into the rock matrix. Adsorption and reaction processes, both in the fracture and rock matrix, can also be simulated in the CRAFLUSH model. It is important to note that the CRAFLUSH model likely provides a very conservative estimate of contaminant attenuation because 1) no attenuation of the source is assumed, and 2) no dilution of the contaminant due to mixing into other fracture zones is

included. However, CRAFLUSH serves as a useful tool to determine if the decreases in contaminant levels between Transects A and B can be explained by diffusive uptake into the rock matrix.

Model Parameter Values

The CRAFLUSH model, which assumes a constant source concentration, was used to conduct a preliminary estimate of the diffusion of PCE from groundwater into the rock matrix between Transects A and B at the Wilmington, MA site, and the subsequent impact of this matrix diffusion process on dissolved PCE concentrations in the fractures.

The following input parameters were used:

Fracture spacing: 40 cm. This estimate is based on the fracture spacing of fractures ranked 2 and 3 by Hager-Richter Geosciences in the geophysical logging at borehole TRC-202R conducted for AECOM (Appendix Q). The interval from 62 to 182 ft bgs is considered. As indicated in Appendix T, both high and low transmissivity fractures contribute to the contaminant mass flux, thus both small and large aperture fractures should be considered in the fracture spacing.

Matrix Porosity: 0.023. This is based on the data presented in the Stone Environmental report for matrix diffusion sampling conducted at the site (Appendix K[1]).

Matrix PCE Linear Adsorption Coefficient: 0.08 L/kg (based on rock matrix TOC values measured in the Stone Environmental report in Appendix K). Assuming a rock density of 2.6 kg/L, and the matrix porosity of 0.023, a rock matrix PCE retardation factor of 10 is estimated. No sorption and retardation was conservatively assumed in the fracture.

Effective PCE diffusion coefficient: 6.5 x 10^{-9} cm^2/sec based on diffusion testing presented in Golder report – average of replicates excluding one outlier (Appendix L). Note that this effective diffusion coefficient value is multiplied by the matrix porosity, and therefore must be divided by the matrix porosity prior to entering it into the CRAFLUSH model.

Seepage velocity through fracture: 1873 cm/day (based on calculations presented in Appendix R)

Fracture aperture: 0.0007 cm (based on calculations presented in Appendix R, and considering both fractures ranked 2 and 3 by Hager-Richter Geosciences in the geophysical logging at borehole TRC-202R conducted for AECOM). The interval from 62 to 182 ft bgs is considered.

Exposure time: 40 years (this is a conservative assumption based on time of PCE/TCE release).

Length: A travel distance of 500 feet (Transect A to Transect B) is assumed.

---

[1] Appendices are provided in the Phase II report prepared by AECOM

Contaminant degradation: No PCE degradation in both the fractures and rock matrix was conservatively assumed.

Source concentration: A dimensionless source concentration of 1 was used, thus the model simply looked at the fractional decrease in concentration between Transects A and B.

No dispersion was assumed in the model.

Screening Model Results

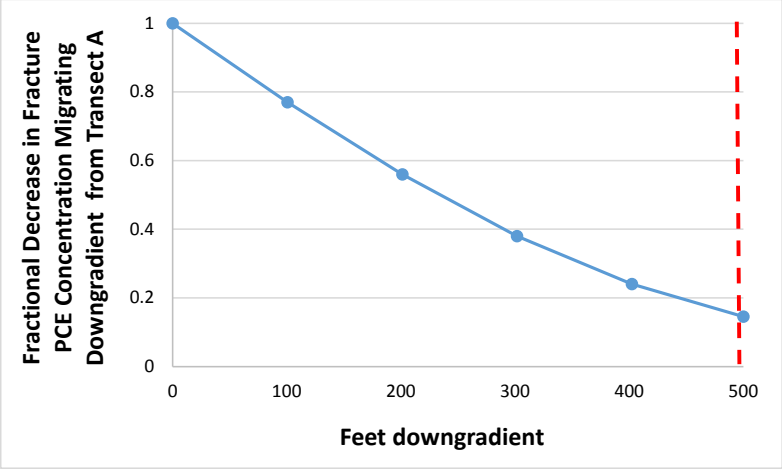


Figure 1
CRAFLUSH simulation results using the listed model parameter values. The dashed line indicates the location of Transect B, which is approximately 500 feet downgradient of Transect A.

Comparison Between model and Observed PCE Concentrations

The CRAFLUSH model, using site-specific input parameters, indicates that PCE concentrations (or, mass discharge) will decrease by approximately 85% between Transect A and B (Transect B is approximately 500 feet downgradient of Transect A). This simulation result is in reasonable agreement with field data along Transects A and B, which show approximately a 90 to 99% decrease in PCE groundwater concentrations as PCE migrates from Transect A to Transect B. The CRAFLUSH simulation likely underestimates the PCE attenuation because dilution and dispersion processes, including spreading due to entry into additional fracture zones during migration from Transect A to Transect B, is not considered in the model.

References

Davis, G.B. and C. D. Johnston, 1984, "Comments on "Contaminant Transport in Fractured Porous Media: Analytical Solutions for a System of Parallel Fractures" by E. A. Sudicky and E.O. Frind", Water Resources Research, Vol. 20, No. 9, pages 1321-1322

Sudicky, E.A. and Frind, E.O. 1982. Contaminant transport in fractured porous media: analytical solutions for a system of parallel fractures. Water Resources Research 18, 1634-1642.

Sudicky, E. A. and E. O. Frind, 1984, Reply, Water Resources Research, Vol. 20, No. 9, pages 1323-1324

APPENDIX K
LABORATORY ANALYTICAL AND DATA VALIDATION REPORTS – INDOOR AIR

ANALYTICAL REPORT

Lab Number:	L2202814
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	Lori Herberich
Phone:	(978) 589-3383
Project Name:	LOCKHEED MARTIN
Project Number:	60552044.30
Report Date:	03/07/22

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2202814-01	22A-AA1-1	AIR	WILMINGTON, MA	01/18/22 16:58	01/19/22
L2202814-02	22A-IA2-1	AIR	WILMINGTON, MA	01/18/22 16:54	01/19/22
L2202814-03	22A-IA3-1	AIR	WILMINGTON, MA	01/18/22 16:53	01/19/22
L2202814-04	22A-IA4-1	AIR	WILMINGTON, MA	01/18/22 16:52	01/19/22
L2202814-05	22A-IA7-1	AIR	WILMINGTON, MA	01/18/22 16:53	01/19/22
L2202814-06	22A-IA8-1	AIR	WILMINGTON, MA	01/18/22 16:56	01/19/22
L2202814-07	22A-IA8-2	AIR	WILMINGTON, MA	01/18/22 16:56	01/19/22
L2202814-08	22A-IA9-1	AIR	WILMINGTON, MA	01/18/22 17:00	01/19/22
L2202814-09	UNUSED_CAN953	AIR	WILMINGTON, MA		01/19/22

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2202814
Project Number:	60552044.30	**Report Date:**	03/07/22

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	YES
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2202814
Project Number:	60552044.30	**Report Date:**	03/07/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2202814
Project Number:	60552044.30	**Report Date:**	03/07/22

Case Narrative (continued)

Report Revision

March 7, 2022 the report has been amended to correct the answer to questions E b and I.

MCP Related Narratives

Canisters were released from the laboratory on January 17, 2022. The canister certification data is provided as an addendum.

MCP Volatile Organics in Air

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

L2202814-01 through -08: The Total Ion Chromatograph was scanned for the ions associated with methyl acetate. This compound was not detected in the sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 03/07/22

QC OUTLIER SUMMARY REPORT

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment

There are no QC Outliers associated with this report.

AIR

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-01
Client ID: 22A-AA1-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:58
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/01/22 20:02
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.444	0.200	--	2.20	0.989	--		1
Chloromethane	0.528	0.200	--	1.09	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	1.26	1.00	--	2.99	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.068	0.050	--	0.521	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.181	0.100	--	0.578	0.319	--		1
Carbon tetrachloride	0.072	0.020	--	0.453	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-01
Client ID: 22A-AA1-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:58
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	0.161	0.100	--	0.607	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	0.044	0.040	--	0.191	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-01
Client ID: 22A-AA1-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:58
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Bromofluorobenzene	102		70-130
Toluene-d8	103		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	106		60-140
chlorobenzene-d5	102		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-02
Client ID: 22A-IA2-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:54
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/01/22 20:43
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.446	0.200	--	2.21	0.989	--		1
Chloromethane	0.528	0.200	--	1.09	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.071	0.050	--	0.544	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	2.65	0.100	--	8.47	0.319	--		1
Carbon tetrachloride	0.071	0.020	--	0.447	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-02
Client ID: 22A-IA2-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:54
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	6.09	0.100	--	23.0	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.20	0.020	--	5.21	0.087	--		1
p/m-Xylene	4.07	0.040	--	17.7	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.280	0.020	--	1.19	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.60	0.020	--	6.95	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.141	0.050	--	0.739	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-02
Client ID: 22A-IA2-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:54
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Bromofluorobenzene	101		70-130
Toluene-d8	98		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	105		60-140
bromochloromethane	107		60-140
chlorobenzene-d5	103		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-03
Client ID: 22A-IA3-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:53
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/01/22 21:24
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.447	0.200	--	2.21	0.989	--		1
Chloromethane	0.529	0.200	--	1.09	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	1.49	1.00	--	3.54	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.065	0.050	--	0.498	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	2.99	0.100	--	9.55	0.319	--		1
Carbon tetrachloride	0.072	0.020	--	0.453	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-03
Client ID: 22A-IA3-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:53
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	6.83	0.100	--	25.7	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.35	0.020	--	5.86	0.087	--		1
p/m-Xylene	4.59	0.040	--	19.9	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.322	0.020	--	1.37	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.79	0.020	--	7.77	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.139	0.050	--	0.729	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-03
Client ID: 22A-IA3-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:53
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Bromofluorobenzene	101		70-130
Toluene-d8	96		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	106		60-140
bromochloromethane	107		60-140
chlorobenzene-d5	104		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-04
Client ID: 22A-IA4-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:52
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/01/22 22:05
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.444	0.200	--	2.20	0.989	--		1
Chloromethane	0.532	0.200	--	1.10	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	1.08	1.00	--	2.57	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.070	0.050	--	0.537	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	3.33	0.100	--	10.6	0.319	--		1
Carbon tetrachloride	0.069	0.020	--	0.434	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-04
Client ID: 22A-IA4-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:52
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	7.64	0.100	--	28.8	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.51	0.020	--	6.56	0.087	--		1
p/m-Xylene	5.08	0.040	--	22.1	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.352	0.020	--	1.50	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.98	0.020	--	8.60	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.130	0.050	--	0.682	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-04
Client ID: 22A-IA4-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:52
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Bromofluorobenzene	105		70-130
Toluene-d8	99		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	107		60-140
chlorobenzene-d5	102		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-05
Client ID: 22A-IA7-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:53
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/22 00:09
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.432	0.200	--	2.14	0.989	--		1
Chloromethane	0.509	0.200	--	1.05	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	2.02	1.00	--	4.80	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.069	0.050	--	0.529	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	3.04	0.100	--	9.71	0.319	--		1
Carbon tetrachloride	0.077	0.020	--	0.484	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-05
Client ID: 22A-IA7-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:53
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	6.84	0.100	--	25.8	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.38	0.020	--	5.99	0.087	--		1
p/m-Xylene	4.56	0.040	--	19.8	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.303	0.020	--	1.29	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.80	0.020	--	7.82	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.114	0.050	--	0.598	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-05
Client ID: 22A-IA7-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:53
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Bromofluorobenzene	102		70-130
Toluene-d8	97		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	108		60-140
chlorobenzene-d5	103		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-06
Client ID: 22A-IA8-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:56
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/01/22 23:27
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.442	0.200	--	2.19	0.989	--		1
Chloromethane	0.527	0.200	--	1.09	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	1.05	1.00	--	2.49	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.087	0.050	--	0.667	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	2.17	0.100	--	6.93	0.319	--		1
Carbon tetrachloride	0.070	0.020	--	0.440	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-06
Client ID: 22A-IA8-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:56
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	4.90	0.100	--	18.5	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.102	0.020	--	0.692	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.966	0.020	--	4.20	0.087	--		1
p/m-Xylene	3.29	0.040	--	14.3	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.231	0.020	--	0.984	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.29	0.020	--	5.60	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.094	0.050	--	0.493	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-06
Client ID: 22A-IA8-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:56
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Bromofluorobenzene	100		70-130
Toluene-d8	96		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	107		60-140
chlorobenzene-d5	102		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-07
Client ID: 22A-IA8-2
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:56
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/22 00:50
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.443	0.200	--	2.19	0.989	--		1
Chloromethane	0.521	0.200	--	1.08	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.084	0.050	--	0.644	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	2.08	0.100	--	6.64	0.319	--		1
Carbon tetrachloride	0.069	0.020	--	0.434	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-07
Client ID: 22A-IA8-2
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:56
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	4.62	0.100	--	17.4	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.091	0.020	--	0.617	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.890	0.020	--	3.87	0.087	--		1
p/m-Xylene	3.02	0.040	--	13.1	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.214	0.020	--	0.911	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.17	0.020	--	5.08	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.092	0.050	--	0.482	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-07
Client ID: 22A-IA8-2
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 16:56
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Bromofluorobenzene	101		70-130
Toluene-d8	96		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	105		60-140
bromochloromethane	107		60-140
chlorobenzene-d5	103		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-08
Client ID: 22A-IA9-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 17:00
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/22 01:31
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.452	0.200	--	2.24	0.989	--		1
Chloromethane	0.532	0.200	--	1.10	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	1.69	1.00	--	4.01	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.071	0.050	--	0.544	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	0.020	0.020	--	0.098	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	2.20	0.100	--	7.03	0.319	--		1
Carbon tetrachloride	0.072	0.020	--	0.453	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-08
Client ID: 22A-IA9-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 17:00
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	4.97	0.100	--	18.7	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.047	0.020	--	0.319	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.956	0.020	--	4.15	0.087	--		1
p/m-Xylene	3.14	0.040	--	13.6	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.191	0.020	--	0.813	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.23	0.020	--	5.34	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.072	0.050	--	0.378	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

SAMPLE RESULTS

Lab ID: L2202814-08
Client ID: 22A-IA9-1
Sample Location: WILMINGTON, MA

Date Collected: 01/18/22 17:00
Date Received: 01/19/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Bromofluorobenzene	98		70-130
Toluene-d8	93		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	106		60-140
chlorobenzene-d5	103		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 101,TO-15-SIM
Analytical Date: 02/01/22 18:12

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-08 Batch: WG1600363-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 101,TO-15-SIM
Analytical Date: 02/01/22 18:12

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-08 Batch: WG1600363-4								
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30
Lab Number: L2202814
Report Date: 03/07/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 101,TO-15-SIM
Analytical Date: 02/01/22 18:12

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-08 Batch: WG1600363-4								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Bromofluorobenzene	104		70-130
Toluene-d8	103		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-08 Batch: WG1600363-3								
Dichlorodifluoromethane	95		-		70-130	-		
Chloromethane	95		-		70-130	-		
Vinyl chloride	94		-		70-130	-		
Bromomethane	95		-		70-130	-		
Chloroethane	93		-		70-130	-		
Acetone	98		-		50-150	-		
1,1-Dichloroethene	98		-		70-130	-		
Methylene chloride	95		-		70-130	-		
Carbon disulfide	92		-		70-130	-		
Freon-113	96		-		70-130	-		
trans-1,2-Dichloroethene	95		-		70-130	-		
1,1-Dichloroethane	96		-		70-130	-		
Methyl tert butyl ether	98		-		70-130	-		
2-Butanone	92		-		70-130	-		
cis-1,2-Dichloroethene	99		-		70-130	-		
Chloroform	100		-		70-130	-		
1,2-Dichloroethane	92		-		70-130	-		
1,1,1-Trichloroethane	95		-		70-130	-		
Benzene	89		-		70-130	-		
Carbon tetrachloride	93		-		70-130	-		
1,2-Dichloropropane	95		-		70-130	-		
Bromodichloromethane	101		-		70-130	-		
1,4-Dioxane	96		-		50-150	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-08 Batch: WG1600363-3								
Trichloroethene	98		-		70-130	-		
cis-1,3-Dichloropropene	91		-		70-130	-		
4-Methyl-2-pentanone	98		-		70-130	-		
trans-1,3-Dichloropropene	107		-		70-130	-		
1,1,2-Trichloroethane	100		-		70-130	-		
Toluene	88		-		70-130	-		
Dibromochloromethane	107		-		70-130	-		
1,2-Dibromoethane	99		-		70-130	-		
Tetrachloroethene	98		-		70-130	-		
Chlorobenzene	98		-		70-130	-		
Ethylbenzene	96		-		70-130	-		
p/m-Xylene	97		-		70-130	-		
Bromoform	102		-		70-130	-		
Styrene	100		-		70-130	-		
1,1,2,2-Tetrachloroethane	103		-		70-130	-		
o-Xylene	97		-		70-130	-		
1,3-Dichlorobenzene	102		-		70-130	-		
1,4-Dichlorobenzene	99		-		70-130	-		
1,2-Dichlorobenzene	101		-		70-130	-		
1,2,4-Trichlorobenzene	106		-		50-150	-		
Naphthalene	91		-		50-150	-		
Hexachlorobutadiene	107		-		50-150	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.30

Lab Number: L2202814

Report Date: 03/07/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-08 Batch: WG1600363-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95				70-130
Toluene-d8	100				70-130
Bromofluorobenzene	98				70-130

Lab Duplicate Analysis
Batch Quality Control

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1600363-5 QC Sample: L2202814-04 Client ID: 22A-IA4-1						
Dichlorodifluoromethane	0.444	0.439	ppbV	1		25
Chloromethane	0.532	0.527	ppbV	1		25
Vinyl chloride	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Acetone	1.08	1.30	ppbV	18		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
Methylene chloride	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
Freon-113	0.070	0.069	ppbV	1		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25
2-Butanone	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
Chloroform	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Benzene	3.33	3.36	ppbV	1		25
Carbon tetrachloride	0.069	0.071	ppbV	3		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab	Associated sample(s): 01-08	QC Batch ID: WG1600363-5		QC Sample: L2202814-04		Client ID: 22A-IA4-1
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	ND	ND	ppbV	NC		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Toluene	7.64	7.66	ppbV	0		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	ND	ND	ppbV	NC		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	1.51	1.50	ppbV	1		25
p/m-Xylene	5.08	5.10	ppbV	0		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	0.352	0.352	ppbV	0		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	1.98	1.99	ppbV	1		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1600363-5 QC Sample: L2202814-04 Client ID: 22A-IA4-1						
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Naphthalene	0.130	0.156	ppbV	18		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		96		70-130
Toluene-d8	99		97		70-130
Bromofluorobenzene	105		103		70-130

Project Name: LOCKHEED MARTIN

Project Number: 60552044.30

Lab Number: L2202814

Report Date: 03/07/22

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2202814-01	22A-AA1-1	01249	Flow 5	01/17/22	375785		-	-	-	Pass	10.0	10.2	2
L2202814-01	22A-AA1-1	2638	6.0L Can	01/17/22	375785	L2201182-06	Pass	-29.0	-5.1	-	-	-	-
L2202814-02	22A-IA2-1	0790	Flow 4	01/17/22	375785		-	-	-	Pass	9.8	10.1	3
L2202814-02	22A-IA2-1	2266	6.0L Can	01/17/22	375785	L2200666-03	Pass	-28.8	-8.4	-	-	-	-
L2202814-03	22A-IA3-1	01452	Flow 4	01/17/22	375785		-	-	-	Pass	10.0	10.8	8
L2202814-03	22A-IA3-1	1815	6.0L Can	01/17/22	375785	L2201182-06	Pass	-29.1	-7.0	-	-	-	-
L2202814-04	22A-IA4-1	01809	Flow 3	01/17/22	375785		-	-	-	Pass	10.0	10.2	2
L2202814-04	22A-IA4-1	1785	6.0L Can	01/17/22	375785	L2200666-03	Pass	-29.0	-6.5	-	-	-	-
L2202814-05	22A-IA7-1	0250	Flow 5	01/17/22	375785		-	-	-	Pass	10.0	10.6	6
L2202814-05	22A-IA7-1	3599	6.0L Can	01/17/22	375785	L2201182-06	Pass	-28.9	-8.2	-	-	-	-
L2202814-06	22A-IA8-1	01770	Flow 4	01/17/22	375785		-	-	-	Pass	10.0	10.7	7
L2202814-06	22A-IA8-1	904	6.0L Can	01/17/22	375785	L2200666-03	Pass	-28.9	-8.0	-	-	-	-
L2202814-07	22A-IA8-2	0167	Flow 4	01/17/22	375785		-	-	-	Pass	10.0	10.9	9
L2202814-07	22A-IA8-2	1668	6.0L Can	01/17/22	375785	L2201182-06	Pass	-28.7	-7.0	-	-	-	-
L2202814-08	22A-IA9-1	01513	Flow 4	01/17/22	375785		-	-	-	Pass	10.0	10.4	4

Project Name: LOCKHEED MARTIN

Project Number: 60552044.30

Lab Number: L2202814

Report Date: 03/07/22

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2202814-08	22A-IA9-1	3125	6.0L Can	01/17/22	375785	L2200666-03	Pass	-28.8	-8.7	-	-	-	-
L2202814-09	UNUSED_CAN953	0695	Flow 4	01/17/22	375785		-	-	-	Pass	10.0	10.5	5
L2202814-09	UNUSED_CAN953	953	6.0L Can	01/17/22	375785	L2201182-06	Pass	-29.0	-29.4	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2200666
Report Date: 03/07/22

Air Canister Certification Results

Lab ID: L2200666-03
Client ID: CAN 2950 SHELF 36
Sample Location:

Date Collected: 01/05/22 14:00
Date Received: 01/06/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 01/09/22 18:32
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2200666
Report Date: 03/07/22

Air Canister Certification Results

Lab ID: L2200666-03
Client ID: CAN 2950 SHELF 36
Sample Location:

Date Collected: 01/05/22 14:00
Date Received: 01/06/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2200666

Project Number: CANISTER QC BAT **Report Date:** 03/07/22

Air Canister Certification Results

Lab ID: L2200666-03
Client ID: CAN 2950 SHELF 36
Sample Location:

Date Collected: 01/05/22 14:00
Date Received: 01/06/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2200666

Project Number: CANISTER QC BAT **Report Date:** 03/07/22

Air Canister Certification Results

Lab ID: L2200666-03
Client ID: CAN 2950 SHELF 36
Sample Location:

Date Collected: 01/05/22 14:00
Date Received: 01/06/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2200666
Report Date: 03/07/22

Air Canister Certification Results

Lab ID: L2200666-03
Client ID: CAN 2950 SHELF 36
Sample Location:

Date Collected: 01/05/22 14:00
Date Received: 01/06/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	91		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	91		60-140

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2200666

Project Number: CANISTER QC BAT **Report Date:** 03/07/22

Air Canister Certification Results

Lab ID: L2200666-03
Client ID: CAN 2950 SHELF 36
Sample Location:

Date Collected: 01/05/22 14:00
Date Received: 01/06/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 01/09/22 18:32
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2200666
Report Date: 03/07/22

Air Canister Certification Results

Lab ID: L2200666-03
Client ID: CAN 2950 SHELF 36
Sample Location:

Date Collected: 01/05/22 14:00
Date Received: 01/06/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2200666

Project Number: CANISTER QC BAT **Report Date:** 03/07/22

Air Canister Certification Results

Lab ID: L2200666-03
Client ID: CAN 2950 SHELF 36
Sample Location:

Date Collected: 01/05/22 14:00
Date Received: 01/06/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	93		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2201182
Report Date: 03/07/22

Air Canister Certification Results

Lab ID: L2201182-06
Client ID: CAN 1641 SHELF 31
Sample Location:

Date Collected: 01/10/22 08:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 01/12/22 00:26
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2201182
Report Date: 03/07/22

Air Canister Certification Results

Lab ID: L2201182-06
Client ID: CAN 1641 SHELF 31
Sample Location:

Date Collected: 01/10/22 08:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2201182

Project Number: CANISTER QC BAT **Report Date:** 03/07/22

Air Canister Certification Results

Lab ID: L2201182-06
Client ID: CAN 1641 SHELF 31
Sample Location:

Date Collected: 01/10/22 08:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2201182

Project Number: CANISTER QC BAT **Report Date:** 03/07/22

Air Canister Certification Results

Lab ID: L2201182-06
Client ID: CAN 1641 SHELF 31
Sample Location:

Date Collected: 01/10/22 08:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2201182
Report Date: 03/07/22

Air Canister Certification Results

Lab ID: L2201182-06
Client ID: CAN 1641 SHELF 31
Sample Location:

Date Collected: 01/10/22 08:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	80		60-140
Bromochloromethane	83		60-140
chlorobenzene-d5	86		60-140

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2201182

Project Number: CANISTER QC BAT **Report Date:** 03/07/22

Air Canister Certification Results

Lab ID: L2201182-06
Client ID: CAN 1641 SHELF 31
Sample Location:

Date Collected: 01/10/22 08:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 01/12/22 00:26
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2201182
Report Date: 03/07/22

Air Canister Certification Results

Lab ID: L2201182-06
Client ID: CAN 1641 SHELF 31
Sample Location:

Date Collected: 01/10/22 08:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2201182

Project Number: CANISTER QC BAT **Report Date:** 03/07/22

Air Canister Certification Results

Lab ID: L2201182-06
Client ID: CAN 1641 SHELF 31
Sample Location:

Date Collected: 01/10/22 08:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	76		60-140
bromochloromethane	78		60-140
chlorobenzene-d5	83		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.30

Lab Number: L2202814
Report Date: 03/07/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2202814-01A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2202814-02A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2202814-03A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2202814-04A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2202814-05A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2202814-06A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2202814-07A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2202814-08A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2202814-09A	Canister - 6 Liter	NA	NA			Y	Absent		CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2202814
Project Number:	60552044.30	**Report Date:**	03/07/22

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2202814
Project Number:	60552044.30	**Report Date:**	03/07/22

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2202814
Project Number:	60552044.30	**Report Date:**	03/07/22

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2202814
Project Number:	60552044.30	**Report Date:**	03/07/22

REFERENCES

101 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA/625/R-96/010b:January 1999) with QC Requirements & Performance Standards for the Analysis of TO-15 under the Massachusetts Contingency Plan, WSC-CAM-IXB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 1/20/22

ALPHA Job #: L2202814

Client Information

Client: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824
Phone: 978-905-2100
Fax: 978-905-2101
Email: lori.herberich@aecom.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Lockheed Martin
Project Location: Wilmington, MA
Project #: 60552044.30
Project Manager: Scott Olson
ALPHA Quote #: 2017-2022

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)
Lori Herberich
Scott Olson

Billing Information

☐ Same as Client info PO #: 141252

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
Mass DEP	CAM	

Other Project Specific Requirements/Comments: TO-15 SIM. RLs must meet thresholds in AECOM Project QAPP (2017)

Project-Specific Target Compound List: ☐ Call Lori Herberich with Questions 478-302-2174

ANALYSIS

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM + Freon 113	APH Subject Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
02814-01	22A-AA1-1	1/18/22	0925	1658	-30.57	-6.61	AA	DP	6L	2638	01249	X					
-02	22A-IA2-1	1/18/22	0931	1654	-30.01	-8.42	AA	DP	6L	2266	01770	X					
-03	22A-IA3-1	1/18/22	0929	1653	-30.10	-7.38	AA	DP	6L	1815	01452	X					
-04	22A-IA4-1	1/18/22	0928	1652	-30.35	-7.20	AA	DP	6L	1785	01809	X					
-05	22A-IA7-1	1/18/22	0931	1653	-30.62	-8.65	AA	DP	6L	3549	0250	X					
-06	22A-IA8-1	1/18/22	0930	1656	-29.61	-7.76	AA	DP	6L	904	0790	X					
-07	22A-IA8-2	1/18/22	0930	1656	-29.93	-6.81	AA	DP	6L	1666	0167	X					
-08	22A-IA9-1	1/18/22	0927	1700	-30.16	-8.40	AA	DP	6L	3125	01573	X					

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Relinquished By:	Date/Time	Received By:	Date/Time:
		AWLB	1/19/22 09:56
	1/19/22 13:20		1/19/22 13:20
	1/19/22 15:00		1/19/22 1500
	1/19/22 1552		1/19/22 1552

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation Summary Lockheed Martin-Wilmington, MA Site Alpha Analytical SDG L2202814		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.30
Date	February 14, 2022		

Data validation was performed on the data for seven indoor air samples and one ambient air sample collected at the Lockheed Martin site in Wilmington, MA on January 18, 2022. Alpha Analytical in Mansfield, MA analyzed the samples and reported the data in sample delivery group (SDG) L2202814.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the *Work Plan 2017-2022 Post-Temporary Solution Monitoring Program Former General Electric Site, 50 Fordham Road, Wilmington, MA, September 2017.* Current Region 1 data validation guidelines were also used as a reference during review of the data.

Data for the following samples were assessed:

Sample ID	Parameter
22A-AA1-1	VOCs by EPA Method TO-15 SIM
22A-IA2-1	
22A-IA3-1	
22A-IA4-1	
22A-IA7-1	
22A-IA8-1	
22A-IA8-2*	
22A-IA9-1	

*Field duplicate of 22A-IA8-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

- * Chain-of-custody (COC)/sample integrity
- * Holding times and sample preservation
- * Laboratory method blanks
- * Canister certification
- * GC/MS tuning#
- * Initial calibration/initial calibration and continuing calibration verifications#
- * Surrogate recoveries (%Rs)
- * Matrix duplicate (MD) results
- * Laboratory control sample (LCS) results
- * Field duplicate results
- * Internal standard performance
- General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements.

General Reporting Issues

MassDEP "Presumptive Certainty" status was achieved for the data as indicated on the MADEP MCP Response Action Analytical Report Certification form.

The total ion chromatograms were scanned for the ions associated with methyl acetate. This compound was not detected in the samples.

The Reporting Limits for the following compounds exceed the Project Action Limits, as indicated in the Work Plan:

Dibromochloromethane
1,2-Dibromoethane (Ethylene Dibromide)
Hexachlorobutadiene
1,1,2,2-Tetrachloroethane

APPENDIX L
PUBLIC NOTIFICATION DOCUMENTATION

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 06, 2021 3:36 PM
To: gstanieich@aol.com
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Planning for Wilmington Annual Groundwater Sampling - August - September 2021
Attachments: BWSC_WRT_Aug-2021.pdf

Hi Gary,

I hope this email finds you well.

Please see the attached MassDEP form that we are required to send to property owners to notify of our upcoming annual groundwater sampling event.

We plan to conduct the work between the dates of **August 30 and September 24, 2021**, with occasional brief site visits in August, and October 2021.

Same as in past years, the sampling requires us to access wells within Building 1 (UPS). We understand the need to coordinate work with you and UPS.

As in the past we will coordinate all indoor work to minimize the time we spend inside the building. We do have an expanded sampling round this year so the time spent at each of the wells is more than in past years. The following are our dates for work inside Building 1, which we have scheduled such that we only need to be inside the building between 10:00 am and 4:00 pm to avoid UPS trucks.

- water level measurements – **Tuesday August 31** – requires roughly 3 hours to measure all wells inside
- groundwater sampling – **Wednesday through Friday September 1-3, and Wednesday September 22**.

I will follow up with a phone call to discuss details, as needed.

Regards.
Scott

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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Gary Stanieich

2. Street Address: 424 Broadway

City/Town: Somerville, MA Zip Code: 02145

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 40 Fordham Rd (site formerly #50, but is now #40 Fordham Rd)

City/Town: Wilmington, MA Zip Code: 01887

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be conducted August 30 and mid-October 2021.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following groundwater monitoring activities will be conducted onsite between the dates of August 30 and mid-October 2021:

- Groundwater sampling for laboratory analyses from numerous overburden and bedrock monitoring wells located at 40 and 50 Fordham Rd at:
    - Up to 11 monitoring locations within Building 1, and
    - Approximately 40-60 monitoring wells outside of the Building at various locations on the property. Approximately 30 of these wells are located within the parking lot.
- Although unlikely, surface water samples may also be collected for laboratory analyses from select locations in the wetland.

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 06, 2021 3:12 PM
To: Patrick St Pierre
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notification of Groundwater Sampling - 87 Concord Street - North Reading, MA - August - September 2021
Attachments: BWSC_Howland_Aug-2021.pdf

Patrick,

Attached please find a copy of BWSC-123 form providing notification of upcoming water level and groundwater sampling activities to be conducted on the property at 87 Concord Street in North Reading, MA.

- The activities detailed in the form will be conducted onsite between the approximate dates of August 30 and mid-October 2021.
- Activities will be conducted per the conditions of the access agreement in place between Howland Development Corporation and Lockheed Martin Corporation.
- Wells to be sampled include AE-112D and AE-112R, plus water levels from wells MW-2 and MW-3 (AECOM IDs HOW-2 and HOW-3) which are located in the paved parking area around the building.
- We will visit the wells periodically during the sampling event with tentative dates of **August 30 - September 1** for water level measurements, **plus 1-2 days (TBD) in September** for groundwater sampling.
- Access is only needed to the localized area at each well. Our personnel will place cones around the wells but will not disrupt traffic flow around the building.
- Each visit will include 1-2 people with 1-2 vehicles for durations ranging from 1 to 8 hours.
- We will have no need to enter the building or interact with any of the tenants.

Dylan Potter (cell 508-333-2316) will lead the work in the field and may be contacted, if needed, during the work.

Nicole Callahan (cell 631-806-9411) and I are also available should you have any questions.

A copy of this notification is being mailed to your office. I will also attempt to fax a copy to Thomas A. Mackie at Mackie Shea O'Brien, P.C. as required per the access agreement.

Regards.
Scott

Scott Olson, PG
Project Manager, Project Management Office
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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Patrick St. Pierre - Howland Development Corp.

2. Street Address: 155 West Street

City/Town: Wilmington, MA Zip Code: 01867

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 87 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ August 30 - mid October 2021

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

This written notice satisfies the notification requirement from the access agreement in place between Howland Development Corporation and Lockheed Martin Corporation.

The following activities will be conducted onsite between the approximate dates of August 30 and mid October 2021:

- Groundwater sample collection for laboratory analyses from up to four monitoring wells, AE-112D, AE-112R, plus MW-2 and MW-3 which AECOM has identified as HOW-2 and HOW-3 so as to not confuse them with other MW-2 and MW-3 locations previously existing as part of other sites in the area.

- The wells are located in the paved parking area around the building. AECOM will visit the wells periodically during the sampling event with tentative dates of August 30 – September 1 for water level measurements, plus 1-2 days in September for groundwater sampling.

- Access is only needed to the localized area at each well. Each visit will include 1-2 people with 1-2 vehicles for durations of 1-8 hours. At no time will we disrupt traffic flow at the property or impede occupants use of the property.

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 06, 2021 3:07 PM
To: 'ken.polk@intlfamilychurch.com'
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notification of Groundwater Sampling - August 30 to mid-October 2021
Attachments: BWSC_Church_Aug-2021.pdf

Hi Ken,

I hope this email finds you well.

Attached please find a copy of BWSC-123 form providing notification of upcoming water level and groundwater sampling activities to be conducted on your property at 99 Concord Street in North Reading, MA. The activities detailed in the form will be conducted onsite between the approximate dates of August 30 and mid-October 2021. The work will be conducted in the parking lot and the wooded portions of your property. When sampling wells in the parking lot, our personnel will barricade the immediate area around the well and will not entirely block the lane for traffic. All work will be done between 7:00 am – 6:00 pm on weekdays.

A hard copy of this notification is in the mail to your office.

Dylan Potter (cell 508-333-2316) will be leading the work in the field and may check in with you periodically, as needed. Otherwise, Nicole Callahan (cell 631-806-9411) and I are available should you have any questions.

Regards.
Scott

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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ken Polk - International Family Church

2. Street Address: 99 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 99 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ August 30 - mid October, 2021

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of August 30 and mid October 2021:

- Groundwater sampling for laboratory analyses from up to seven monitoring wells (MW-5, MW-7, GZA-14, GZA-14A, AE-109D, AE-109R, and AE-110R) which are located in the parking lot and wooded portions of the property at 99 Concord Street in N. Reading, MA. The wells will be accessed from the parking lot of the former GE property at 40 Fordham Rd which abuts the 99 Concord Street property.

- Surface water samples may also be collected for laboratory analyses from the wooded portions of the property during this time.

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 06, 2021 3:24 PM
To: Mark Clark (mclark@northreadingma.gov)
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notice of Groundwater Sampling Activity - August 30 - mid-October 2021
Attachments: BWSC_N-Reading_Aug-2021.pdf

Hi Mark,

I hope this email finds you well.

I just wanted to let you know that we will be conducting our annual groundwater sampling event for the former GE facility in Wilmington and North Reading between the dates of **August 30 and mid-October 2021**.
Attached please find a copy of the BWSC-123 form providing notification of upcoming water level and groundwater sampling activities to be conducted from monitoring wells along the edge of Concord Rd in North Reading.

As in past rounds, we plan to use the Stickney Well road to access the woods and wetlands from Redmond Avenue. Dylan Potter (cell 508-333-2316) will be the Field Lead for this work. Dylan will contact the Water Dept and/or Highway Dept as necessary to gain access if the gate is locked. They typically allow us to add our own padlock so that both the Town and AECOM have access to open the chain at the gate, but maintain it locked when not in use. Same as in past years, our use of the access road will be minimal, just one to two SUVs or pickup trucks with two to four people at a time. No big trucks or heavy equipment. We will contact Water Dept to relock gate when we are done with annual sampling and are ready to remove our lock.

If you have any questions or issues with reports from residents in the area, feel free to contact Dylan or me.

Our crews will be out there on **August 30 and 31** for water level measurements and then for **select days (TBD) in September - October** to conduct the groundwater sampling.

We plan to contact the Fletchers at 3 Furbish Pond Lane to request permission to measure the depth to water from their well on **August 31**. They have permitted us to measure their well for the past 4-5 years without issue. Other than that, we do not plan to contact any of the other residents.

Any questions, please feel free to call or email.

Thank you.
Scott

Scott Olson, PG
Project Manager, Project Management Office
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M +1-978-846-5238
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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Mark Clark - Town of North Reading

2. Street Address: 235 North Street

City/Town: N. Reading Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 51 & 71 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ August 30 - mid October 2021

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of August 30 and October 31, 2021:

- Groundwater sample collection for laboratory analyses from up to seven monitoring wells, STM-3-S-D-R, and STM-8-S-M-D-R.

- The wells are located along the edge of Concord Rd in North Reading near the DL Maher and Richelieu Hardware properties. AECOM will visit the wells periodically during the sampling event with tentative dates of August 30 – September 1 for water level measurements, plus 1-2 days in September for groundwater sampling.

- Access is only needed to the localized area at each well. At no time will we disrupt traffic flow along Concord Street, although we typically hire a North Reading Police detail for sampling STM-3 wells as they are close to the edge of the road.

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 06, 2021 3:17 PM
To: roland@wilmingtongrain.com
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notice of Upcoming Environmental Work at 62 Concord Street North Reading - August 30 - mid-October 2021
Attachments: BWSC_Wilm Masonry_Aug-2021.pdf

Hi Roland,

I hope this email finds you well.

Please see the attached form which we are required to send to property owners as notification of upcoming environmental work to be conducted on your property. A hard copy of this form is in the mail to you.

We plan to conduct water level measurements on **August 31** and then conduct groundwater sampling on your property for two days between **September 1 and 24, 2021**.

Dylan Potter (cell 508-333-2316) will lead the work in the field and will provide you updates regarding specific days that we will be on your property and need to access monitoring well STM-8R1 in your employee parking lot.

Thank you.
Scott

Scott Olson, PG
Project Manager, Project Management Office
D +1-978-905-2351
M +1-978-846-5238
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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Roland Gagne - Wilmington Masonry

2. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed August 30 to mid October 2021.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of August 30 and October 31, 2021:

- Groundwater sampling for laboratory analyses from one monitoring well (STM-8R1) located in the parking lot of the property at 62 Concord Street in North Reading, MA.
- Water levels will be obtained at locations along the Ipswich River through the back of the property at 62 Concord Street.
- Although unlikely, surface water samples may also be collected for laboratory analyses from along the Ipswich River during this time.

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 06, 2021 3:30 PM
To: 'Ruben.Byerley@yrcfreight.com'; charles.castelluccio@gmail.com
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notification of Groundwater Sampling - YRC Freight at 95 Concord Street - North Reading, MA - August 30 - September 24, 2021
Attachments: BWSC_YRC_Aug-20201.pdf

Ruben,

Attached please find a copy of BWSC-123 form providing notification of upcoming water level and groundwater sampling activities to be conducted on the property at 95 Concord Street in North Reading, MA.

- The activities detailed in the form will be conducted onsite between the approximate dates of **August 30 and September 24, 2021**.
- The activities will be conducted per the conditions of the Access Agreement between YRC Freight and Lockheed Martin Corporation.
- Wells that may be sampled include AE-106 S/M/D/R located in the woods/wetlands, and AE-111R located in the paved parking area at the facility.
- We will visit the wells periodically during the sampling event, specifically on **Monday August 30** to pre-purge Flute wells, and **Tuesday August 31** for site-wide water level measurements. We will then conduct the groundwater sampling of the wells on YRC property for 1-2 days [exact dates TBD] between **September 1-24**.
- Each visit will include 1-2 people with 1-2 vehicles for durations ranging from 1 to 8 hours.
- Access is only needed to the localized area at each well. Our personnel will place cones around the wells but will not disrupt traffic flow at the facility.

We would like permission to measure the depth to groundwater in select monitoring wells on the property during our site-wide measurement round on **Tuesday August 31**. If this is acceptable we can contact Chuck Castelluccio, whom I have copied on this email, to coordinate logistics for water level measurements as we have done in the past.

Dylan Potter (cell 508-333-2316) is the Field Lead for this work. He will notify Mike Day at the YRC Terminal of our work dates, and will coordinate the work directly with the Mike. If Mike Day is no longer the facility Manager, Dylan will introduce himself to the new manager and explain the work that we do per the access agreement.

Nicole Callahan (cell 631-806-9411) and I are also available should you have any questions.

Thank you.

Scott

Scott Olson, PG
Project Manager, Project Management Office
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M +1-978-846-5238
scott.olson@aeom.com

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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ruben Byerly

2. Street Address: 10990 Roe Avenue

City/Town: Overland Park, KS Zip Code: 66211-1213

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 95 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ August 30 to mid October 2021.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of August 30 and mid-October 2021:

- Groundwater sampling for laboratory analyses from up to four monitoring wells (AE-106 S/M/D/R) located in the woods/wetlands and one well (AE-111R) in the parking lot of the property at 95 Concord Street in North Reading, MA.

- Water level measurements may also be obtained from other existing monitoring wells on the property at 95 Concord Street, with permission from YRC.

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

January 3, 2022

***** **Via Electronic Mail** *****

Mr. Eric Darci
Vice President
Hilco Redevelopment Partners (HRP)
99 Summer Street, Suite 1110
Boston, MA 02110

Subject: September 2021 Groundwater Analytical Results
50 Fordham Road, Wilmington, MA

Dear Mr. Darci,

In September 2021, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from 96 monitoring well [screen intervals] located on your property at 40-50 Fordham Road in Wilmington and North Reading, MA.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September 2021 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September 2021 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Julianna Connolly, Hilco Redevelopment Partners
Paul Calligan, Lockheed Martin Corp.

Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Eric Darci - Hilco Redevelopment Partners

2. Street Address: 99 Summer Street, Suite 1110

City/Town: Boston, MA Zip Code: 02110

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 40-50 Fordham Road

City/Town: Wilmington / N.Reading, MA Zip Code: 01887 / 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached letter and data sheets for groundwater data from 96 wells/screens sampled in September 2021.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 8, 2021

Mr. Patrick St. Pierre
Howland Development
155 West Street
Wilmington, MA 01887

Subject: September 2021 Groundwater Sampling Analytical Results
Property at 87 Concord Street – North Reading, MA

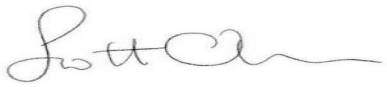
Dear Mr. St. Pierre,

In September 2021, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from eight monitoring wells AE-112D and AE-112R (ports R1 through R7) located on your property at 87 Concord Road in North Reading, MA. Monitoring wells HOW-2 and HOW-3 (also known as MW-2 and MW-3) were not sampled in September 2021.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September 2021 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September 2021 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,



Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corporation

Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Patrick St. Pierre - Howland Development Corp.

2. Street Address: 155 West Street

City/Town: Wilmington, MA Zip Code: 01867

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 87 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Monitoring Wells AE-112D and AE-112R (ports R1 through R7)

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 8, 2021

Mr. Ken Polk
Facility Manager, International Family Church
99 Concord St
N. Reading, MA 01864

Subject: September 2021 Groundwater Analytical Results
50 Fordham Road, Wilmington, MA

Dear Mr. Polk,

In September 2021, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from 20 monitoring wells (MW-5, MW-7, GZA-14, GZA-14A, AE-109D, AE-109R (R1 through R8), and AE-110R (R1 through R7) located on your property at 99 Concord Street in N. Reading, MA.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the owner of the property. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September 2021 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September 2021 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corp.
Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ken Polk - International Family Church

2. Street Address: 99 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 99 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

MW-5, MW-7, GZA-14, GZA-14A, AE-109D, AE-109R-1 thru 8, and AE-110R-1 thru 7

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 8, 2021

Mr. Mark Clark
Town of N. Reading
235 North Street
N. Reading, MA 01864

Subject: September 2021 Groundwater Analytical Results
Former GE Facility – 50 Fordham Road, Wilmington, MA

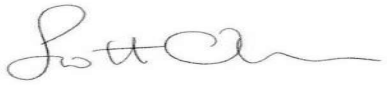
Dear Mr. Clark,

In September 2021, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from seven monitoring wells (STM-3D, -3R, -3S, and STM-8D, -8M, -8R, and -8S) located within the right-of-way along Concord St in North Reading.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the groundwater sampling, and a map of the sampling locations close to your property lines. We have included summary tables of the September 2021 groundwater analytical results with a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,



Scott Olson
Senior Technical Specialist

cc: Calligan, Lockheed Martin Corp.

Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Mark Clark - Town of North Reading

2. Street Address: 235 North Street

City/Town: N. Reading Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 51 & 71 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☐ industrial ☐ school/playground ☑ Other municipal right-of-way (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

STM-3D, -3R, -3S; and STM-8D, -8M, -8R, -8S

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 8, 2021

Mr. Roland Gagne
Manager, Wilmington Masonry
62 Concord Street
North Reading, MA 01889

Subject: September 2021 Groundwater Analytical Results
62 Concord Street, Wilmington, MA

Dear Mr. Gagne,

In September 2021, AECOM under contract to Lockheed Martin Corporation (LMC) collected a groundwater sample from one monitoring well (STM-8R1) located on your property as part of the ongoing work relating to the former GE facility formerly located at 50 Fordham Rd in Wilmington, MA.

The former GE facility is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September 2021 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September 2021 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corp.

Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Roland Gagne - Wilmington Masonry

2. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

STM-8R1, groundwater

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 8, 2021

******* Via Electronic Mail *******

Mr. Ruben Byerley
YRC Freight
10990 Roe Avenue
Overland Park, KS 66211-1213

Subject: September 2021 Groundwater Sampling Analytical Results
YRC Freight Property at 95 Concord Street – N. Reading, MA

Dear Mr. Byerley,

In September 2021, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from fifteen monitoring wells (AE-106D, AE-106M, AE-106R (ports R1 through R5), AE-106S, and AE-111R (ports R1 through R7) located on your property at 95 Concord Street in N. Reading, MA.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September 2021 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September 2021 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria. We have also provided a summary table of water level measuresments from wells on YRC property on August 31, 2021.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corp.

Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ruben Byerly

2. Street Address: 10990 Roe Avenue

City/Town: Overland Park, KS Zip Code: 66211-1213

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 95 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

AE-106-D-M-S, AE-106R (R1 through R5) and AE-111R (R1 through R7)

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 8, 2021

Nathan and Lindsay Fletcher
3 Furbish Pond Lane
N. Reading, MA 01864

Subject: 2021 Irrigation Well Groundwater Elevation Results

Dear Mr. and Mrs. Fletcher,

On August 31, 2021, AECOM under contract to Lockheed Martin Corporation obtained groundwater elevation data, with your permission, from the irrigation well located on your property at 3 Furbish Pond Lane. This effort was performed as part of environmental monitoring that is being conducted associated with the former GE Facility at 50 Fordham Road, Wilmington, MA. This letter summarizes the information developed from that event.

Massachusetts environmental regulations require notification to a property owner when environmental data are collected at a property on behalf of someone other than the owner of the property. Therefore, we are providing you with the data that we collected, specifically the depth to groundwater measurements and the calculated groundwater elevations.

Data from irrigation well located at #3 Furbish Pond Lane

Depth to water (from reference elevation) August 31, 2021: 18.62 ft (did not measure total depth)
Groundwater elevation on August 31, 2021 = 103.21 (Ref Elev.) – 18.62 ft = 84.59 ft NAVD29.

The groundwater elevations at your property are higher than those in the nearby wetlands and in the vicinity of the former GE Facility at 50 Fordham Road indicating that it would not be likely that any groundwater impacts from that site would come to be located beneath your property.

Should you be interested in more information, additional public involvement opportunities for this site are available by reviewing documents in the project repository located at the North Reading Flint Memorial Library (147 Park Street), on the Lockheed Martin project-specific website located at http://www.lockheedmartin.com/us/who-we-are/eesh/remediation/wilmington/archive.html., or on the MassDEP's website. If you have any questions or comments regarding the results, please contact me at 978-846-5238 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corporation

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

Reference
60552044

May 3, 2022

Subject: **NOTIFICATION OF DOCUMENT AVAILABILITY**
Post-Temporary Solution Status Reports Periodic Review of the Temporary Solution
May 2022 through May 2027
Former General Electric Facility, 50 Fordham Road, Wilmington, MA, RTN 3-0000518

Dear Community Members:

Pursuant to the Massachusetts Contingency Plan (MCP) 310 CMR 40.1405 and the Public Involvement Plan (PIP) for the site dated November 17, 2000, AECOM has prepared this letter on behalf of Lockheed Martin Corporation ("Lockheed Martin") to inform you that the *Post-temporary Solution Status Report No. 10 and Periodic Review of the Temporary Solution* was submitted to the Massachusetts Department of Environmental Protection (MassDEP) on May 2, 2022. This report was submitted to the MassDEP for Release Tracking Number (RTN) 3-0000518, located at the former General Electric Facility, 50 Fordham Road, Wilmington, Massachusetts (the site).

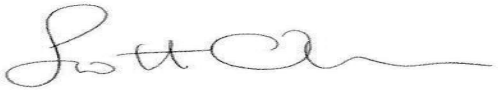
This tenth Status Report includes the first five-year review of the Temporary Solution achieved for the site in 2017. Additionally, Post-temporary Solution Status Reports will continue to be submitted to the MassDEP and the designated public repository every six-months in May and November with the next five-year Review in May 2027.

Should you wish to view copies of the Post-temporary Solution Status Reports and five-year Periodic Reviews, electronic copies are available at the designated information repository in the Flint Memorial (North Reading) Library, 147 Park Street, North Reading, MA (telephone 978-664-4942). Library hours are as follows: Monday, Tuesday and Thursday 10 AM to 8 PM; Wednesday, Friday, and Saturday 10 AM to 5 PM; closed on Sundays.

The historical disposal site files can also be accessed several ways as detailed in the enclosed May 2022 Fact Sheet for the site.

If you have questions or require additional information related to these submittals, please contact the undersigned at (978) 905-2100.

Yours sincerely,



Scott Olson

enclosure: May 2022 Fact Sheet

cc: Paul Calligan, Lockheed Martin Corporation

Fact Sheet for the Former GE Site 50 Fordham Road, Wilmington, MA

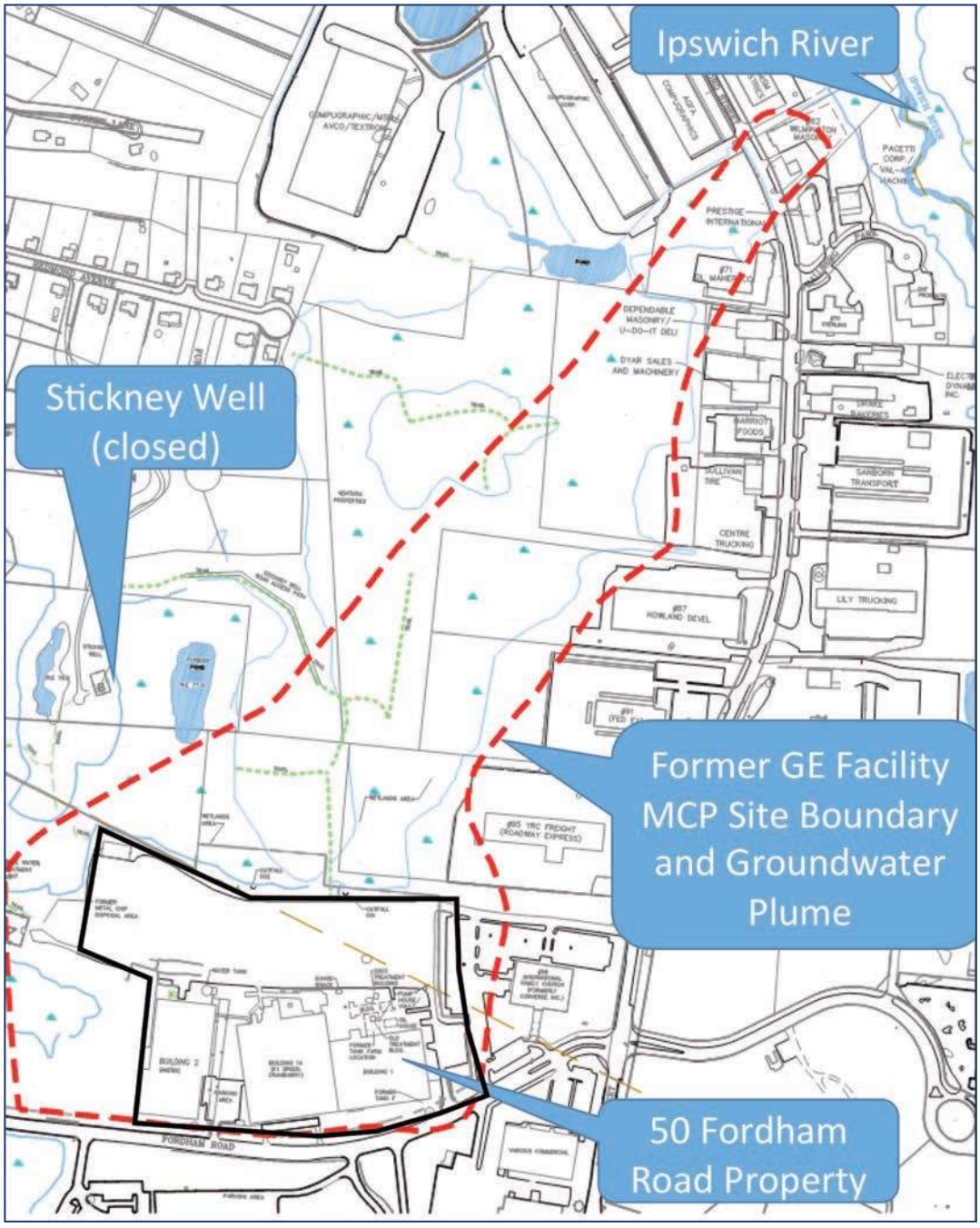
May 2022

Site History

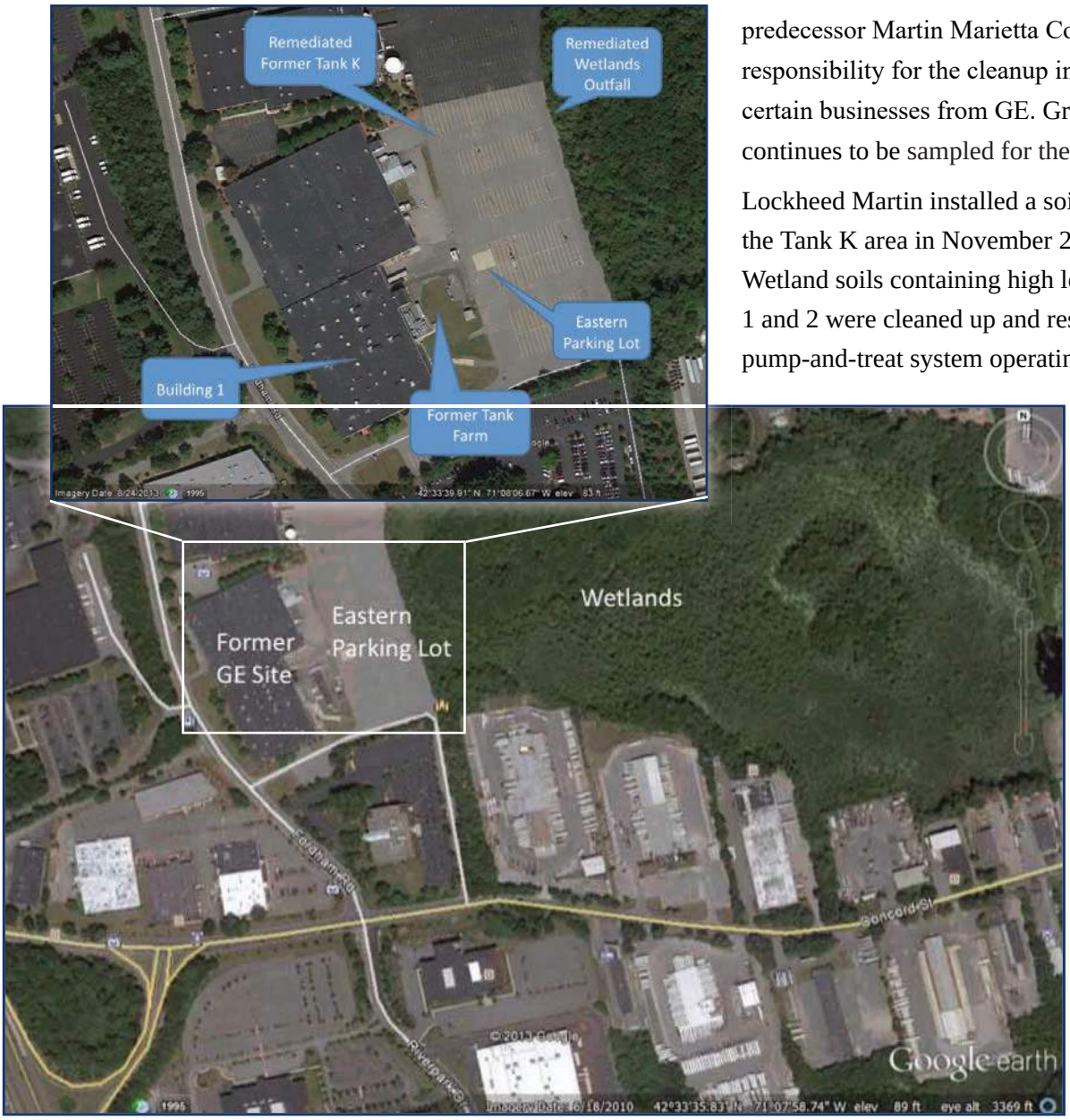
GE Aerospace's Instruments Control Systems Department operated from 1970 to 1989 at 50 Fordham Rd. in Wilmington, Massachusetts, which property it leased from Wilmington Realty Trust from 1969 to 1989. The 13-acre industrial park, currently owned by Hilco Redevelopment Partners, spans the towns of Wilmington and North Reading, Massachusetts. In 1986, a Massachusetts Department of Environmental Protection (MassDEP) environmental investigation found that the Fordham Road site was the source of contaminants in the Stickney public water supply well. The well is 500 feet east of the site in North Reading. The well currently is inactive with no known plans to be used again.

The investigation noted four areas of concern at the industrial park:

- An underground storage tank farm near Building 1, which had leaked into groundwater chlorinated solvents used for degreasing
- The Eastern Parking Lot area, which had soil impacted by Stoddard solvent – a light oil – and chlorinated solvents



Groundwater plume and site boundary according to the Massachusetts Contingency Plan (MCP)



Former GE Site

- Outfalls 1 and 2 in the site wetlands, which had high levels of metals in wetland soils
- An area near underground storage Tank K, which had high levels of gasoline in soil and groundwater

GE began cleaning up the site in 1986, removing two of the underground storage tanks. The cleanup effort removed six more tanks the following June, and one more in 1991. That year, GE also fixed the pipeline to the last underground storage tank, Tank E. GE began extracting and treating (pump and treat) groundwater in the tank farm area in 1992. At the same time, the corporation began removing oil and solvents from the soil in the Eastern Parking Lot. Lockheed Martin predecessor Martin Marietta Corporation assumed responsibility for the cleanup in 1993, when it acquired certain businesses from GE. Groundwater in this area continues to be sampled for the presence of contaminants.

Lockheed Martin installed a soil-vapor extraction system in the Tank K area in November 2000 to remove the gasoline. Wetland soils containing high levels of metals near Outfalls 1 and 2 were cleaned up and restored in 2004. In 2002, a pump-and-treat system operating further east, at the edge of the parking lot and the wetland, replaced the 1992 tank farm pump-and-treat system. The site team also injected an iron-based solution into the area to help break down the chlorinated solvents. Lockheed Martin shut down the second pump-and-treat system in 2008 to monitor the results of the iron-based solution. In 2011, Building 3 and the oil house at the site were demolished. Rubble from the removal was appropriately recycled, and underlying solvent-impacted soil was removed and disposed of offsite at a licensed facility.

Recent Site Activity

In 2013, Lockheed Martin proposed to MassDEP and the community that it use specific techniques to further investigate the extent, potential movement, and possible impact of the groundwater contaminants to human health and the environment. Upon MassDEP approval, Lockheed Martin installed additional monitoring wells around the site and in the wetlands east of the site in North Reading in 2014. The wells were installed into shallow and deep soil and the bedrock underneath. Lockheed Martin also installed wells in



Bldg1 – Treatment Shed – Former Source Area Onsite behind Building 1



Treatment Shed – Former Groundwater Remediation System Shed Onsite

the Eastern Parking Lot and within Building 1 to learn more about the contaminants under the building. In addition, wells were installed along Concord Street to learn if the contamination was moving from the wetlands towards the Ipswich River.

During well installation, soil and rock samples were analyzed for contaminants. Lockheed Martin also studied boreholes to understand how contaminants might move through fractures in the bedrock. Using this information, Lockheed Martin installed liners in each borehole to obtain groundwater samples at multiple levels.

These investigations helped Lockheed Martin develop a full understanding of the site and the potential risks for humans and the environments exposed to the contaminants. The investigations showed that while some contaminants remain in site groundwater, the contaminant plume is not moving and is shrinking. The risks to human health are limited because no one drinks the groundwater: most area residents use municipal water, and there are no private wells within the underground contamination plume. The investigations also found no indoor air issues at the site. While some light oil contaminants remain under the Eastern Parking Lot, there is no direct way for humans to contact the contaminants under the pavement. Any excavation requires a soil management plan to mitigate potential exposures to contaminated soils.

Lockheed Martin's Phase II Report of May 2017 presents the foregoing findings. Based on the investigations' results, the corporation developed a Phase III Remedial Action Plan (RAP), which evaluated cleanup options for the contaminated groundwater beneath the Eastern Parking Lot. Lockheed



Hydrogen sampling – Collecting samples for dissolved hydrogen analysis



Gauging FLUTe Wells – Measuring depth to groundwater in FLUTe™ well

Martin chose to use monitored natural attenuation, which relies on natural processes to help clean up contaminants over time. The corporation also prepared a Temporary Solution Statement outlining a monitoring program until a Permanent Solution can be achieved.

Under the temporary solution, from 2017-2022, Lockheed Martin sampled groundwater from site monitoring wells every year to learn if the contamination was naturally decreasing. Contaminant concentrations and the total amount of contamination in groundwater have decreased. The overall contaminant area is stable and not increasing. In addition, Lockheed Martin monitored the light oil under the Eastern Parking Lot every quarter. This oil is not moving, and petroleum concentrations in shallow groundwater are decreasing.

As part of the required 5-Year Periodic Review, Lockheed Martin reviewed the Temporary Solution in May 2022 to learn if it could take any steps toward a permanent solution. The review did not find any new technologies that could feasibly achieve a permanent solution at this time. The contaminant concentration reductions and observed stability means the ongoing Temporary Solution (monitored natural attenuation) is an appropriate remedy for the site. The periodic review also showed that over the last five years, risks to humans or the environment are acceptable under current conditions, constituting a No Substantial Hazard condition.

Over the next five years, from 2022 to 2027, Lockheed Martin will document monitoring well results in publicly available status reports every six months.

Public Involvement

In November 1999, private citizens petitioned the MassDEP to designate the 50 Fordham Rd. site as a Public Involvement Plan (PIP) site under state law. Lockheed Martin partnered with the agency to hold public meetings in April 2000 to explain cleanup plans and work-to-date at the Fordham Road site. The site team provided an update on cleanup activities in May 2006. In December 2013, the site team held a public meeting about cleanup progress. On Sept. 3, 2015, Lockheed Martin held another public meeting to present the next phase of planned site activities.

Lockheed Martin held a public meeting on May 11, 2017, to inform the community about the most current work at the Fordham Road site through May 2017. No further public meetings have occurred or are planned, unless conditions change. The public is periodically updated through mailings and fact sheets such as this one.

If you have questions, comments, or concerns, please contact Lockheed Martin Communications at 800-449-4486 or Adriane.Tish@lmco.com.

More information about this site is on the Lockheed Martin site-specific website: www.lockheedmartin.com/wilmington.

You can view the site files in the following ways:

- Visit the Lockheed Martin site-specific website: www.lockheedmartin.com/wilmington
- Visit the MassDEP website: https://eeaonline.eea.state.ma.us/portal#!/search/wastesite
    - In the RTN box, type “3-0000518” and click Search
    - Click on 3-0000518
    - Click on Supporting Documents to access and view historical site reports

Call MassDEP at 978-694-3320 to review the files in person at the MassDEP Northwest Regional Office, 205B Lowell Street, Wilmington, MA 01887; calling first is recommended.

Visit the designated public file viewing location in the Flint Memorial (N. Reading) Library, 147 Park Street, North Reading, MA (Main Phone: 781-664-4942)